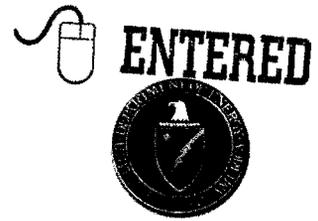
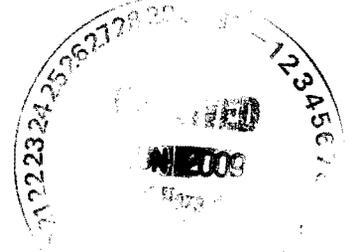




Permit
DEPARTMENT OF ENERGY
 National Nuclear Security Administration
 Los Alamos Site Office
 Los Alamos, New Mexico 87544



JUN 30 2009



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

Dear Mr. Kieling:

Subject: Transmittal of Class 1 Permit Modification to the Contingency Plan of the Los Alamos National Laboratory Hazardous Waste Facility Permit

This letter transmits a Class 1 permit modification to the New Mexico Environment Department Hazardous Waste Bureau (NMED-HWB), for the National Nuclear Security Administration and the Los Alamos National Security, LLC (NNSA/LANS). The permit modification makes changes to the list of emergency coordinators within the Attachment D Contingency Plan of the Los Alamos National Laboratory (LANL) Hazardous Waste Facility Permit. Table D-2 has been revised to include the names, addresses and phone numbers for three new emergency managers.

This modification has been prepared in accordance with the New Mexico Administrative Code, Title 20, Chapter 4, Part 1 (20.4.1.900 New Mexico Administrative Code [NMAC]) (incorporating Code of Federal Regulations [CFR] , Title 40 § 270.42[a][1]), revised March 1, 2009. The enclosed permit modification package includes a revised Table D-2 for the LANL Hazardous Waste Facility Permit (LA-UR-09-03868). This revision changes the names, addresses, and phone numbers of coordinators or other persons or agencies identified in the plan, Item B.6.d as described in Appendix I to 20.4.1.900 NMAC (incorporating 40 CFR § 270.42). This modification does not change any emergency procedures or equipment at the LANL permitted container storage units. Changes made to the names, addresses, and phone numbers of coordinators are valid for interim status units as well as units included within the permit. This list was last updated October 1, 2008.

Modification of Table D-2 complies with 20.4.1.500 NMAC (incorporating 40 CFR § 264.52(d)). 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)).

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 Table D-2.



If you have comments or questions regarding this permit modification, you may contact Gene Turner of my staff at (505) 667-5794 or Jack Ellvinger, LANS, at (505) 667-0633.

Sincerely,



Donald L. Winchell, Jr.
Manager

EO:19GT-36603

Enclosures

cc w/enclosure:

Laurie King, Chief (6PD-N)
New Mexico/Federal Facilities Section
Environmental Protection Agency
Region 6 1445 Ross Avenue, Suite 1200
Dallas, TX 75202-2733

cc w/out enclosure:

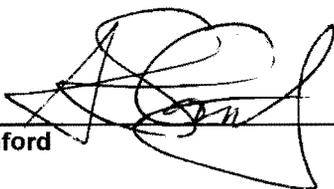
James Bearzi, Chief
Hazardous Waste Bureau
New Mexico Environment Department
2905 Rodeo Park Drive East, Building 1
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Steve Pullen, NMED-HWB, Santa Fe, NM

G. Rael, EO, LASO
M. B. Mallory, PADOPS, LANS, MS-A102
J. Chris Cantwell, ADESHQ, LANS, MS-K491
M. Graham, ADEP, LANS, MS-M991
A. Stanford, EO-DO, LANS, MS-C938
J. Blankenhorn, WDP, LANS, MS-J910
S. Clemmons, EWMO-DO, LANS, MS-J910
A. Grieggs, ENV-RCRA, LANS, MS-K490
E. Louderbough, LC-ESH, LANS, MS-A187
J. Ellvinger, ENV-RCRA, LANS, MS-K490
R. Lechel, ENV-EAQ, LANS, MS-J593
L. Sandoval, ENV-EAQ, LANS, MS-J593
Records Center, LASO
Official Contract File, LASO
ENV-DO File, LANS, MS-J978

INTERNAL CERTIFICATION
INFRASTRUCTURE AND SITE SERVICES DIRECTORATE

I certify under penalty of law that this document and attachments were reviewed and approved for consistency 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 reviewing, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete as it applies to emergency response personnel listed in the permit. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.



Anthony R. Stanford
Division Leader
Emergency Operations
Los Alamos National Laboratory

6/24/09
Date Signed

CERTIFICATION

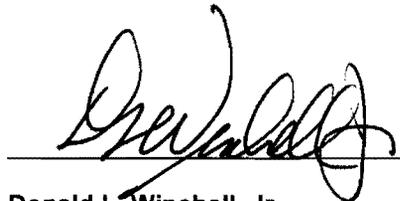
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage 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.



James C. Cantwell
Associate Director
Environment, Safety, Health, & Quality
Los Alamos National Laboratory
Operator

6/22/09

Date Signed



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

6/30/09

Date Signed

Enclosure 1

**Table D-2, Emergency Management and Response Office
Emergency Managers, with Editing Marks**
(Excerpt from LA-UR-09-03868)

TABLE D-2
EMERGENCY MANAGEMENT AND RESPONSE OFFICE
EMERGENCY MANAGERS^a

| Emergency Managers | Laboratory Telephone | Home Telephone | Home Address |
|------------------------------|--------------------------|---|--|
| ^b Brenda Andersen | 667-6211 | 662-4173 699-1144 | 3926 A Alabama, Los Alamos, NM |
| Manny L'Esperance | 667-6211 | 660-9799455-9138 699-1383 | 13 Paseo Patron, Santa Fe, NM |
| Joe Boyet | 667-6211 | 753-6108 412-9997 | 125 Private Rd. 1153, Espanola, NM |
| Ron Huerta | 667-6211 | 852-0286 412-8434 | P.O. Box 923, Alcalde NM, |
| Wil Martinez | 667-6211 | 351-2340 412-8135 | 120A RA CR 92, Chimayo, NM |
| Dave McClard | 667-6211 | 412-8945 699-0803 | 2220 A 36 Street, Los Alamos, NM |

^a To ensure immediate response, the Emergency Manager may be reached at the Emergency [Operations Support Center Management and Response Office](#) (667-6211 ~~or after hours, 667-7080~~).

^b Primary contact

Enclosure 2

**Table D-2, Emergency Management and Response Office
Emergency Managers, Clean Version
(Excerpt from LA-UR-09-03868)**

TABLE D-2
EMERGENCY MANAGEMENT AND RESPONSE OFFICE
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| Emergency Managers | Laboratory Telephone | Home Telephone | Home Address |
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^a To ensure immediate response, the Emergency Manager may be reached at the Emergency Operations Support Center (667-6211).

^b Primary contact

**CONTINGENCY PLAN
PERMIT ATTACHMENT D
NM0890010515-1**

ATTACHMENT D
HAZARDOUS WASTE FACILITY CONTINGENCY PLAN

This attachment presents contingency measures for hazardous and mixed waste units at Los Alamos National Laboratory (LANL). The contingency plan is intended to meet the requirements specified in the New Mexico Administrative Code, Title 20, Chapter 4, Part 1 (20 NMAC 4.1), Subpart V, Part 264, Subpart D, revised November 1, 1995, "Contingency Plan and Emergency Procedures," for Resource Conservation and Recovery Act (RCRA) treatment, storage, or disposal (TSD) facilities. In addition, this document is consistent with the LANL Emergency Management Plan (EMP) (LANL, 1993), prepared by the LANL Emergency Management and Response (EM&R) Office. The provisions of this plan will be carried out 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 [20 NMAC 4.1, Subpart V, 264.51(b), revised November 1, 1995].

D.1 HAZARDOUS AND MIXED WASTE EMERGENCY RESPONSE RESOURCES

The primary resources for management of emergency incidents at LANL reside within the EM&R Office, which is part of the Emergency Response Division. During an emergency situation, line management (i.e., the Group Leader of the affected area) works with the Duty Emergency Manager from the EM&R Office. The Emergency Manager has primary responsibility for managing emergency response operations, making appropriate notifications, activating the emergency response organizations, and proceeding to the scene. The Emergency Manager has authority to assume the role of Incident Commander (IC) during an emergency and typically assumes full responsibility for management of the emergency response operations at the scene. If an emergency can be resolved primarily by site-specific emergency response personnel, the Emergency Manager may choose not to assume command of the emergency response but will remain on standby in case additional response resources are needed. In these situations, site-specific management personnel (e.g., Group Leaders, Deputy Group Leaders) form a facility command and designate a Facility Incident Commander (FIC). Site-Specific emergency response personnel would then report directly to the FIC. Figure D-1 depicts the structure of a facility command.

Additional LANL resources that may provide assistance in an emergency include personnel from the Environment, Safety, Health and Quality (ESH&Q) Division and the TA-54 Operations Center at LANL. These groups are discussed in Sections D.1.2, D.1.3, and D.1.6.

Contracted services and other agencies are also available for assistance during emergencies. These are discussed in Section D.1.5 and include the contracted services of Protection Technology Los Alamos (PTLA) for security, KBR-Shaw-LATA (KSL) for facility maintenance, and the Los Alamos County Fire Department (LACFD). Other outside response agencies are discussed in Section D.1.7 and include the Los Alamos County Police Department (LACPD) and the Los Alamos Medical Center (LAMC). The LACPD and the LAMC each provide assistance under a memorandum of understanding (MOU).

Emergency response protocol at LANL is currently being modified to be consistent with the National Interagency Incident Management System (NIIMS). The NIIMS is a national standard that provides consistency in terminology/methodology and allows for an integrated emergency response both locally and nationally, if necessary.

The IC (e.g., the Duty Emergency Manager, the FIC) coordinates all groups and agencies responding to the emergency and personnel operating at the scene in what is called the Unified Command (UC). If the FIC is in charge during an emergency and the Emergency Manager decides that additional resources are needed

and assumes the position of IC, then the facility command formed by the FIC becomes the Facility Branch of the UC. The emergency response structure at LANL, as shown on Figure D-2, is designed to expand and collapse to include the response groups/agencies needed to address any particular emergency.

The IC may appoint and utilize a network of support personnel to assess, plan for, and mitigate emergencies. These personnel include a Safety Officer, a Public Information Officer, and a Liaison Officer than 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 Chief, a Logistics Chief, a Plans Chief, and an Administrative Chief. The Operations Chief oversees the Fire Branch, the Emergency Medical Services Branch, and the Facility Branch and is responsible for the actual emergency response. The Logistics Chief is responsible for providing support personnel and equipment necessary for the emergency response. The Plans Chief is responsible for planning the active mitigation and recovery for the emergency and the Administrative Chief is responsible for keeping records of expenditures. In some instances, one person may be assigned more than one of these positions. During an emergency at LANL, 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 listed in Table D-1 and discussed briefly in Sections D.1.2 through D.1.7

Each of the emergency response groups/agencies and the appropriate facility operators will retain a current copy of this contingency plan. The Environmental Protection Division's hazardous waste compliance personnel is responsible for the controlled distribution of the contingency plan.

D.1.1 Emergency Management and Response Office

The Director of LANL has delegated the authority and responsibility for administering and implementing LANL's emergency management program to the Emergency Response Division, which includes the EM&R Office. The EM&R Office coordinates and issues LANL's EMP and provides response coordination for emergencies. The EM&R Office also provides a 24-hour Duty Emergency Manager to respond to emergencies, including hazardous and mixed waste releases. The LANL Emergency Manager is the functional equivalent of the RCRA Emergency Coordinator (20 NMAC 4.1, Subpart V, 264.55, revised November 1, 1995). The EM&R Office maintains an Emergency Operations Center (EOC) in a ready condition should a center be required. The primary EOC is located at Technical Area (TA) 69, Building 33 (TA-69-33). An alternate EOC is located at TA-49-113. Should an EOC be activated during an emergency, all other emergency personnel including the IC and the entire facility or Unified Command fall under the control and direction of the EOC.

EM&R Office personnel designated as Emergency Managers are listed in Table D-2. Assignment as the Duty (i.e., primary) Emergency Manager is rotated. The Duty Emergency Manager can be reached by contacting the EM&R Office (667-6211 during working hours, 667-7080 after working hours) or the Central Alarm Station (CAS) operator (911).

The Duty Emergency Manager 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 LANL personnel, the Duty Emergency Manager will initially assess the possible hazards to human health or the environment and, if assuming incident command, will use whatever response personnel and/or emergency equipment necessary in order to control and contain the waste, as necessary. In the event of an emergency, the Emergency Manager becomes the IC with full responsibility for field activities (including logistics, planning, and operations or establishing these positions within the UC). The exception to this is when on-site personnel can adequately address the emergency and maintain incident command internally.

At the scene of the emergency, the IC will assemble a UC consisting of the senior person from each responding organization, functional specialists, and the Duty Emergency Manager (if not the IC). Additional technical or management representation may be integrated into the emergency response, as needed. The UC will receive direction from the IC and the members of the UC will work together to mitigate emergency situations.

The Duty Emergency Manager responding to an emergency will have access to a copy of the appropriate building emergency plan(s) (BEP) relating to the area in which the incident is occurring. These plans are maintained by the EM&R Office at TA-69 as well as located on site for use by emergency response personnel. The various response groups will 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 the BEP(s) and other site-specific information.

D.1.2 Hazardous Materials Response Group

The Hazardous Materials (HAZMAT) Team is responsible for the aggressive mitigation of chemical, radiological, hazardous waste, and mixed waste emergencies, including field decontamination of responders and response equipment. The HAZMAT Team may provide the LACFD with limited field decontamination support for victims. The HAZMAT Team is capable of providing a contamination-control 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. LANL standards require that the HAZMAT Team meet the training criteria for emergency response personnel specified in the Code of Federal Regulations, Title 29 (29 CFR), Subparts 1910.120(q)(6)(iii), (iv), and (v). The HAZMAT Team acts as part of the UC reporting through the HAZMAT Supervisor. The LANL HAZMAT Supervisor coordinates the HAZMAT Team and radiological field monitoring activities.

During an emergency response, HAZMAT 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. To operate effectively, the HAZMAT team may obtain resources from environmental monitoring personnel, such as the health physics and industrial hygiene personnel.

D.1.3 Environmental Protection Division Response Groups

At the scene, the IC coordinates representatives and technical advisors from the TA-54 Operations Center and the environmental protection groups. In addition to their post-emergency duties, the groups discussed below 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 Environmental Protection Division will assume the position of the Environmental Safety and Health Advisor, will provide technical support, and will ensure LANL compliance with applicable federal, state, and local regulations.

D.1.3.1 Waste Disposition Project

Waste management groups within the Waste Disposition Project are responsible for initial response actions at hazardous and mixed waste treatment and storage units at TA-50, and TA-54. These groups also provide guidance on proper treatment, storage, and transportation of hazardous and mixed waste.

D.1.3.2 Meteorology and Air Quality Personnel

Meteorology and air quality personnel provide field surveys of air to determine potential environmental effects of exposure after an emergency. In addition, they provide expertise in meteorology to establish potential short- and long-term environmental effects of emergency conditions.

D.1.3.3 Water Quality Personnel

After an emergency, the Water Quality Personnel provide sampling of water to determine potential environmental effects of an emergency and performs assessments for reporting requirements. They also provides expertise in hydrogeology to establish potential short- and long-term environmental effects of emergency conditions.

D.1.3.4 Hazardous Waste Compliance Personnel

Hazardous waste compliance personnel provide guidance on regulatory requirements to other groups. After an emergency, they provide field sampling (e.g., of soil, surface water runoff, and sediments) to determine potential environmental effects of exposure.

D.1.3.5 Ecology Personnel

Ecology personnel provide field surveys of biota to determine potential environmental effects of exposure after an emergency.

D.1.4 Other LANL Response Resources

Appropriate personnel from the TA-55 Operations Division have been trained in emergency procedures. If an emergency occurs at TA-55, operations personnel are responsible for monitoring for leaks, pressure buildup, gas generation, and/or equipment ruptures. Dynamic and Energetic Materials Division (DE) personnel are responsible for the hazardous and mixed waste treatment units (i.e., open burning/open detonation units) at TA-14, TA-36, and TA-39. Appropriate DE personnel responsible for these units are trained in emergency procedures and may provide information and/or assistance during emergencies involving high-explosive waste. Weapons Technology Division personnel are responsible for treatment and storage units at TA-16. Appropriate personnel are also trained in emergency procedures and may provide information and/or assistance during emergencies involving units at TA-16.

D.1.5 Contracted Response Groups

Contracted response groups report to the Crisis Manager in the UC if the EOC is activated. In a smaller emergency, the EOC is not activated and the contracted response groups report directly to the IC. If the IC deems it necessary, the IC may designate an Operations Chief to aid in the coordination and direction of these groups.

D.1.5.1 Protection Technology Los Alamos

PTLA is responsible for LANL security, which is provided by PTLA under contract to LANL. During an emergency, PTLA activities include maintaining security, directing traffic within LANL, and controlling access to the emergency scene. PTLA maintains the necessary equipment (such as crowd-control equipment and patrol vehicles) to perform these functions. In addition, the CAS at TA-64-1 is manned by PTLA personnel 24 hours a day.

D.1.5.2 KBR-Shaw-LATA (KSL)

KSL provides a maintenance support force under contract to LANL. This support force is under LANL's direction in an emergency. KSL conducts inspections of LANL equipment, maintains equipment, and participates in post-emergency cleanup under the direction of a Recovery Manager designated by the IC. The Utilities Control Center (UCC) at TA-3-223 is maintained by KSL personnel 24 hours a day.

D.1.5.3 Los Alamos County Fire Department

The LACFD provides fire protection and ambulance coverage for the residential communities of Los Alamos and White Rock and for LANL. In the case of an emergency within LANL, the LACFD coordinates fire suppression and Emergency Medical Services (EMS) efforts, while the IC retains overall responsibility for the emergency response effort. The U.S. Department of Energy (DOE) requires that LACFD personnel meet the training criteria for emergency response personnel specified in 29 CFR 1910.120(q)(6)(i) and (ii). A contract has been established between the DOE and the Incorporated County of Los Alamos.

D.1.6 LANL Support Groups

D.1.6.1 Health Physics Personnel

Health physics or radiation protection personnel provide field personnel to perform routine site evaluation and monitoring to determine the nature and extent of radiological contamination. Personnel also provide routine guidance on radiological decontamination. Field personnel conduct these activities under the supervision of certified health physicists. In addition, this group augments the assessment and monitoring functions of the HAZMAT Team.

D.1.6.2 Occupational Medicine Services

LANL 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. In addition to promoting early identification and prevention of illnesses or injuries that may arise from exposures to hazardous or radioactive materials, personnel maintain documented records of the health status of employees and related occupational medicine activities.

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 is shown on Figure D-3. Medical staff at includes physicians, physician's assistants, registered nurses, x-ray technicians, and clinical laboratory technicians. All full-time physicians and nurses receive radiation accident training.

Occupational medicine personnel also maintain access to a software program called the TOMES™ system at the central medical facility located at TA-3-1411. This extensive database provides the clinical staff with timely exposure and treatment information. Occupational medicine personnel are supported by industrial hygiene and safety personnel, as described below.

D.1.6.3 Industrial Hygiene and Safety Personnel

Industrial hygiene and safety personnel provide support to occupational medicine personnel with their ability to obtain additional exposure and treatment information via telephone access to the National Library of Medicine's TOXLINE™ and CHEMLINE™, the Toxicity Databank files POISONDEX™ and TOMESPLUS™ (Micromedics), and the CC/INFO™ database files on Material Safety Data Sheets. In addition, industrial hygiene and safety personnel maintain 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, industrial hygiene and safety 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 Contractor Assurance Office (CAO)

The Contractor Assurance Office (CAO) is responsible for the Occurrences Reporting and Processing System at LANL and has the lead in reporting the occurrence of an on-site emergency. CAO is in part responsible for tracking follow-up corrective actions. CAO personnel assist the facility manager in investigating the occurrence, determining the causal factors, identifying the appropriate corrective actions, and assisting in the preparation of reports documenting the occurrence to DOE. This group tracks the target and actual completion dates for all corrective actions associated with an emergency 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. The IC may designate an Operations Chief to aid in coordinating and directing the groups responding to an emergency.

D.1.7.1 Los Alamos County Police Department

The LACPD has only minimal interaction with LANL in an on-site emergency. This interaction is limited to traffic control on DOE roads with public access and to criminal investigations. An MOU for mutual aid assistance has been established between the DOE and the Incorporated County of Los Alamos.

D.1.7.2 Los Alamos Medical Center

LANL 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 occupational medicine personnel. Radiation protection personnel, industrial hygiene and safety personnel, and HAZMAT personnel also provide assistance to the emergency room staff. This assistance is coordinated through the EM&R Office. An MOU has been established between the DOE Los Alamos Area Office (DOE/LAAO) and LAMC.

D.2 EMERGENCY EQUIPMENT AND COMMUNICATIONS

D.2.1 Emergency Equipment

20 NMAC 4.1, Subpart V, Part 264, Subpart D, revised November 1, 1995, requires a listing of all emergency response equipment available that can be used in the event of an emergency. Appendix D-1 lists all emergency equipment available at or near the waste management units addressed in this permit and in LANL's HAZMAT vehicles and trailers. Appendix D-1 also includes a list of supplemental emergency

equipment maintained by KSL, the LACFD, and occupational medicine personnel. The locations of emergency facilities are shown on Figure D-3.

D.2.2 Emergency Communications

Effective emergency response at LANL requires an efficient communication system that will integrate required personnel into the emergency response. The initial phase of an emergency will involve a small number of individuals at the affected area and notification of the Duty Emergency Manager. For small scale emergencies, local communication equipment/systems will be utilized. When responding to hazardous or mixed waste emergencies, the EM&R Office provides communications between response units and emergency organizations.

D.2.2.1 Emergency Central Alarm Station

The LANL emergency CAS is located at TA-64-1. This station is manned by PTLA personnel 24 hours a day and is equipped with telephones (including direct-line telephones), medium- and short-range radios, a National Warning System (NAWAS) station, and an emergency power system. The fire alarm board at the control room gives the location of automatic and manual fire alarm equipment. The CAS receives alarms from several sources and, in turn, notifies the Duty Emergency Manager of a hazardous or mixed waste emergency. Sources include:

- Telephone communication (911)
- Automatic fire alarms
- Manual pull alarms
- Computer interface (to warn of critical events at selected facilities)
- Security alarms
- Radio communications.

Upon receipt of an alarm, the CAS operator then notifies the LACFD and the Duty Emergency Manager. The Emergency Manager, the HMGS, the EOC communicator, and/or the CAS operator may request emergency response groups to respond. Should the LANL 911 system fail, the Los Alamos County System, located at the LACPD Station, will be used to activate emergency response groups.

D.2.2.2 Utilities Control Center

KSL personnel maintain the UCC at TA-3-223. This facility is maintained 24 hours a day. Alarms at this facility are connected to LANL experiments, equipment, and/or buildings to record outages and hazardous conditions. Any conditions that activate these alarms will be reported immediately to building management or to the CAS operator for notification and response.

D.2.2.3 Additional Communication Systems

Internal communication systems at LANL include:

- The Centrex telephone system
- A telephone paging system
- A variety of FM VHF simplex repeater and trunked radio systems, including:

- Multiple base stations
- Mobile and hand-held units
- Links to New Mexico public safety agencies

- A UHF radio system, including:
 - Multiple antenna sites
 - Mobile and base units
 - Links with the LACPD, the LACFD, and the State Medical System

- A 400-megahertz trunked radio system that includes a link with the LACFD

- Transmission and reception (through EOC) for:
 - Secure telephone
 - Secure fax
 - Secure still video

- Access to all radio systems outlined above (through EOC).

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

- A Centrex telephone system
- Private telephone lines (if Centrex fails)
- Two NAWAS stations
- A link to KRSN radio (local radio station)
- The local cable television
- A Community Alert Network.

The LANL EOC, maintained by the EM&R Office, operates radio systems on key LANL and off-site channels. Emergency personnel responding to on-site incidents have the benefit of wide-area radio coverage using EOC facilities. After hours, the Duty Emergency Manager is responsible for activating whatever support personnel, equipment, or services are needed.

D.3 CONTINGENCY PLAN IMPLEMENTATION

The following sections discuss guidelines used to implement this contingency plan, for emergency notifications, and for Emergency Manager actions in various types of emergencies.

D.3.1 Guidelines For Implementation

The decision to implement this contingency plan depends upon whether an imminent or actual incident involving a release of hazardous or mixed waste to the environment could threaten human health or the environment. The Duty Emergency Manager will use the guidelines listed below to decide whether to implement this plan.

This contingency plan will be implemented immediately in the following situations involving releases or potential releases of hazardous or mixed waste:

- Spills:

- If a hazardous or mixed waste spill cannot be contained with secondary containment or application of sorbents.
- If precipitation threatens to move spilled material off site.
- 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.
- If an earthquake or other natural disaster threatens containment integrity.
- Explosions:
 - If an unplanned explosion involving hazardous or mixed waste occurs (except at TA-14, TA-15, TA-16, TA-36, and TA-39).
 - If an imminent danger of an explosion involving hazardous or mixed waste exists.
- Fires:
 - If a fire involving hazardous or mixed waste occurs (except planned burning of HE waste).
 - If any building, grass, forest, or nonhazardous waste fire exists that threatens to volatilize or ignite hazardous or mixed waste.

D.3.2 Emergency Notification

During working hours, immediately upon discovery of an imminent or actual incident involving hazardous or mixed waste, on-site personnel will notify line management and the EM&R Office. During nonworking hours, personnel will report all incidents involving hazardous or mixed waste to the Duty Emergency Manager or the CAS operator. In the case of fire involving hazardous or mixed waste, notification of these individuals is superseded by the LANL fire alarm system. A fire is reported by dialing 911 (from telephone exchanges 667 and 665) or 667-7080 (from all exchanges), activating automatic alarms, or activating a fire alarm pull box. All fire alarms alert the CAS operator, the LACFD, and PTLA. In case of a fire involving hazardous or mixed waste or a hazardous or mixed waste unit, the CAS operator will contact the Duty Emergency Manager.

Upon recognition of a hazardous or mixed waste emergency, the first arriving emergency-trained person will become the temporary IC. Once the EM&R Office is notified of the emergency, the Duty Emergency Manager will proceed to the scene and be briefed by the temporary IC, building/area personnel, and/or other emergency units/teams. The Emergency Manager may then assume the position of IC. If necessary, the IC may recommend that the EOC be activated and that the necessary members of the emergency management team be determined. The IC will form a UC and contact the HMGS. The HMGS will notify the appropriate emergency response groups. The IC may determine from the list of response groups described in Table D-1 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.

The EM&R Office will be notified of any potential hazardous or mixed waste emergency (e.g., spills, fires, explosions). The IC and the HMGS 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 is being

or has been generated and/or released. HAZMAT, hazardous waste compliance personnel, and waste management groups within Waste Services have the expertise to determine the nature and extent of contamination and the characteristics of the hazardous or mixed waste involved.

D.3.3 Emergency Manager Actions

Upon notification of an incident, the Duty Emergency Manager may:

- Proceed directly to the scene.
- Call the HMGS.
- Assess the nature of the incident (e.g., through communication with the temporary IC).
- Assume incident command.
- Make an initial assessment of the incident and, in conjunction with the UC, obtain resources to determine the source, quantities, and types of hazardous or mixed waste involved and the areal extent of any released materials.
- Based on the guidelines in Section D.3.1 of this plan, determine if implementation of this contingency plan is warranted.
- Recommend activation of the EOC, if necessary.

Upon deciding to implement this contingency plan, the IC will, when appropriate:

- 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 Group Leader or designee has not already accomplished evacuation of the area, the IC will initiate evacuation of the immediate area.
- Determine if evacuation of the local area is advisable and, if so, immediately notify appropriate response groups and the LACPD, if appropriate. The IC may activate one or more of the following community alert mechanisms: the Community Alert (telephone) Network, the KRSN radio remote input system, or the cable television capture system.
- Notify required response personnel and DOE/LAAO. In the case of fire, the IC will confirm that the LACFD Senior Officer at the scene is aware of the special hazards associated with hazardous or mixed waste.
- Warn the remaining on-scene and response personnel of imminent or actual hazards using internal radio communication systems or the public address (PA) system. A radio/PA system at key facilities throughout LANL may be used for emergency notification.

- In emergency situations, the appropriate ESH representative will notify the New Mexico Environment Department (NMED) at (505) 827-9329 and the National Response Center at (800) 424-8802, reporting:
 - The name and telephone number of the ESH 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.
- Advise the response groups of hazards in order to minimize personnel exposure and expedite mitigation.
- When an emergency occurs at hazardous or mixed waste treatment units, ensure that CST waste management personnel or, in the case of TA-55, the TA-55 operations emergency response personnel monitor for leaks, pressure buildup, gas generation, or equipment ruptures.

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 include:

- Arranging for site cleanup.
- Providing for proper handling of recovered waste, contaminated soil, or contaminated surface/ground water.
- Providing for decontamination of equipment, as needed.
- Arranging for replacement and/or repair of equipment, as needed.
- Ensuring that testing is conducted to verify successful cleanup.

Within 15 days of the incident, DOE/LAAO will submit a report to the Secretary, NMED. The contents of this report will be generated by several LANL groups responding to the emergency, as detailed in Section D.12.

D.4 SPILLS

Sudden releases 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 presents a potential threat to human health or the environment, as listed in Section D.3.1, require implementation of this contingency plan.

Hazardous and mixed wastes are stored on site in a variety of containers including, but not limited to, 55-gallon drums, lab packs, tanks, fiberglass-reinforced plywood boxes, standard waste boxes, and small laboratory bottles. Volumes of hazardous or mixed waste stored or treated will vary from unit to unit. The general steps in handling hazardous and/or mixed waste spills are as follows:

- Isolate the immediate area and deny entry to all unauthorized personnel

- Contain the spill by spreading sorbents or forming temporary dikes to prevent further migration (performed by properly trained personnel, if safe)
- Monitor the spill area and sample the spilled waste and contaminated media
- Package the waste and contaminated media in sound containers
- Decontaminate the area and all involved equipment and personnel (follow by testing to assure adequate cleanup)
- Remove the waste and contaminated media (performed by appropriate waste management personnel).

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 before the Emergency Manager arrives, a qualified member of the affected area's operating group will serve as the temporary IC.

The emergency preparedness procedures related to flammable organic solvent spills require stabilization of the spilled material with an organic solvent spill kit. Other chemical spills are to be stabilized using acid and caustic spill kits or by the addition of sorbents. During spill control and cleanup, all personnel will wear personal protective equipment (PPE). Industrial hygiene and safety personnel will conduct monitoring to ensure that chemical exposure is minimized. Radiation protection personnel will conduct health physics monitoring whenever mixed waste is involved to ensure that radiation exposure is also minimized. The stabilized 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 waste storage and/or treatment 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 analysis shows that the runoff does not exhibit the characteristic (i.e., ignitability, corrosivity, reactivity, and/or toxicity), then 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 spills if it is known to be compatible with the spilled material. Approved drums or packaging will be used to collect all spilled material and contaminated sorbent. For corrosives, the drums will be lined with polyethylene drum liners. Appendix D-1 lists emergency equipment available for spill control at each waste management unit addressed in this permit. Appropriate waste management personnel will determine the ultimate disposition of any contaminated sorbent or waste material, according to RCRA regulatory requirements.

D.4.2 Decontamination Verification

Decontamination will be accomplished at the spill site. After the spilled material has been sorbed, the material will be containerized. If the spill occurs on a cemented 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) will be sorbed with a compatible, nonbiodegradable sorbent and will be

containerized. If a spill is from an identifiable source, then the spilled material will be analyzed for the hazardous waste constituents known to be components of the waste managed at that unit. The appropriate analytical method(s) given in Table D-4 will be utilized. If the spill is from other than an identifiable source, then the spilled material will be analyzed for all of the parameters listed in Table D-4. All personnel conducting decontamination verification will wear PPE. Radiation protection personnel will conduct health physics monitoring whenever mixed waste is involved to ensure that radiation exposure is minimized. Any hazardous or mixed waste collected from decontamination activities will be handled appropriately.

In order to establish baseline data, a sample of decontamination water or solvent and nonbiodegradable sorbent material will be taken prior to the start of the decontamination effort. A sample of the material used to sorb the final wash water will then be taken. No hazardous waste constituents should be present in this sample at levels above those found in the baseline data. If the sample exhibits any of the characteristics of a hazardous waste as defined in 20 NMAC 4.1, Subpart II, Part 261, Subpart C, revised November 1, 1995, or if a hazardous constituent listed in 20 NMAC 4.1, Subpart II, Part 261, Appendix VIII, revised November 1, 1995 (and not detected in the baseline data), is present above established health-based levels, the decontamination procedure will be repeated. An alternative demonstration of decontamination may be proposed and justified to NMED, who will evaluate the proposed alternative in accordance with the standards and guidance then in effect. If the proposed alternative is accepted, decontamination levels will meet the levels approved by NMED. Each sample will be collected with an appropriate sampling device (e.g., thief or trier) as specified in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" (EPA, 1992).

If the spill occurs on soil, any free liquid present will be sorbed with a compatible nonbiodegradable sorbent, and the resulting material will be containerized. For such a spill, all contaminated soil will be excavated and containerized. Industrial hygiene and safety personnel will conduct industrial hygiene monitoring, and if mixed waste is involved, radiation protection personnel will conduct health physics monitoring to minimize exposure during soil removal operations. To establish comparative background data, one or more samples will be collected from an unaffected area near the spill site. The spill site will then be characterized, and the data will be compared to the background data to ensure that all contaminated material has been removed.

If a spill occurs in an area with sealed floors, verification sampling will be performed after decontamination. Swipe samples or other types of sampling appropriate for the contaminant will be collected at random in the area and analyzed. For a spill that occurs in an area that does not have sealed floors, random samples of the floor material, such as concrete chips, will be collected and analyzed for decontamination verification. Contaminated floor material will be removed if the level of contamination remains above that detected in the background data after repeated decontamination attempts. If a spill occurs on asphaltic concrete, the asphaltic concrete will be decontaminated, and a sample of the final wash water and/or the material used to sorb the final wash water will be collected and analyzed for decontamination verification. Contaminated asphaltic concrete that cannot be decontaminated will be removed.

D.5 EXPLOSION

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 contingency plan is required whenever a sudden release that cannot be contained or that presents a threat to human health or the environment occurs as a result of an explosion.

In the case of an explosion at LANL, all personnel will immediately evacuate the area. Any injured personnel will be decontaminated at the site, if required and if time allows. An LACFD ambulance will transport these personnel to the occupational medicine facility or 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 the EM&R Office immediately so that the Emergency Manager can ensure that all necessary emergency response personnel are alerted. The LACFD is notified automatically upon central alarm system 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.

If a fire results from an explosion, the LACFD Senior Officer will, upon arrival at the scene, evaluate all available information and determine the appropriate firefighting methods and tactics. The LACFD Senior Officer will direct firefighting operations under the general direction of the IC.

D.6 FIRE

Fires and resultant releases of hazardous or mixed waste may result in a significant threat to human health or the environment. Implementation of this contingency plan is required whenever a fire incident results in a sudden release of hazardous or mixed waste that cannot be contained or that presents a threat to human health or the environment.

Depending on the size of the fire and the fuel source, portable fire extinguishers may be used. However, LANL policy does not encourage the use of portable fire extinguishers by employees unless properly trained. Instead, LANL policy encourages immediate evacuation of the area and notification of the LACFD. For any fire, including a fire that involves hazardous or mixed waste, the responsible Group Leader and the EM&R Office must be contacted immediately. The Emergency Manager will alert the LACFD and all other necessary emergency response personnel. If the fire spreads or increases in intensity, all personnel must evacuate to an area designated by the responsible Group Leader, Group Leader designee, or 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.

Upon arrival at the scene, the LACFD Senior Officer will evaluate all available information and determine the appropriate firefighting methods and tactics. The LACFD Senior Officer will direct firefighting operations under the general direction of the IC.

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, loss of secondary containment integrity, and incomplete treatment.

D.7.1 Responsibility

The operating group is 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 the EM&R Office may provide assistance in mitigating releases. Any correction methods for nonsudden releases that have resulted in an impact to the environment will be coordinated with the NMED.

D.7.2 Nonsudden Releases

Not all failures can be predicted. In general, the response to a nonsudden release will be (1) to contain the release, (2) to correct the cause of the release, and (3) to clean up any release to a level that protects human health and the environment.

The operating group will conduct regularly scheduled inspections to detect failure of containment at the hazardous and mixed waste units addressed in this permit. Inspections of these units will be conducted to ensure that containers and tanks are not leaking. In addition, the operating group will inspect the secondary containment systems regularly to ensure that the integrity of the containment systems has not deteriorated. If an inspection reveals that containers or tanks are leaking or that secondary containment has deteriorated, operating group personnel will ensure that maintenance or replacement of containment is performed, as appropriate.

D.7.3 Nonsudden Release Surveillance

In addition to routine inspection and site-specific sampling and testing, LANL has established an area-wide environmental monitoring network maintained by Environmental Protection Division. Monitoring and sampling locations for various types of measurements are organized into three main groups. Regional monitoring stations located within the five counties surrounding Los Alamos County are placed up to 80 kilometers (50 miles) from LANL. These stations serve to determine background conditions. Perimeter stations, located within approximately 4 kilometers (2.5 miles) of the LANL boundary, document conditions in residential areas surrounding LANL. On-site stations, most of which are accessible only to employees during normal working hours, are within the LANL boundary.

Routine surveillance conducted at these stations includes measuring radiation and collecting samples of air particulates, surface waters, ground waters, 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 background levels, and for radiation dose calculations.

D.8 EXPOSURE TO HAZARDOUS OR MIXED WASTE

If a person is exposed to hazardous or mixed waste, the affected person, a co-worker, or line management will notify the EM&R Office. Appropriate first aid should be administered immediately. An EM&R Office representative will notify HAZMAT directly, as soon as possible, so that exposure levels and decontamination requirements can be established. The injured person will then be quickly transported to the occupational medicine medical facility or to LAMC for evaluation. If possible, the material involved in the injury will be ascertained and the information given to the medical staff.

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

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

The affected person will be transferred to the occupational medicine medical facility or to LAMC. A radiation protection, industrial hygiene and safety, or HAZMAT representative will attempt to ascertain what, if any, exposure occurred and what corrective measure is appropriate.

D.9 EVACUATION

A facility will be evacuated upon the voice command to evacuate the area or upon the sounding of the evacuation or fire alarm.

D.9.1 Emergency Process Shutdown Prior To Evacuation

Personnel are instructed to shut down equipment prior to evacuating a building unless an immediate building 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. The team will be equipped with the proper equipment, clothing, and breathing apparatus. If they are on location, radiation protection personnel, industrial hygiene and safety personnel, and/or HAZMAT will provide advice and assistance. Process-shutdown procedures apply mainly to hazardous or mixed waste treatment units only.

D.9.2 Evacuation Plan

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. Table D-5 lists the criteria for evacuation, persons responsible for initiating evacuations, and reentry conditions.

To initiate the evacuation of a building/area, the evacuation or fire alarm is sounded and/or the PA system may be used. Evacuation alarms cannot be silenced and reset by site personnel. Only the Fire Alarm Maintenance Section at 667-4027 and the LACFD Battalion Chief at 667-7026 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.

In the event of the evacuation of a building, an outbuilding, or an outlying work area, the responsible Group Leader or designee will establish 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 Group Leader or designee can oversee evacuation operations and work to prevent further spread of the hazard.

As personnel exit an affected building/area, a primary sweep of the building/area will 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 follows:

- Person discovering the accident or emergency will call 911 and ensure that line management and the EM&R Office are notified.
- Site-specific BEPs and/or emergency action procedures will be followed concerning evacuation, sweep, personnel accountability, and equipment shutdown procedures.

For a small-scale evacuation, a responsible on-site person may direct the evacuation. For a large-scale evacuation, the central alarm system may be activated. The EM&R Office will be notified immediately and will dispatch the Duty Emergency Manager. A responsible on-site person may begin the evacuation process until the Duty Emergency Manager arrives at the scene to assume that responsibility.

D.10 SALVAGE AND CLEANUP

Appropriate representatives from radiation protection, industrial hygiene and safety, and hazardous waste compliance personnel will survey the affected area before salvage and cleanup begin. They will conduct visual inspections and sampling 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 breathing apparatus and protective clothing 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 the Recovery Manager, who will:

- 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 LANL. Waste management personnel will be responsible for determining the final disposition of the waste. This determination will be made in compliance with RCRA TSD standards.
- 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.
- 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.
- 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.

The Recovery Manager is the functional equivalent of the RCRA Emergency Coordinator for post-emergency actions.

Prior to resuming operations, facility management will verify that the previously mentioned tasks have been performed. The owner/operator (DOE/LAAO) will notify appropriate state and local authorities that cleanup procedures are completed and that emergency equipment is clean and fit for its intended use.

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 post-emergency actions include cleanup operations, repairing vital equipment, or interim hazard-removal operations (such as arranging for the demolition of unstable walls). The services of the affected operational organizations, Environmental Protection Division personnel, radiation protection personnel, industrial hygiene and safety personnel, KSL, and other on-site resources will also be used to estimate cleanup costs and operational impact.

D.11 POST-EMERGENCY ASSESSMENT

When the emergency is over, the cause of the emergency and the effectiveness of the response are investigated in an effort to prevent future emergencies and to facilitate more effective responses to them. Following each event requiring the implementation of this contingency plan, the EM&R Office will schedule and conduct a critique with representatives from all response groups, from representatives in the building/area in which the emergency occurred, and from LANL management to determine the adequacy of the response.

D.12 EMERGENCY RESPONSE RECORDS AND REPORTS

Any emergency that requires implementation of the contingency plan will be documented by the Group Leader or designee responsible for the hazardous or mixed waste unit, and reported in writing within 15 days to the NMED. The incident report, submitted by DOE/LAAO, will include the following data:

- Name, address, and phone number of owner or operator
- Name, address, and phone number of the facility
- Date, time, and type of incident (e.g. fire, explosion, spill)
- Name of material(s) involved
- Quantity of material(s) involved
- Extent of injuries (if any)
- Assessment of actual or potential hazards to human health or the environment
- Estimated quantity and disposition of material recovered from the incident.

Various LANL personnel responding to the emergency will record the details of any incident requiring implementation of this plan. The CAS operator, the EOC communicator, the Emergency Manager, and/or the Group Leader or designee responsible for the hazardous or mixed waste management area in which the emergency occurred will record the date, time, location of the incident, wastes/materials involved, injuries (if any), property damage (if any), and a detailed description of the incident. This information will be maintained in the facility operating record. Contractor assurance office will supply information concerning any follow-up actions. Appropriate LANL personnel will provide details regarding the removal and disposition of hazardous and mixed wastes associated with the emergency.

D.13 CONTINGENCY PLAN AMENDMENT

This contingency plan will be reviewed periodically by the EM&R Office, waste management groups, and hazardous waste compliance personnel and, if necessary, will be reviewed as appropriate by HAZMAT. The plan will be amended immediately if determined to be inadequate to handle releases (spills, explosions, and/or fires), and whenever:

- The facility permit is revised
- There is significant 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
- The list of Emergency Managers changes
- The list of emergency equipment changes significantly.

This plan is a controlled document distributed by hazardous waste compliance personnel. Amendments to this contingency plan will be distinguished by the revision number and date of revision noted in the upper right corner of each page. Amendments will be issued to all contingency plan holders and will include a cover letter that describes the plan changes and the rationale for those changes.

TABLE D-1
RESPONSE GROUPS AND AGENCIES AVAILABLE TO THE
EMERGENCY MANAGEMENT AND RESPONSE OFFICE FOR
GUIDANCE AND/OR EMERGENCY ASSISTANCE

| LANL ^a -Controlled Response Group | Telephone | Responsibilities |
|---|-----------|---|
| Waste Disposition Project | 606-1788 | Provides guidance on proper treatment, storage, and off-site shipment of hazardous and mixed waste. |
| Health Physics Personnel | 665-7797 | Provides routine guidance on radiological decontamination. Provides routine site evaluation and monitoring to determine the nature and extent of contamination (radiological). |
| Occupational Medicine | 667-0660 | Provides emergency medical treatment. |
| Industrial Hygiene and Safety Personnel | 606-0295 | Provides guidance on industrial hygiene equipment and on operational safety. |
| | 667-5231 | Provides routine site evaluation/support field testing to determine the nature and extent of contamination (chemical). |
| Contractor Assurance Office | 665-8206 | Reports occurrences and tracks follow-up actions. |
| Hazardous Materials Response (HAZMAT) | 665-5237 | Provides emergency site evaluation/field monitoring (chemical and radiological). Specifies protective clothing and equipment. Dispatches Hazardous Materials Response Team. Provides support for chemical, radiological, hazardous, and mixed waste incidents and decontamination of responders and response equipment. |

TABLE D-1
RESPONSE GROUPS AND AGENCIES AVAILABLE TO THE
EMERGENCY MANAGEMENT AND RESPONSE OFFICE FOR
GUIDANCE AND/OR EMERGENCY ASSISTANCE
(continued)

| LANL ^a -Controlled Response Group | Telephone | Responsibilities |
|--|----------------------|---|
| Meteorology and Air Quality Personnel | 667-6952 | Provides information on meteorological conditions. |
| Water Quality Personnel | 665-0453 or 7-0666 | Provides information on hydrologic conditions. |
| Hazardous Waste Compliance Personnel | 667-0666 or 665-0453 | Provides guidance on regulatory requirements. Conducts field surveys to determine spread of contamination and adequacy of cleanup. |
| Ecology Personnel | 667-6952 | Provides information on biotic conditions. |
| TA-55 Operations Division | 667-3030 | Provides initial emergency site evaluations at Technical Area (TA) 55 and conducts activities related to the prevention, notification, and control of emergencies at TA-55. In the event of an emergency at TA-55, monitors for leaks, pressure buildup, gas generation, or equipment ruptures, if necessary. Maintains and operates TA-55 Emergency Response Team. |
| High Explosives Area Access Control | 667-6844 | Provides information and/or assistance during emergencies involving units at TA-16. |
| Dynamic and Energetic Materials Division | 667-5653 | Provides information and/or assistance during emergencies involving units at TA-14, TA-36, and TA-39. |

TABLE D-1
RESPONSE GROUPS AND AGENCIES AVAILABLE TO THE
EMERGENCY MANAGEMENT AND RESPONSE OFFICE FOR
GUIDANCE AND/OR EMERGENCY ASSISTANCE
(continued)

| LANL ^a -Controlled Response Group | Telephone | Responsibilities |
|---|-----------|---|
| PTLA, Protection Technology Los Alamos | 667-4531 | Provides traffic control, security. |
| KBR-Shaw-LATA (KSL) | 667-5702 | Dispatches maintenance personnel and equipment. Assists in waste cleanup under direction of Recovery Manager. |

TABLE D-1
RESPONSE GROUPS AND AGENCIES AVAILABLE TO THE
EMERGENCY MANAGEMENT AND RESPONSE OFFICE FOR
GUIDANCE AND/OR EMERGENCY ASSISTANCE
(continued)

| Non-LANL ^a -Controlled Response Group | Telephone | Responsibilities |
|---|-----------------|---|
| Los Alamos County Fire Department | 662-8301 911 | Dispatches firefighting personnel, equipment, and Emergency Medical Services. |
| Los Alamos County Police Department | 662-8222 | Provides traffic control on public access roads. |
| Los Alamos Medical Center ^b | 662-4201 | Provides medical services. Provides and maintains Emergency Room. |

^a Los Alamos National Laboratory.

^b Medical services related to hazardous and mixed waste injuries are provided under the direction of LANL occupational medicine personnel.

Deleted: July 24, 2007

**TABLE D-2
 EMERGENCY MANAGEMENT AND RESPONSE OFFICE
 EMERGENCY MANAGERS^a**

| Emergency Managers | Laboratory Telephone | Home Telephone | Home Address |
|------------------------------|----------------------|--|---|
| ^b Brenda Andersen | 667-6211 | 662-4173 699-1144 | 3926 A Alabama, Los Alamos, NM |
| Manny L'Esperance | 667-6211 | 660-9799 699-1383 | 13 Paseo Patron, Santa Fe, NM |
| Joe Boyet | 667-6211 | 753-6108 412-9997 | 125 Private Rd. 1153, Espanola, NM |
| Ron Huerta | 667-6211 | 852-0286 412-8434 | P.O. Box 923, Alcalde NM, |
| Wil Martinez | 667-6211 | 351-2340 412-8135 | 120A RA CR 92, Chimayo, NM |
| Dave McClard | 667-6211 | 412-8945 699-0803 | 2220 A 36 Street, Los Alamos, NM |

Deleted: .

Deleted: 455-9138

^a To ensure immediate response, the Emergency Manager may be reached at the Emergency ~~Operations Support Center~~ (667-6211).

Deleted: Management and Response Office

^b Primary contact

Deleted: or after hours, 667-7080

**TABLE D-4
WASTE ANALYSIS PARAMETERS AND TEST METHODS^a**

| Parameter | Test Method | Reference ^b |
|--------------------------|--|---|
| Ignitability | Pensky-Martens closed-cup method | (L) SW1010 (L) ASTM D93-80 |
| Reactivity | Test method to determine hydrogen cyanide released from waste Test method to determine hydrogen sulfide released from waste | (L, S) HCN Test Method, Section 7.3 (L, S) H ₂ S Test Method, Section 7.3 |
| Corrosivity | Electrometric (pH of aqueous solution) | (L) SW9040B |
| Toxicity characteristic: | Toxicity characteristic leaching procedure (TCLP) extraction | (L, S) SW1311 |
| Metals: | Graphite furnace atomic absorption (AA) spectroscopy, gaseous hydride AA, or direct aspiration AA | |
| Arsenic | | (L, S) SW7060A, SW7061A |
| Barium | | (L, S) SW7080A, SW7081 |
| Cadmium | | (L, S) SW7130, SW7131A |
| Chromium | | (L, S) SW7190, SW7191 |
| Lead | | (L, S) SW7420, SW7421 |
| Selenium | | (L, S) SW7740, SW7741A |
| Silver | | (L, S) SW7760A, SW7761 |
| Mercury | Manual cold-vapor technique | (L) SW7470A, (S) SW7471A |
| Volatile organics | Gas chromatography(GC)/mass spectrometry (MS) GC/MS capillary column technique | (L, S) SW8240B (L, S) SW8260A |

Refer to footnotes at end of table.

TABLE D-4
WASTE ANALYSIS PARAMETERS AND TEST METHODS^a
(continued)

| Parameter | Test Method | Reference ^b |
|---------------------------|---|---|
| Semivolatile organics | GC/MS GC/MS capillary column technique | (L, S) SW8250A (L, S) SW8270B |
| Organochlorine pesticides | TCLP extraction and GC | (L, S) SW8080A |
| Chlorinated herbicides | | (L, S) SW8150B |
| Heat value | Bomb calorimeter | (L) A006, ASTM D240 |
| Organic chloride | Halide titration of combustion residue | (L, S) A004, ASTM D2361 |
| Ash content | Residue after combustion in muffle furnace | (L) A001, ASTM D482 (S) A001, ASTM D3174 |
| Cyanide, free and total | Distillation and colorimetric ultraviolet | (L, S) SW9010A, SW9012 |
| Total chromium | Colorimetric method for hexavalent chromium | (L, S) SW7196A |
| Sulfide | Colorimetric titration | (L, S) SW9030A |

Refer to footnotes at end of table.

TABLE D-4
WASTE ANALYSIS PARAMETERS AND TEST METHODS^a
(continued)

| Parameter | Test Method | Reference ^b |
|-----------------------------|---|----------------------------|
| Total metals ^c : | Acid digestion | (L) SW3010A, (S) SW3050A |
| | Inductively coupled plasma atomic emission spectroscopy | (L, S) SW6010A |
| Arsenic | | (L, S) SW6010A |
| Barium | | (L, S) SW6010A |
| Beryllium | | (L, S) SW6010A |
| Cadmium | | (L, S) SW6010A |
| Chromium | | (L, S) SW6010A |
| Lead | | (L, S) SW6010A |
| Nickel | | (L, S) SW6010A |
| Selenium | | (L, S) SW6010A |
| Silver | | (L, S) SW6010A |
| Thallium | | (L, S) SW6010A |
| Zinc | | (L, S) SW6010A |
| Mercury | Manual cold-vapor technique | (L) SW7470A (S) SW7471A |
| Free liquids | Paint Filter Liquids Test | (L, S) SW9095 |

Refer to footnotes at end of table.

TABLE D-4
WASTE ANALYSIS PARAMETERS AND TEST METHODS^a
(continued)

- ^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, 1992, "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.

**TABLE D-5
EVACUATION DETERMINATION AND REENTRY CONDITIONS**

| Reason for Evacuation | Evacuation Determination Made by | Reentry Conditions ^a |
|--|--|--|
| Fire | Fire or evacuation alarm, Group Leader or alternate, Lead Engineer, Senior Staff Member present, Senior Technician, or Emergency Manager | Following survey by the Chief Fire Officer, health physics, industrial hygiene and safety, and/or HAZMAT ^b , and R&D ^c supervision |
| Explosion | Same as above | Same as above |
| Loss of ventilation | Group Leader or alternate, Senior Staff Member, Lead Engineer, or Senior Technician | Following survey by health physics and/or industrial hygiene and safety, and R&D supervision |
| Loss of electric power | Same as above | Same as above |
| Extensive contamination | Same as above or health physics | Same as above or HAZMAT |
| Airborne contamination | Same as above or Radiation Monitor | Same as above or HAZMAT |
| Escape or release of toxic or hazardous gas or fumes | Group Leader or alternate, Senior Staff Member, Lead Engineer, Senior Technician, or Emergency Manager | Same as above plus in or HAZMAT |
| Bomb or bomb threat | EM&R ^d or PTLA ^e representative, R&D Section Leader or alternate, Senior Staff Member, or Lead Engineer | Following determination by the Emergency Manager or HDT ^f Leader |

^a All reentries are authorized by the Incident Commander.

^b "HAZMAT" refers to the Hazardous Materials Response.

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

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

^e "PTLA" refers to Protection Technology Los Alamos.

^f "HDT" refers to the Hazardous Devices Team.

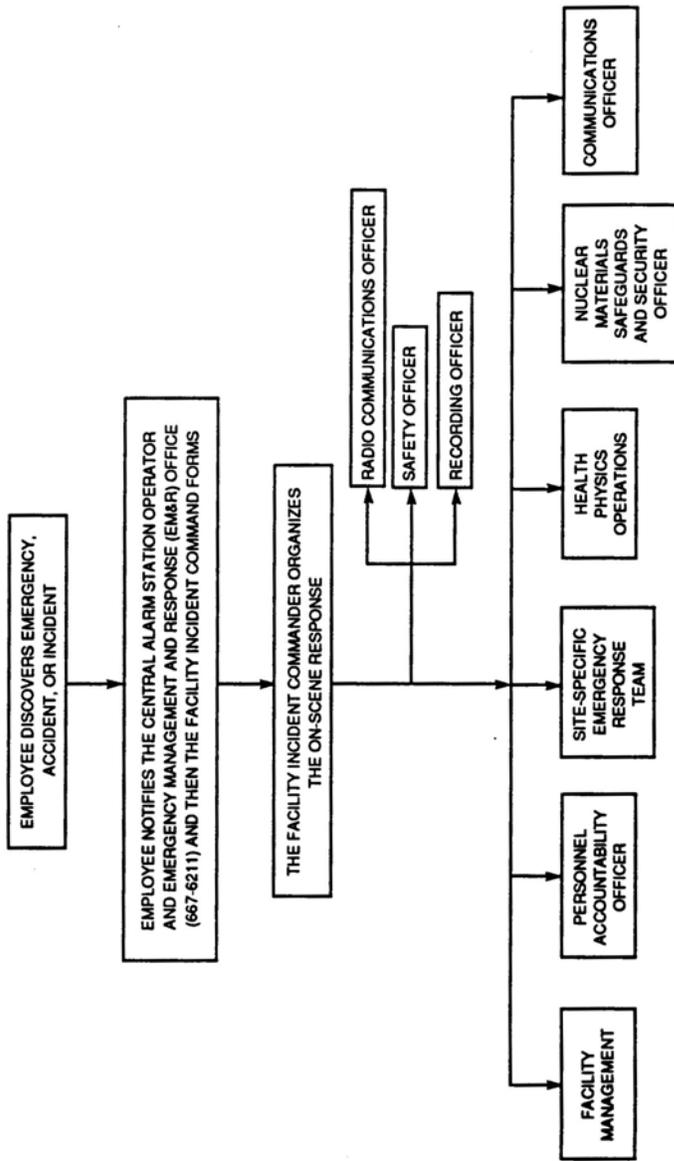


FIGURE D-1
EMERGENCY NOTIFICATION STRUCTURE FOR SITE-SPECIFIC EMERGENCY RESPONSES

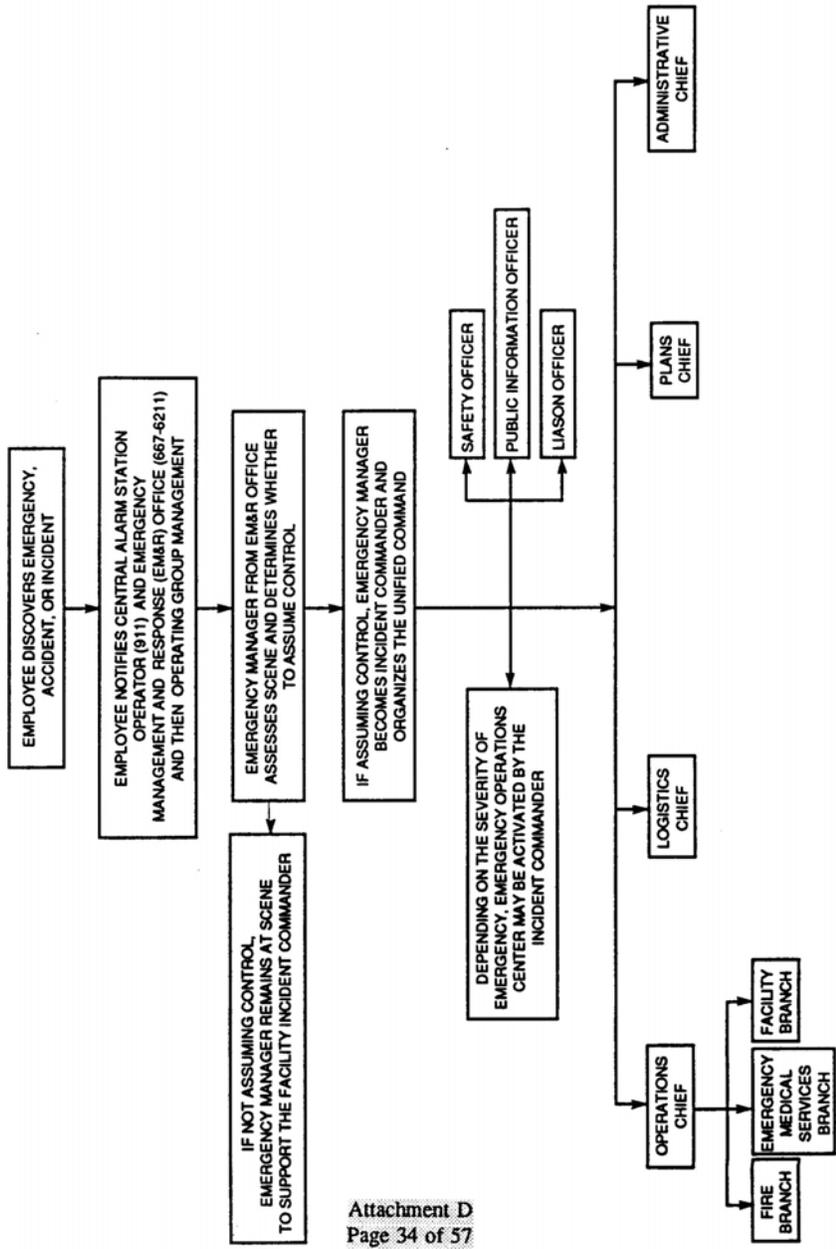
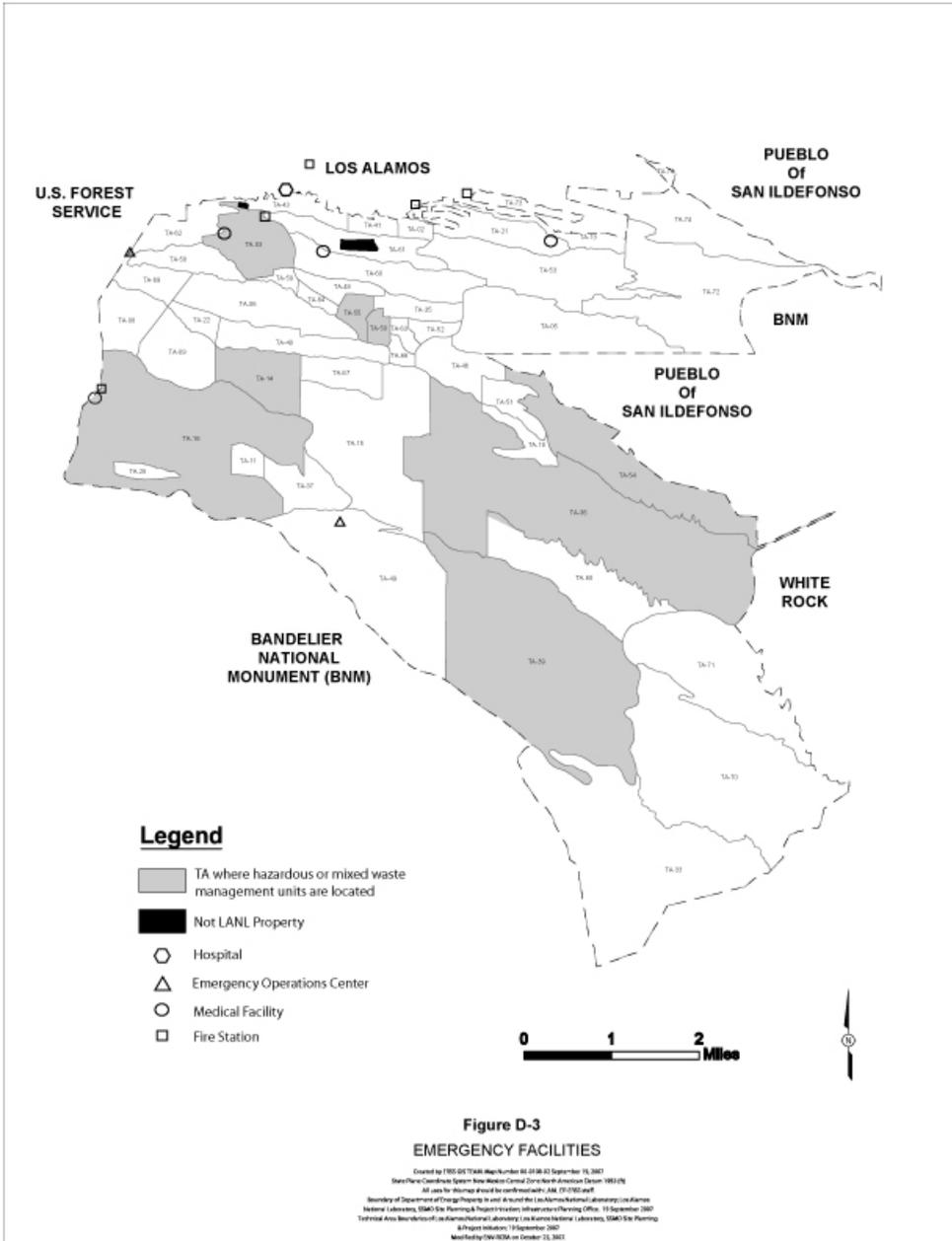


FIGURE D-2
 GENERAL HAZARDOUS AND MIXED WASTE EMERGENCY NOTIFICATION STRUCTURE

Attachment D
 Page 34 of 57



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
(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
(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
(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 fenceline crash gates at Area L, at the northeast end of
TA-54-32, the exterior west end of TA-54-215, and at TA-54-62

Additional equipment includes two-way radios and cellular 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
(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
(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
(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
(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
(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
(continued)**

TA-54

Emergency equipment at TA-54-226, TA-54-229, TA-54-230, TA-54-231, TA-54-232, and Pads 9 & 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 Pads 9 & 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
(continued)**

**Emergency equipment at TA-54-226, TA-54-229, TA-54-230, TA-54-231, TA-54-232, and Pads 9 & 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 Pads 9 & 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
(continued)

Emergency equipment at TA-54-226, TA-54-229, TA-54-230, TA-54-231, TA-54-232, and Pads 9 & 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
(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
(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
(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
(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
(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.