

# ES&H manual

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## Environment, Safety, and Health

### Volume II

#### Part 22: Emergencies/Earthquakes/Fire

## Document 22.1 Emergency Preparedness and Response

Recommended for approval by the ES&H Working Group

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**New document or new requirements**

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- New document
- Major requirement change

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\* Major Revision

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## 22.1

### Emergency Preparedness and Response

#### 1.0 Purpose and Scope

The Lawrence Livermore National Laboratory (LLNL) bases its emergency preparedness and response planning processes on the hazards and potential consequences associated with each facility and its operation. As a result, the scope and extent of emergency planning is commensurate with the hazards involved with each facility. The Laboratory uses an emergency management system known as the Incident Command System, in accordance with the California Standardized Emergency Management System (SEMS) to respond to Operational Emergencies and to mitigate consequences resulting from them. Operational Emergencies are defined as unplanned, significant events or conditions that require time-urgent response from outside the immediate area of the incident that could seriously impact the safety or security of LLNL's employees, its facilities, or the environment. (See Appendix A for a list of acronyms, terms and definitions relating to this document.) This *Environment, Safety, and Health (ES&H) Manual* document describes the LLNL Emergency Management System and personnel responsibilities during Operational Emergencies that occur on LLNL property and those that take place offsite but could have a potential impact on LLNL. This document does not apply to emergency management for LLNL activities at the Nevada Test Site. The *LLNL Emergency Plan* (the "Emergency Plan"), summarized in Section 2.1 of this document, provides additional information.

#### 2.0 Emergency Planning

An Emergency Management Base Program is required at LLNL to ensure each facility has a fundamental emergency plan (evacuation, assembly, and accountability) and participates in a basic drill program. Formal emergency planning is based on projected consequences, is documented in hazard assessments, and follows guidance provided in an emergency plan and implementing procedures. Assessments include hazards, event scenarios, indicators, consequences, and possible emergency and response actions for facilities whose inventories exceed regulatory thresholds. The hazards described in the Emergency Preparedness Hazard Assessment (EPHA) are also described in detail in specific facility Integrated Worksheets/Safety Plans (IWS/SPs), Facility Safety Plans (FSPs), and Documented Safety Analyses (DSAs). These are modified as conditions change.

The Laboratory incorporates into its Emergency Plan a broad range of hazards, potential consequences, and lessons learned from simulated and actual emergencies that occurred at LLNL or other DOE facilities. The degree of emergency planning and preparedness for a particular facility directly corresponds to the type and scope of hazards and the potential for harm. Those facilities that have, or are in need of, an EPHA shall have a specific facility

emergency plan. To determine if an EPHA is needed, contact the appropriate ES&H Team or the Emergency Preparedness Section.

## 2.1 LLNL Emergency Plan

The Emergency Plan contains LLNL's Operational Emergency response policies, commitments, and institutional responsibilities for managing and recovering from emergencies. It is not possible to list in the Emergency Plan all events that could occur during any given emergency situation. However, a combination of hazard assessments, an effective Emergency Plan, and Emergency Plan Implementing Procedures (EPIPs) can provide the framework for responses to postulated emergency situations.

The Emergency Plan and EPIPs contain specific information for planning, responding to, mitigating, and recovering from Operational Emergencies that occur on LLNL property, or those that take place offsite but have a potential impact on LLNL. An Operational Emergency may be categorized according to the following designations:

- Health and safety.
- Environmental.
- Security and safeguards.
- Hazardous material.
- Offsite emergency affecting LLNL.
- Fire, emergency medical services, mass casualty, or other emergency at the discretion of the Duty Chief (see Section 3.1).

Of these categories, only Operational Emergencies involving hazardous materials are further classified as Alerts, Site Area Emergencies, or General Emergencies. However, Operational Emergencies affecting security and safeguards may also be further classified, based on the potential for a release of hazardous materials and the projected consequences.

The Laboratory's Emergency Plan is available at the following Internet address:

[http://www.llnl.gov/es\\_and\\_h/hsm/doc\\_22.01/113311.pdf](http://www.llnl.gov/es_and_h/hsm/doc_22.01/113311.pdf)

## 2.2 Self-Help Program

During a large-scale emergency situation, professional emergency personnel may be prevented from responding to all emergency needs in a timely manner. The Laboratory's Self-Help Program, managed by the Fire Department and designed for local response to a major earthquake, provides Laboratory personnel information on how to respond to large-scale emergency situations. As a part of the Self-Help Program, and in coordination with the

director Self-Help Coordinator, facility management shall have a Self-Help Plan that will, at minimum, include facility-specific information on:

- Facility evacuation routes and location(s) of assembly point(s).
- Personnel accountability.
- Personnel safety.
- First-aid response. (First-aid supplies, tools, preparedness information, and other materials are stored at each assembly point in special equipment lockers for use during large-scale emergencies. Recommended supply lists and vendors are available from the LLNL Self-Help Program Manager.)
- Facility damage identification and reporting.

This Self-Help Plan shall be incorporated as a section within existing Facility Safety Plans (FSP), referenced by the FSP, or developed as a stand-alone plan in the absence of an established FSP. The Self-Help Plan is separate from the facility specific emergency plan required for facilities having EPHAs.

### **3.0 Concept of Operation During an Emergency**

#### **3.1 General Concept of Operations**

The LLNL Fire Department responds to all non-security emergencies until the incident is stabilized. The Safeguards and Security Department performs a similar function for security incidents. In either event, a person, usually a senior-ranked member of the Emergency Response Team, is designated as the Incident Commander (IC) in accordance with SEMS. The IC manages the emergency response at the scene.

In addition, LLNL has authorized Laboratory Emergency Duty Officers (LEDOs) to take the actions necessary to protect the health and safety of employees, the public, and the environment, and to maintain the facility's security during abnormal and emergency situations. The LEDO serves as a consultant to the IC, the Director's Office, and cognizant senior management. The IC keeps the on-duty LEDO informed and maintains on-scene command and control until the situation has been stabilized and control has been turned over to appropriate personnel (e.g., ES&H Team and/or facility personnel).

The following are the general steps taken in the event of an emergency:

- Any person discovering an abnormal event/condition shall immediately notify Fire Dispatch [911 if calling from a Laboratory phone, or 1 (925) 447-6880 if calling from offsite or if using a cell phone] or their supervisor.

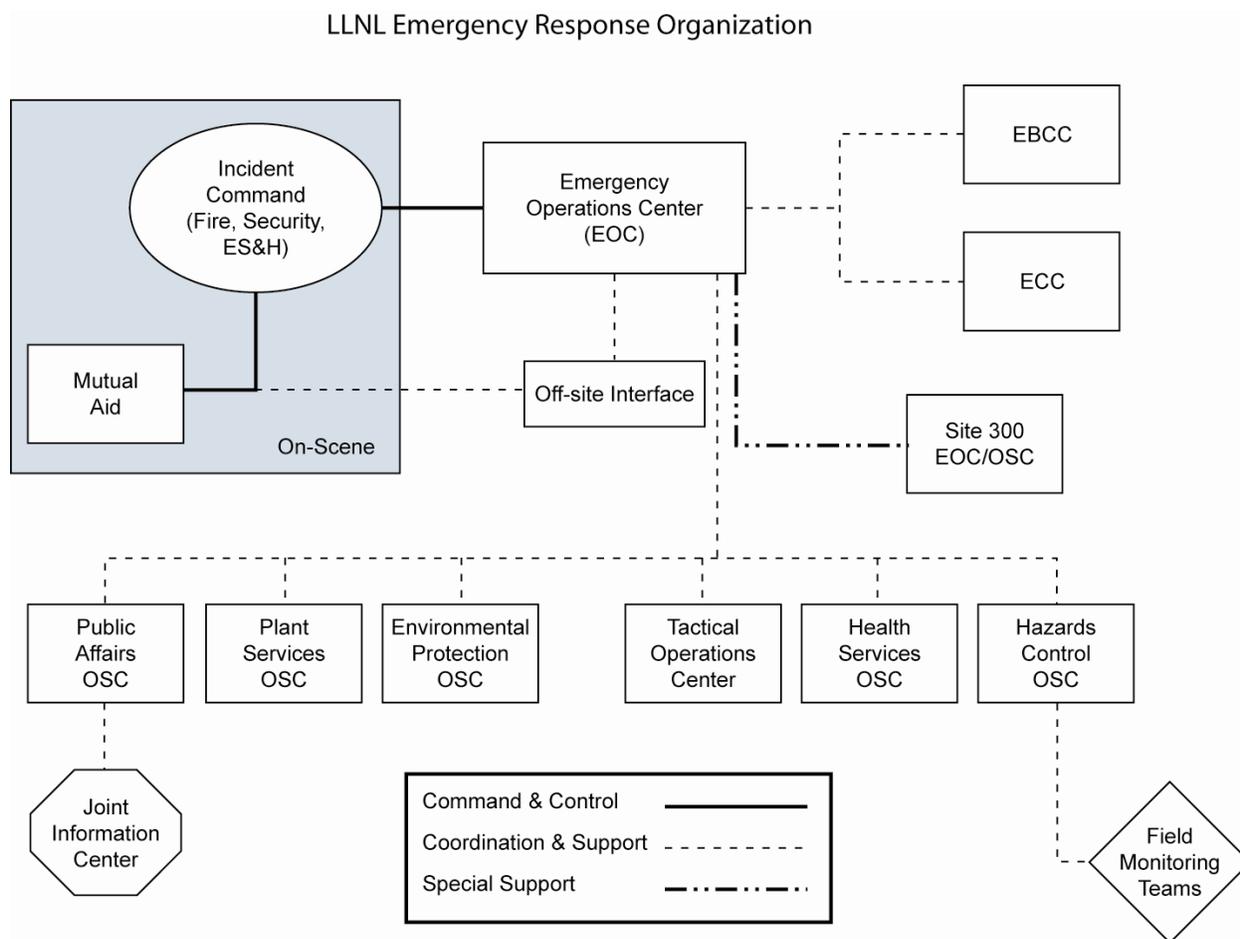
- Fire Dispatch is the 24-hour notification point for LLNL. Fire Dispatch initiates response by notifying appropriate onsite emergency resources, typically under the command/control of the IC.
- The IC/Duty Chief will gather information sufficient to determine the categorization/classification of the event/situation and implement initial protective actions and, if required, provide protective action recommendations to appropriate offsite authorities.
- Upon categorization of an Operational Emergency, the Duty Chief assumes the role of Emergency Director (ED), activates the appropriate level of the Emergency Response Organization (ERO), initiates appropriate notifications, including the LEDO, and manages the emergency as the ED until relieved by the EOC ED (see next bullet).
- During an Operational Emergency, the LEDO may activate the Emergency Operations Center (EOC), at which time the LEDO becomes the Emergency Director (ED). The ED, with the agreement of the IC, is responsible for overall command and control of the LLNL emergency response, determining and approving emergency classifications, protective actions onsite, protective action recommendations offsite, ensuring proper notifications, and approving termination of the Operational Emergency.
- During a localized Operational Emergency at Site 300, the Site 300 Manager or designated alternate serves as the ED. This ED coordinates the emergency activities of site workers and equipment and keeps the LEDO informed. The LEDO may choose to activate the EOC at the Livermore site for support of the Operational Emergency at Site 300.

## **4.0 Emergency Response Organization**

The LLNL ERO consists of a two-tiered organizational approach for responding to Operational Emergencies (see Figure 1). Emergency Management Teams at each level provide for command and control of the emergency response efforts. The IC is in charge at the scene and after the EOC is activated the ED or the EOC is in charge of the overall site-wide response efforts.

### **4.1 Livermore Site Command Structure and Activation**

When an Operational Emergency occurs, routinely designated LLNL emergency responders, such as the Fire Department, HazMat, medical/emergency medical services, ES&H Teams, and security/law enforcement provide on-scene response under the direction of the IC.



**Figure 1. LLNL Emergency Response Organization.**

The IC works closely with the area ES&H Team through the ES&H Team Leader to develop an incident action plan for controlling emergencies. This plan identifies health and safety requirements, strategic goals, and tactical objectives to protect life, the environment, and property. Under the direction of the IC, a liaison (e.g., ES&H Team Leader, deputy, or technician supervisor) for the cognizant ES&H Team will coordinate all ES&H activities at the emergency scene.

During normal working hours, ES&H Team workers respond to the emergency scene and report to the IC. After normal working hours, the off-shift health and safety technician responds to onsite emergencies and assumes the position of the ES&H Team liaison.

Emergency management, including policy, employee and public information, and support for Operational Emergencies is directed from the Emergency Operations Center (EOC) by the on-duty LEDO/ED. The on-duty LEDO becomes the Emergency Director in the EOC, and the back-up LEDO becomes the Response Manager. The Emergency Management Team (EMT) also works in the EOC and is comprised of senior management (or designees) from the

Environmental Protection Department, the Hazards Control Department, Plant Services, Public Affairs, and Safeguards and Security.

Operations Support Centers (OSCs) provide support to the EOC. The LEDO/ED may activate OSCs for the Environmental Protection, Hazards Control, Health Services, and Safeguards and Security Departments; Plant Services; the Public Affairs Office; and Site 300. During an Operational Emergency the OSC for Safeguards and Security is their Tactical Operations Center (TOC). Site 300 may use their OSC as an EOC if operating independent of the main site. The OSCs have internal plans outlining the operations specific to each OSC's response activities. These plans cover the following:

- OSC Operations including interface with the EOC, and other OSCs.
- Staffing levels and assignments (e.g. Field Monitoring Teams for HCD OSC).
- Duties and responsibilities.
- Activation, deactivation procedures (including alternate OSC).
- Training and drill requirements for OSC positions.
- Position activation checklists.
- Supplies/equipment maintenance.

To reflect changes to the Emergency Plan, the OSC Plans are reviewed periodically by EP Section staff and revisions are recommended.

The Joint Information Center (JIC) is the location for coordination and release of information in the event of a LLNL emergency that could possibly impact health and safety offsite and require the need for public protective action. Public Information Officers from federal, state, and local EROs assemble at the JIC to coordinate and release emergency information to the public through the news media.

The Executive Business Coordination Center is a support facility where the Laboratory Director and/or designated executive staff gather to monitor the progress of the emergency, keep the UC Office of the President informed of the status of the emergency, and provide business continuity for overall LLNL operations and mission. The ED assigned a LEDO to provide liaison with the EOC.

The Emergency Communications Center is a support facility providing information to NNSA/LSO management, the NNSA/DOE headquarters (HQ) EOC, members of the press, and coordinates with other federal agencies on a local level as necessary. In the event that an emergency situation requires additional assets or assistance, including long-term monitoring, the Emergency Communications Center will coordinate notification activities with other NNSA/DOE, local, state, and federal agencies.

## **4.2 Site 300 Initial Command Structure and Activation**

Site 300's ERO has a dual role in that it may respond to and mitigate an emergency within the Site 300 boundaries, or it may be called upon for support in an emergency at the Livermore site (Site 200). To facilitate either situation, Site 300 has developed a stand-alone ERO that could operate independently of the Livermore site ERO, if necessary.

In a Site 300 emergency, the Site 300 Manager may become the local ED. The Site 300 Fire Department Duty Fire Captain serves as the on-scene IC—unless relieved by a higher-ranking fire officer from the Livermore site—and will categorize, classify and assume the initial responsibility for the event. At the inception of a security-related emergency, the Site 300 Senior Protective Force Duty Sergeant will serve as IC in a unified command. Although the Site 300 ERO has been developed as a stand-alone organization, there are well-defined communications links established with Site 200 to ensure that adequate direction and support are available.

When the IC has declared an Operational Emergency, in coordination with the Site 300 ED, immediate action will be taken to activate the Site 300 EOC and alert the Site 300 Emergency Management Team (EMT).

During normal work hours, the Site 300 ED will direct the activation of the Site 300 EOC through the Site 300 Manager's administrative staff. Outside of normal working hours, the Site 300 ED will call the alternate EDs and announce activation of the Site 300 EOC. He will direct the alternate EDs to activate their communications tree, if warranted, and request Site 300 EMT members to report to the Site 300 EOC.

In the event of an emergency or disaster that would require Site 300 workers to be responsible for their own well-being, Self-Help Plans for each organization will be activated (refer to Site 300 Emergency Self-Help Guidelines).

## **4.3 Self-Help Organizations**

Under certain emergency conditions, such as a response to a large earthquake, it will be necessary for departments, divisions, and facilities to react locally to emergencies using their own Self-Help programs. Each directorate shall designate a Self-Help Coordinator responsible for ensuring adequate directorate participation (volunteers), supplies, and training at the local facility level. Laboratory personnel assigned Self-Help responsibilities shall receive training appropriate for the position(s) they hold.

The Laboratory has several Self-Help Zones, each consisting of a control point, a Zone Supervisor, and numerous assembly points. Assembly Point Leaders direct local emergency activities from the assembly points and are responsible for ensuring communication through the Zone Supervisor network to the EMT. Zone Supervisors, designated by the primary directorates located within the Self-Help Zones, are responsible for prioritization of requests for assistance within the zone and for communications between the zone and the Emergency Management

Team (EMT). The EMT provides overall coordination and direction to Self-Help organizations during a large-scale emergency.

## 5.0 Training, Drills, and Exercises

The goal of the ERO Training and Drill Program is to ensure that the ERO is prepared to carry out emergency-response functions during an Operational Emergency. The program is administered in accordance with Hazards Control Department policy and the LLNL Training Program Manual. (See Document 40.1, "LLNL Training Program Manual," of the *ES&H Manual*.) Exercises are conducted to evaluate LLNL personnel's ability to respond effectively to an emergency. The exercise critique and evaluation process provides feedback for improving weaknesses in policies, plans, facilities, equipment, training, and emergency response performance.

### 5.1 Training and Drills

The LLNL Emergency Plan discusses three emergency management training program categories: general employee training, ERO training, and drill and exercise evaluator and controller training. They are designed to meet the following goals:

- Provide general instruction to the onsite population regarding potential hazards, methods of alerting, and protective actions that may be carried out.
- Provide basic and advanced responder training to ERO members.
- Provide problem solving drills and tabletop drills to ERO members to enhance their skills.
- Continually improve training by implementing and refining methodologies for change to incorporate new ideas and lessons learned.
- Provide appropriate offsite agencies the opportunity to participate in selected LLNL training.
- Provide a cadre of trained evaluators and controllers for the drill/exercise program.

The ERO position's functions and responsibility levels are used as a baseline for an individual's required training program. Institutional training requirements mandatory for a specific position are approved by the LLNL Training Program Committee and are identified in the LLNL Course Catalog. Non-institutional courses may be scheduled as needed.

The emergency preparedness drills provide both a supervised, hands-on training component for ERO members and an opportunity for the ERO to demonstrate and maintain individual and organizational capabilities. Training courses may be identified as having hands-on or on-the-job training components.

A facility-specific drill program is being initiated for facilities having an Emergency Preparedness Hazard Assessment.

## 5.2 Exercises

The LLNL Exercise Program validates the various emergency response elements over a multi-year period. The program provides annual exercises to evaluate emergency response capabilities and ensure that members of the ERO are prepared to respond appropriately to an Operational Emergency. The program also ensures that the local offsite organizations are offered participation in an exercise at least every three years.

The Emergency Preparedness Drill and Exercise Planning Committee (EPDEPC) is composed of representatives from each LLNL EMT organization, the Health Services Department, and offsite community partner organizations that have indicated an interest in drill and exercise planning. The EPDEPC is chartered by the EPMC to plan, document and conduct the annual exercise and institutional drills.

An exercise is a comprehensive performance test of the integrated capabilities of the ERO. Exercises test the adequacy and effectiveness of:

- Organizational command and control.
- Implementation procedures.
- Notification and communication networks.
- Emergency equipment.
- Training.
- ERO performance.
- Overall emergency preparedness program performance.

## 6.0 Emergency Evacuation and Shelter

Depending on the type of emergency, the IC may direct employees to shelter-in-place or evacuate a building. Employees may also receive instructions from one or more of the sources listed below:

- The LEDO.
- The LLNL Emergency Voice Alarm System.
- The Self-Help Program emergency communications structure.
- The LLNL radio station KKG291 (1610 AM).
- Uniformed Fire or Protective Force Officers.

Employees who are instructed to shelter-in-place should immediately move indoors, close all windows and doors, and stay inside until provided further instructions (e.g., shelter, shut, listen). If employees are to evacuate a building, they should proceed to the nearest assembly point. They should not leave the assembly point area until instructed to do so by the Assembly Point Leader, with the concurrence of the local IC or the Zone Supervisor in the event of a Self-Help activation.

## **7.0 Vehicles Use During Emergencies**

It is essential that the necessary workers and equipment are promptly transported to the scene of an emergency. Thus, Laboratory vehicles shall be relinquished for this service when needed. Requests by emergency response workers for taxi service to an emergency scene shall be given immediate priority. The IC may request taxi service for other situations related to the emergency. During an off-shift emergency, all taxis are available for use by emergency response workers. Taxi drivers, emergency workers using taxis, and other vehicles must obey all traffic regulations.

## **8.0 Recovery and Reentry**

The purpose of the recovery effort is to return the affected facilities and areas to normal operations following the termination of emergency response. Normally, the Fire Department IC will formally transfer control of the incident scene (facility and local affected area) to the ES&H Team Leader upon stabilization of the scene after completion of Fire Department activities. The IC may elect to retain control of the incident and delegate responsibility for the reentry phase to the ES&H Team Liaison (e.g., ES&H Team Leader, deputy, technician supervisor).

For recovery from classified Operational Emergencies, the ED may appoint a Recovery Manager, who is responsible for developing and coordinating plans and schedules for recovery operations for both the facility and LLNL site. Plans and schedules for recovery operations must consider methods for protecting workers, other onsite workers, and the general public. Once a Recovery Manager has been appointed, local planning for facility level recovery will require Recovery Manager approval of the plan.

Release of the incident scene to the facility will occur only after the ES&H Team has completed a preliminary investigation to determine the cause of the incident, all environmental and safety issues have been addressed, and the LLNL management responsible for the activity, facility, or program has reached a decision on the need for a more formal investigation (e.g., incident analyses). Document 4.5, "Incidents—Notification, Analysis and Reporting," in the *ES&H Manual* describes LLNL's incident analysis procedures.

Parts of a facility or area may either be deemed unsafe for use or be turned over to an incident analysis committee, while the rest of the facility can resume normal operations. In such cases, the ES&H Team Leader and the facility manager should establish a limited-access area and ensure that the authorizing manager is notified.

## 9.0 Responsibilities

All workers and organizations responsible for emergency management shall refer to Document 2.1, "Laboratory and ES&H Policies, General Worker Responsibilities, and Integrated Safety Management," in the *ES&H Manual* for a list of general responsibilities. Specific responsibilities are listed below each title.

### 9.1 Workers

Workers shall:

- Know the Laboratory's emergency numbers (911 if calling from a Laboratory phone, or 925-447-6880 if calling from offsite or from a cellular phone). The LLNL Safeguards and Security Protective Force Division may be reached directly by dialing ext. 2-7222.
- Know the assembly point for their work area and the best route to get there (or an alternate route in the event the best route is blocked). Remember that lights may go out and CAIN booths may not be working.
- Know the assembly areas in other parts of the Laboratory that they frequently visit. Maps shall be posted near the exits of all buildings.
- Assist visitors in their work area to the nearest assembly point.
- Check their work area periodically for situations that could present a hazard during a disaster.
- Use only properly secured bookcases, shelves, and cabinets for storage. Loose items (e.g., chemicals and glassware) may need shelf restraints. Details on seismic safety can be found in Document 22.4, "Earthquakes," in the *ES&H Manual*.
- Keep aisles clear to allow for quick exit from buildings.
- Be familiar with any equipment they work on and how to turn it off safely.
- Consider signing up as a member of a Self-Help Team. This involves biennial training in the various Self-Help roles: Assembly Point Leader, access control and disaster first aid (triage). (The current baseline training requirements are: EM1500-Self-Help Overview and EM1600-Disaster First Aid).

Workers are to take the following actions during an emergency:

- Call 911 from a Laboratory phone (or 925-447-6880 if calling from offsite or from a cellular phone) to report any incident. Describe the incident to the emergency dispatcher, give the specific location of the incident, and indicate whether anyone was injured. Always give their name, the telephone number they are calling from, and remain on the line until released by the emergency dispatcher.
- Direct responding fire fighters or security personnel to the emergency. In addition, inform the fire fighters of any hazards associated with the area, including any other information that will help them avoid injury. Follow the senior fire officer's instructions.
- Administer first aid or attempt to control the situation only if they know the correct emergency procedures and if their actions will not endanger the responder or victim.
- Remove all injured persons and leave the immediate vicinity if there is a threat of further injury or over-exposure to hazardous material. If there is no immediate danger, do not move the seriously injured.
- Protect themselves as well as others in the area. During an earthquake, take cover under a desk or table until ground motion stops. In the event of a fire or chemical spill, move away from the hazard and, if possible, close but do not lock doors to put a barrier between themselves and the hazard.
- Upon hearing an emergency message directing them to shelter, stay or go inside, shut all windows and doors, and listen for further information or direction via the LLNL public address system.
- Upon hearing an emergency message directing them to evacuate the building, do so immediately or as soon as feasible. If time permits, secure classified information before they leave. Take personal possessions and keys with them, because they may not be able to reenter the building. If they have visitors, escort them to the assembly point. Be alert for broken glass, exposed electrical wires, and spills as they leave. If worker is a vehicle custodian, remember to take their vehicle keys before leaving the building. These vehicles may be needed to transport the injured.
- Proceed to the nearest assembly point and wait for instructions after evacuating a building. If they are visiting another area at the Laboratory, go to the nearest assembly point and identify themselves to the Assembly Point Leader.
- Provide the Assembly Point Leader the following:
  - Any information about the injured or people trapped within the building.
  - Any hazards that may exist (e.g., fires, spills, exposed electrical systems, or hazardous equipment that may be in operation).
  - Any unsecured classified information.

## IMPORTANT

Employees shall not reenter their workplaces or leave the assembly point until the Assembly Point Leader, upon authorization of the Zone Supervisor (or the local IC if an isolated building evacuation), authorizes them to do so.

### 9.2 Assembly Point Leaders

Assembly Point Leaders shall:

- Coordinate Self-Help activities within the assembly area, including:
  - Accounting for workers who should be in the assigned area.
  - Providing for care and protection to workers, including first aid.
  - Coordinating the transport of injured workers.
  - Assessing and reporting emergency situations.

### 9.3 Self-Help Zone Supervisors

Self-Help Zone Supervisors shall:

- Coordinate Self-Help emergency activities within the zone and establish a communication link with the EOC during an emergency.
- Obtain from Assembly Point Leaders an accounting of workers, injuries and property damage, and transmit this information to the Emergency Operations Center.
- Provide advice and recommendations to Assembly Point Leaders and keep them apprised of conditions at the Laboratory and within the zones.
- Direct the activities of the zone control point staff.

### 9.4 Laboratory Self-Help Program Manager

The Laboratory Self-Help Program Manager shall:

- Provide direction to, and oversight of, the Laboratory's Self-Help Program.
- Develop and update training in support of the program.
- Provide guidance and assistance to directorate Self-Help Coordinators with developing plans, training workers, and coordinating Laboratory resources.
- Ensure annual review of directorate Self-Help Plans.

## **9.5 Environment, Safety, and Health Team**

The ES&H Teams shall:

- Support the IC by providing expert advice on hazards, hazard mitigation strategies, and mitigation actions.
- Assist in developing the Incident Action Plan.
- Assist the IC with evaluating hazards.
- Assist in notifying directorate personnel of events, if necessary.

## **9.6 Laboratory Emergency Duty Officer/Emergency Director**

The Laboratory Emergency Duty Officer/ED shall:

- Monitor events and conditions that could be indicative of an Operational Emergency. Ensure that appropriate indicators are applied to estimate the severity of the events in a timely manner.
- Activate emergency response facilities based on information obtained from the IC.
- Assume control of the overall institutional response upon transfer from the IC.
- After consulting with the Duty Chief, upgrade or terminate the Operational Emergency and provide ongoing guidance to ensure worker protection.
- After consulting with the Duty Chief, order onsite protective actions as necessary and make recommendations for offsite protective actions.
- Ensure appropriate notifications (updates, change in classification, termination) are made to offsite agencies.
- Ensure that necessary staffing and other critical resources are obtained.
- Approve press releases.

## **9.7 Incident Commander/Duty Chief**

The Incident Commander/Duty Chief shall:

- Direct emergency responders at all emergencies.
- Keep the LEDO informed regarding the status of the situation.
- Categorize the event and declare an Operational Emergency when necessary.

- Notify appropriate DOE elements and offsite community partners of an Operational Emergency.
- Order protective actions onsite and make recommendations for protective actions offsite.
- Identify and request the necessary response resources.
- Recommend termination of an Operational Emergency when circumstances allow.

## **9.8 Associate Directors**

Associate Directors shall:

- Ensure that each department, division, or facility in their organization maintains a Self-Help Plan that addresses potential emergency situations using the minimum criteria set forth in section 2.2.
- Designate a directorate Self-Help Coordinator(s).
- Ensure employees are designated for zone control and assembly point assignments.

## **9.9 Facility Management**

Facility Management shall:

- Develop and maintain a Self-Help Plan that addresses potential emergency situations using the minimum criteria set forth in Section 2.2.
- Develop and maintain an emergency plan for facilities having an EPHA. Guidance for the plan will be provided by the ES&H Teams.
- Participate in the drill program for those facilities having an EPHA. See the LLNL Emergency Plan and the ES&H Teams for guidance.

# **10.0 Work Standards**

## **10.1 Work Smart Standards**

DOE O 151.1, Chg. 2, "Comprehensive Emergency Management System" (see Section 3 and Attachment 1).

29 CFR 1910.120, Subpart H, "Hazardous Waste Operations and Emergency Response."

## 11.0 Resources for More Information

### 11.1 LLNL Contacts

For additional information about this document, contact the Emergency Management Division or the Emergency Preparedness Section of the Hazards Control Department.

### 11.2 Applicable Lessons Learned

The articles below are examples of lessons learned about emergency management.

- “Assembly Point Procedures” (July 10, 2002).
- “Requesting Emergency Assistance with Cellular Phones” (April 25, 1996).
- “Requesting Assistance in an Emergency” (March 16, 1995).
- “Smoke and Other Indicators of Possible Fire Should be Reported Immediately” (August 9, 1994).

These articles can be found at the following Internet address:

[http://www-r.llnl.gov/es\\_and\\_h/lessons/](http://www-r.llnl.gov/es_and_h/lessons/)

### 11.3 Other Sources

Firescope California, *Fire Service Field Operations Guide*, ICS 420-1, Incident Command System Publication, January 2001.

Lawrence Livermore National Laboratory, *LLNL Emergency Plan*, Lawrence Livermore National Laboratory, Livermore, CA (UCRL-MA-113311, latest revision).

U.S. Department of Transportation, Research and Special Programs Administration, Staff of Transport Canada, and the Secretariat of Communications and Transportation of Mexico, *2000 Emergency Response Guidebook*, U.S. Department of Transportation, 2000.

## Appendix A

### Acronyms, Abbreviations, Terms, and Definitions

|                   |  |
|-------------------|--|
| Alert             | An Operational Emergency expected to have significant impacts beyond 30 meters, but less than 100 meters and/or the facility boundary, from the release point.   |
| Duty Chief        | The on-duty Chief Officer from the Hazards Control Department's Emergency Management Division. The Duty Chief is available at or near Site 200 24 hours a day/7 days a week and is responsible for fire department management responses (either LLNL or mutual aid) and mitigation of fire, HazMat, and medical emergencies at LLNL. |
| ED                | Emergency Director. The Laboratory Emergency Duty Officer becomes the Emergency Director when the Emergency Operations Center is activated for an Operational Emergency. The Emergency Director directs the Laboratory's institutional response from the Emergency Operations Center.  |
| EMT               | Emergency Management Team, consisting of the Emergency Director/Laboratory Emergency Duty Officer, discipline managers, and staff. Reports to the Emergency Operations Center during Operational Emergencies.  |
| EOC               | Emergency Operations Center. Location where emergency management, including policy, employee and public information, and support for Operational Emergencies, is directed by the Emergency Director.   |
| ERO               | Emergency Response Organization. Primary and alternate management and support personnel trained to carry out emergency response activities according to the Emergency Plan and emergency preparedness implementing procedures.   |
| General Emergency | An Operational Emergency that is expected to have significant impacts beyond the site boundary.  |
| IC                | Incident Commander. Regulatory requirements under the Incident Command System are delineated in Title 19, Division 2, Section 1 of the California Government Code, "Standardized Emergency Management System (SEMS)."  |

|                         |  |
|-------------------------|--|
| Incident Command System | An organized system of roles, responsibilities, and Standard Operating Procedures used to manage emergency operations at LLNL and throughout the State of California.  |
| JIC                     | Joint Information Center. Location for coordination and release of information in the event of a LLNL emergency characterized as one with the potential to impact offsite health and safety and require the need for public protective action.   |
| LEDO                    | Laboratory Emergency Duty Officer. Represents the Laboratory Director. Onsite or on-call at all times.   |
| NNSA/LSO                | National Nuclear Security Administration/Livermore Site Office.  |
| Operational Emergencies | Unplanned, significant events or conditions that require time-urgent response from outside the immediate area of the incident. Such an event could seriously impact the safety or security of LLNL's employees, facilities and/or the environment.   |
| OSC                     | Operations Support Center. Are operated as necessary by Environmental Protection, Hazards Control, Health Services, Plant Services, Public Affairs, Safeguards & Security, and Site 300.   |
| Self-Help Plan          | A plan detailing an organizational structure for employees to take action when LLNL's professional emergency responders are fully committed and cannot respond to all reported emergencies.  |
| SEMS                    | Standardized Emergency Management System. A state-wide system for use by police officers, firefighters, and other disaster responders in disaster events. The basic framework of SEMS incorporates the use of the Incident Command System, multi-agency coordination, the State's master mutual aid agreement and mutual aid program, the operational area concept, and the Operational Area Satellite Information System. |
| Site Area Emergency     | An Operational Emergency that is expected to have significant impacts beyond the facility boundary, but not beyond the nearest site boundary.  |