BERKELEY LAB

Environment / Health / Safety / Security
DIVISION

EMERGENCY GUIDE

Emergency status information for employees: **1-800-445-5830** or **status.lbl.gov**

Emergency Reporting

Life-Threatening Event 24/7

Lab Phone
x7911 or 911

Cell or Off Site
911

Non-Life-Threatening Emergency Reporting

24/7 Incident Reporting

Accidents, Hazardous Materials Spills, Environmental, and Security

Lab Phone
x6999

Cell or Off Site
(510) 486-6999

Urgent Radiation Protection Group Assistance

Lab Phone
x7277

Cell or Off Site
(510) 486-7277

FIRE RESPONSE

Fire alarm bells, bell strobes, or horn strobes will be activated by pulling a fire alarm pull station or by automatic detection of smoke, heat, or sprinkler water flow.

If your fire alarm sounds:

- Evacuate the building immediately and proceed to the designated Assembly Area.
- Before opening any door, check the door and the door's handle temperature with the back of your hand.
- Never open doors that are warm to the touch. If a door handle is warm, then use an alternate route.
- If smoke, heat, or flames block your exit routes, stay in the room with doors closed. Place a wet towel under the door, if available.
- Open a window and wave a brightly colored cloth or flashlight to signal for help.
- Avoid smoke or fumes. If unavoidable, crawl low under smoke.

If there is a fire in your workspace:

- Activate nearest fire alarm pull station and alert others in the immediate area.
- Use a fire extinguisher only if trained, comfortable in the effort, and confident that it is safe to fight the fire.
- Always maintain access to an exit. Do not let fire get between you and the exit.
- Avoid smoke or fumes.
- Close doors behind you as you exit.
- Evacuate and proceed to the designated Assembly Area.

Remember:

- **DO NOT USE ELEVATORS!**
- Follow directions from your Building Emergency Team.
- Do not re-enter the building until it is deemed safe to do so by a person of authority (i.e., professional responder, BET member, or Security officer)

WILDLAND-URBAN FIRES

Diablo-wind driven fires in the Berkeley hills are different from a structure or grass fire.

They are windswept blazes during hot, dry weather conditions. Often, they can't be extinguished until weather conditions change. The East Bay hills have experienced 15 major wildland-urban intermix fires since 1923.

How to Prepare and Respond

- Be especially alert on "Red Flag Days"—warm temperature, low humidity, and windy conditions.
- Listen for and follow instructions given over the Lab's public address system.
- Be prepared to evacuate the Lab on foot. Keep a pair of walking shoes in or close to your work area.
- If an evacuation by vehicle is authorized, offer rides to others.
- Understand how to shelter-in-place if advised to do so.
- Follow instructions from traffic and Security personnel.

Additional Site Instructions:

Location of Assembly Area: _____ Location of exit stairwell: _____

Location of fire extinguisher: _____

Comments: _____

_____

FIRE RESPONSE

INSERT BUILDING MAPS HERE WITH
ALARM STATIONS HIGHLIGHTED

FIRE ALARM PULL STATION ACTIVATION

Pull the nearest fire alarm pull station when you:

- Smell smoke and/or see flames.
- Smell fumes that are making you or others ill or might pose a danger (i.e., natural gas or a strong chemical odor).
- Hear an explosion.
- Believe there is imminent danger to yourself or the building occupants.

Remember:

- Know the location of fire alarm pull station nearest your workstation.
- When in doubt, PULL IT!
- You are not allowed to be in a building with a fire alarm sounding.
- Once you are evacuated to the Assembly Area, inform a person of authority (i.e., the Incident Commander or BET member) the reason for pulling the alarm.

Additional Site Instructions:

Location of Assembly Area: _____ Location of exit stairwell: _____

Location of fire extinguisher: _____

Comments: _____

_____

FIRE ALARM PULL STATION ACTIVATION

Emergency Reporting & Assistance

Serious or Life-Threatening

Lab Phone

x7911 or 911

Cell Phone or Off-site

911

Non-Life-Threatening Emergency Events

Lab Phone

x6999

Cell Phone or Off-site

(510) 486-6999

POWER OUTAGES

During a *sudden, unplanned power outage*:

- Leave fume hoods on. Back-up power will keep fume hoods running. If fume hoods stop functioning, pull fire alarm pull station and EVACUATE immediately.
- Shut down experiments and machines safely.
- Turn off ALL electrical equipment (except fume hoods) and heat sources that may come back on automatically (printers, copiers, hot plates, autoclaves, toaster ovens, etc.).
- Be aware of information or instructions.

During a *power outage warning* (outage is pending or possible):

- Do not use elevators.
- When safe to do so, turn off ALL electrical equipment (except fume hoods) to prevent damage when power returns.
- Have a flashlight or battery-powered lantern in your office.
- Stop work and close, cover, or otherwise contain and secure the materials you were using.
- Stop work in fume hoods or biosafety cabinets as soon as possible, and close the sash, even if the hood appears to be working.
- Make sure cabinet doors and flammable storage cabinets are secure.

POWER OUTAGES

Emergency Status Information

Phone

1-800-445-5830

Website

status.lbl.gov

SHELTER IN PLACE

Lab employees may be asked to Shelter-in-Place for many reasons. For example:

- Atmospheric release of materials considered dangerous to public health, where evacuation is NOT a viable option.
- Situations where employees would be safer inside rather than outside a building.

Procedures:

LISTEN
The Public Address (or other warning) system will explain the situation and direct employees to appropriate actions.

SHELTER
Go inside the nearest building or office. An inside room (minimum doors and windows) is best.

SHUT
Close all doors, windows and accessible vents. In some situations it may be prudent to lock all doors (i.e., active shooter).

MONITOR
Email, voice mail, the public address system, the Lab's EMERGENCY STATUS number, and EMERGENCY STATUS website.

DO NOT turn off fume hoods if they are in use.

SHELTER IN PLACE

Emergency Reporting & Assistance

Lab Phone

x7911 or 911

Cell Phone or Off-site

911

THREATS

Telephone Bomb Threats

Attempt to keep the caller on the line as long as possible and note:

- Time and date of call; age and gender of caller.
- Caller's message.
- Distinguishing speech characteristics.
- Background noises.
- Phone number if caller ID available.
- Any other conversation or comments.

When practical:

- Call the EMERGENCY phone number.
- Evacuate yourself and others immediately.
- If possible, take personal items such as purses and briefcases with you.

Violent, Hostile or Suspicious Persons:

Take precautions to protect yourself and others. Actions depend on the events and may include evacuating, hiding, or locking doors. Call the EMERGENCY number as soon as possible.

For NON-LIFE-THREATENING workplace violence issues, call Human Relations at **(510) 486-6747**.

SUSPICIOUS OBJECTS

What to Look For

- Lack of a return address, or a suspicious return address, on an envelope or package.
- Excessive postage.
- Misspelled words.
- Protruding wires.
- Strange odor.
- Oily stains or discoloration on the outer envelope, wrapper, or material.
- Excessive tape or string.

If Object is Suspicious

- DO NOT TOUCH, handle, or move a suspicious object!
- If you are holding the object, set the object down gently.
- Warn others nearby.
- Evacuate the area.
- Immediately call the EMERGENCY phone number.
- If you have touched the object, if possible, wash your hands with warm water and soap for at least one minute to remove possible contaminants.

Emergency Reporting & Assistance

Serious or Life-Threatening

Lab Phone	Cell Phone or Off-site
x7911 or 911	**911**

Non-Life-Threatening Emergency Events

Lab Phone	Cell Phone or Off-site
x6999	**(510) 486-6999**

EARTHQUAKES

DROP
Drop to the floor.

COVER
Seek sturdy overhead protection such as a desk, table, work bench, or room corner away from windows.

HOLD
Hold on to the protection you've chosen and be prepared to move with it until the shaking stops.

Evacuation

- Take car keys and small personal items.
- Evacuate immediately following shaking.
- Follow Building Emergency Team instructions.
- Do not attempt to re-enter buildings.

LANDSLIDES

Response:

- If you suspect imminent danger, evacuate immediately.
- Listen for unusual sounds that might indicate moving debris, such as trees cracking or boulders knocking together.
- If you are near a stream or channel, be alert for any sudden increase or decrease in water flow and notice whether the water changes from clear to muddy. Such changes may mean that debris flow is moving upstream so be prepared to respond quickly.
- Be especially alert when driving— watch for collapsed pavement, mud, fallen rocks, and other indications of possible debris flow.

After a landslide:

- Stay away from the slide area. There may be danger of additional slides.
- Check for injured and trapped persons near the slide, without entering the direct slide area. Direct rescuers to their locations.
- Listen to local radio or television stations for the latest emergency information.
- Note and report broken utility lines to appropriate authorities.
- Stay away from downed power lines.

Emergency Reporting & Assistance

Serious or Life-Threatening

Lab Phone

x7911 or 911

Cell Phone or Off-site

911

Non-Life-Threatening Illness or Injury Events

Health Services / Building 26

(510) 486-6266

PERSONAL INJURY

Reporting and Assistance

For EMERGENCY response to a serious or life-threatening injury or illness, call the EMERGENCY phone number.

For treatment of NON-LIFE-THREATENING injury, illness, or exposure (e.g., small wounds, sprains or strains):

- Between 7:30 AM and 3:30 PM on regular business days, report to Health Services.
- An after hours first aid box is located outside the entrance to B26 and is accessible with your LBNL badge. If the injury is severe, call your personal physician or proceed to the nearest clinic or hospital emergency room. Report all after hours injuries to Health Services during the next regular business day.
- If a laser eye injury has occurred, also report incident to the Laser Safety Officer (510) 486-7277.

All Injuries MUST be reported to Health Services.

Injury Response Procedures

Hazardous Material in Eye or on Body

Hazardous materials may include chemical, biological, or other hazardous materials.

- Rescuers should wear appropriate personal protection equipment (e.g., hand, eye, and body protection).
- Remove contaminated clothing.
- Flush affected body areas with water from nearest safety shower/eyewash unit for at least 15 minutes. Laboratory sinks may be used for hand-only exposures.
- Use soap and water for biological material on the body, but not in the eyes. If the eyes are affected, forcibly hold open the eyes to ensure effective flushing.
- Call the EMERGENCY phone number for emergency medical response, if needed.
- Hydrofluoric acid users require a special exposure kit that is available from Health Services.
- Report incident to Health Services.
- Report incident to your supervisor.

Lacerations, Puncture Wounds, Strains, and Sprains

- Report incident to Health Services.
- Report incident to your supervisor.

Trauma Kits

Trauma kits are located around the Lab to assist trained volunteer employees in providing emergency care to others. Locations of these kits are identified with signage. Consult the Building Manager if you have any questions regarding the locations of these kits.

Hazardous Materials Injected Into the Body

Hazardous materials injected into the body may include piercing the skin barrier through events such as punctures, lacerations, abrasions, or bites.

- Rescuers should wear appropriate personal protection equipment (e.g., hand, eye, and body protection).
- Flush affected body areas with water for at least 5 and up to 15 minutes and wash with soap. DO NOT use strong disinfectants such as household bleach on skin.
- Apply pressure with a clean gauze/bandage to control bleeding.
- Call the EMERGENCY phone number for emergency medical response, if needed.
- Report incident to Health Services.
- Report incident to your supervisor.

Electrical Shock, or Laser/Beam Exposure

- Immediately call the EMERGENCY phone number for emergency medical response.
- De-energize or shut off equipment.
- Secure the area and warn others.
- Report incident to supervisor.

Phenol and Phenol Mixture Users

- Obtain a phenol first aid kit from Health Services.

PERSONAL INJURY

Emergency Reporting & Assistance

Serious or Life-Threatening

Lab Phone

x7911 or 911

Cell Phone or Off-site

911

Non-Life-Threatening Emergency Events

Environmental Releases, Hazardous Conditions, Traffic Incidents, Near-miss Events, Security Events

Lab Phone

x6999

Cell Phone or Off-site

(510) 486-6999

Health Services / Building 26

(510) 486-6266

EH&S INCIDENT REPORTING

California state law and the Department of Energy require prompt notification of all work-related EH&S incidents/accidents. Report all such events immediately to your supervisor and the EH&S Division.

Call the EMERGENCY number for response to a serious or life-threatening injury or illness.

Once the emergency is over and for all NON-LIFE-THREATENING incidents:

- Report all events immediately to your supervisor.
- Call Health Services for any injuries and illnesses.
- Call the NON-LIFE-THREATENING EMERGENCY number to report the following non-life-threatening events:
    - Environmental releases,
    - Hazardous conditions,
    - Traffic incidents,
    - Near-miss events,
    - Security events.

Stop Work Policy

All Berkeley Lab employees, contractors, and participating affiliates are responsible for stopping work activities that are considered to be an imminent danger.

An "imminent danger" is defined as any condition or behavior that could reasonably be expected to cause death or serious injury, or environmental harm.

Whenever an employee, contractor, or participating affiliate encounters conditions or practices that appear to constitute an imminent danger, such individuals have the authority and responsibility to:

- Alert the affected employee(s) or contractor(s) engaged in the unsafe work creating an imminent-danger condition and request that the work be stopped.
- Call the NON-LIFE-THREATENING EMERGENCY number to report the incident. An EH&S staff member will investigate.
- Notify the immediate supervisor and/or responsible division/department manager.

Note: When in doubt about a safety condition, contact your supervisor. Refer to "Stopping Unsafe Work" in PUB 3000 for more information.

Do you have an Environment, Health or Safety concern?

If you do, please first communicate with your supervisor. You can also:

- Leave anonymous feedback via the EH&S Safety Concerns form (text only).
- Email **safetyconcerns@lbl.gov** (if you want to attach an image with your safety concern).
- Email the Environmental Management System contact at **ems@lbl.gov** for environmental concerns.
- Call EH&S Division at **(510) 486-5514** (can be anonymous).
- Contact EH&S Division Director or Deputy Director in person at **Building 75B-0101** (can be confidential).
- Contact the Ombuds Service at **(510) 642-7823.**
- Contact DOE Employee Concerns Program 24-hour hotline at **(800) 701-9966.**

ACCIDENT / INCIDENT REPORTING

Emergency Reporting & Assistance

Serious or Life-Threatening

Lab Phone

x7911 or 911

Cell Phone or Off-site

911

Urgent Radiation Protection Group Assistance

(510) 486-7277

RADIOLOGICAL SPILL/CONTAMINATION – use S.W.I.M.S

S

STOP and THINK. Stop working. Stop the spill, if safe to do so.

Assess the situation:

- If there is a medical emergency or danger to life, health, or the environment, call the EMERGENCY phone number.
- Check yourself for any chemical contamination or reactions (wet clothing, skin or respiratory irritation). Take appropriate actions.
- Has it made contact with your skin, personal clothing, or outside an area posted or delineated for contamination control?
- Determine the extent of the spill.

W

Warn others

- Alert people nearby.
- If there is no medical emergency or danger to life, health, or the environment, call the Radiation Protection Group.

I

Isolate the area

- Restrict access.
- Keep doors closed if possible.
- Tape or rope off the area.

M

Monitor yourself carefully and completely

- Monitor hands, face, head, sleeves, front of body, and shoes (top and bottom).
- Minimize your movements.

S

Stay in or near the area until help arrives

- Have person knowledgeable of incident assist emergency personnel.
- Notify your supervisor.

Spill Categorization

Minor Spill of Radiological Material

A minor spill is one that is contained within area posted or delineated for contamination control. Laboratory staff can initiate cleanup prior to contacting the Radiation Protection Group for the area.

Major Spill of Radiological Material

A major spill is one that has made contact with personal clothing/skin or that spreads outside the area posted or delineated for contamination control.

Immediately call the Radiation Protection Group.

RADIATION SPILL

Emergency Reporting & Assistance

Serious or Life-Threatening

Lab Phone

x7911 or 911

Cell Phone or Off-site

911

Non-Life-Threatening Emergency Event

Lab Phone

x6999

Cell Phone or Off-site

(510) 486-6999

CHEMICAL SPILL – use S.W.I.M.S

S

STOP and THINK. Stop working. Stop the spill.

Assess the situation:

- How big is the spill?
- Are there any injuries associated with the spill?
- Has it made contact with your skin or personal clothing?
- Can it be safely cleaned? Note: Follow the Spill Cleanup Requirements listed below to make this decision.

W

Warn others

- Call the EMERGENCY number if there is a medical emergency or danger to life, health, or the environment.
- Alert people nearby.

I

Isolate the area

- Restrict access to those involved in the spill cleanup.
- Keep doors closed.

M

Monitor yourself carefully and completely

- Check yourself for any chemical contamination or signs/symptoms of exposure (e.g., wet clothing, skin or respiratory irritation).
- For medical emergencies follow directions under the PERSONAL INJURY tab.

S

STAY in or near the area until help arrives

- Minimize your movements. Avoid spreading contamination to other areas.
- Have a person who is knowledgeable of the incident available to talk to or assist emergency personnel.
- Notify your supervisor.

Chemical spill cleanup requirements

You can clean up a chemical spill if **ALL** of the following requirements are met:

- You are NOT a high school student, or a participant in an internship program.
- There is no potential for release to the environment. Note: Care must be taken to avoid spreading or tracking chemical contamination to other areas.
- There are no personal injuries resulting from the spill.
- You know what the chemical hazards are.
- The cleanup procedures are known and you have the proper spill cleanup materials.
- You have the proper Personal Protective Equipment (PPE) to protect yourself during the cleanup.
- The spill can be cleaned up safely by two people in one hour or less.
- The spill does NOT involve elemental mercury. Special cleanup and monitoring procedures are required for mercury spills. Moreover, mercury contamination is easily tracked to other areas.

If ALL of the above requirements are not met or if you have any doubts about your ability to safely and effectively clean up the spill, then:

- Leave the immediate area.
- Close the door.
- Stay close by and control access. Post the entrance with a warning such as "Spill—Do Not Enter" and call the NON-LIFE-THREATENING EMERGENCY number for assistance.

Other chemical spill cleanup considerations

- Review these guidelines periodically — you must be familiar with them and know what to do before a spill occurs.
- Understand the hazards of the chemicals you use. Consult the Material Safety Data Sheets (use the A-Z index on LBNL's home page).
- Keep spill cleanup kits in your work area. There are different types for acids, bases, and solvents.
- Consult the Chemical Hygiene and Safety Plan (use the A-Z index on LBNL's home page) for selecting and purchasing spill cleanup kits.
- Wear the proper PPE to protect yourself. The minimum includes a lab coat (or coveralls), chemical goggles, closed-toe shoes and chemically resistant gloves rated for the chemical(s) of concern. Consult the Chemical Hygiene and Safety Plan for selecting and using eye/face protection and gloves.
- Ensure waste materials are properly contained and labeled and are placed in an approved Satellite Accumulation Area.
- Inform your supervisor.
- Take Chemical Hygiene and Safety Training — EHS 348 for people who work in laboratories, or EHS 345 for Facilities personnel.

CHEMICAL SPILL

Emergency Reporting & Assistance

Serious or Life-Threatening

Lab Phone

x7911 or 911

Cell Phone or Off-site

911

Non-Life-Threatening Emergency Event

Lab Phone

x6999

Cell Phone or Off-site

(510) 486-6999

BIOLOGICAL INCIDENTS

Worker Exposure, Injury, or Illness

Response, Treatment, and Reporting

- Call the EMERGENCY phone number for immediate medical response to serious or life-threatening injury, illness, or exposure.
- Request assistance from your supervisor.
- Follow the PERSONAL INJURY procedures in this guide.
- Report all occupational injuries, illnesses, and exposures related to biological materials of concern to your supervisor, Health Services at **(510) 486-6266**, and EH&S Biosafety Officer at **(510) 495-2768**.

Biological Exposures of Concern

Biological materials of concern related to exposures include materials or animals that may contain agents or properties that have known, potential, or unknown health risks. Examples of materials include all recombinant genetic materials, viable biological microbes in research, or Risk Group 2 or higher agents or materials. Examples of worker exposures to such biological materials of concern include:

- Biological materials in contact with mucous membranes such as eyes, nose, or mouth
- Biological materials in contact with an open area of skin (e.g., cut or abrasion)
- Cuts or punctures with sharp objects that may be contaminated with biological materials
- Exposures to humans or animals in research in a manner that is known to transmit disease
- Exposure to the blood of other people

Biological Spills and Cleanup

You can cleanup a biological spill if:

- You understand the biological and other hazards and cleanup procedures
- Your work authorization and training sufficiently covers the work to be completed
- There is no potential for personal exposure, injury, or environmental damage
- The appropriate spill cleanup materials and equipment are available
- Two people can clean up the spill thoroughly within an hour

Otherwise:

Request assistance from your supervisor or call the EMERGENCY or NON-LIFE-THREATENING EMERGENCY phone numbers.

Spill Cleanup Procedure

Use the procedural guidelines noted below for biological spills outside of a biosafety cabinet. Consult the online Biosafety Manual for spills inside a biosafety cabinet or involving centrifuges, radiation, chemicals, or animals.

1. If you spilled a Risk Group 1 (RG1) material, or a small dilute amount of a RG2 material, remove any contaminated clothing, wash contaminated body areas with soap and water, and proceed to Step 6.
2. If you spilled a significant amount (e.g., 100 ml or more) of a RG2 or higher material, hold your breath, leave the room immediately, and close the door.
3. Warn others not to enter the contaminated area. Get help as needed and call the LBNL EMERGENCY or NON-LIFE-THREATENING EMERGENCY phone numbers (see above). If you leave the area, post a sign warning others to not enter the area.
4. Remove and put contaminated clothing into a container for biohazardous waste disposal or autoclaving, and thoroughly wash hands and face.
5. Wait 30 minutes before re-entering the area to allow dissipation of airborne biological materials (aerosols) created by the spill. Put on personal protective equipment (PPE) before re-entering the room.
6. Put on the following PPE: lab coat or gown, safety glasses, and double gloves. If the risk of the material or contamination is high, wear additional appropriate PPE such as a respirator, jumpsuit with tight-fitting wrists, or shoe covers.
7. Cover the spill with paper towels or other absorbent material to prevent liquid migration and aerosol production.
8. Gently pour or squirt a freshly prepared solution of 10% household bleach or other appropriate disinfectant around the edges and then into the center of the spill area until the towels are soaked with the disinfectant.
9. Let the disinfectant stay in contact with the spilled material for at least 10 minutes, and up to 20 minutes for larger volumes or RG2 materials.
10. Use paper towels to wipe up the spill, working from the edges into the center of the spill. If sharps or sharp fragments such as glass might be in the spill, do not touch the spill materials with gloved hands. In this case, use a dustpan and squeegee or disposable cardboard to scoop up the spill materials and sharps.
11. Clean the spill areas with paper towels soaked with disinfectant, and then with paper towels wetted with water.
12. Dispose of or autoclave contaminated items. Dispose of contaminated items using biohazardous waste containers, biohazard bags, sharps containers, and other means specified in the Medical and Biohazardous Waste Generator's Guide (PUB-3095). Reusable and autoclavable items may be decontaminated using an autoclave bag and pan in an on-site autoclave.
13. Remove and dispose of PPE, or place coats in lab coat laundry bin. Wash hands with soap and water.
14. Report spill, exposure, and injury incidents to your work lead and supervisor. Also report incidents to Health Services and Biosafety Officer when required as noted in the previous and following sections.

Additional Biosafety Incident Reporting

Report the following biosafety-related incidents to line management and the EH&S Biosafety Officer:

- Worker exposure to biological materials of concern or related injuries or illnesses (see above section, Biological Exposures of Concern).
- Release occurring outside of secondary biosafety containment of medical/biohazardous waste, biohazardous materials, recombinant genetic materials, or other regulated biological materials that have not been inactivated.
- Biosafety-related regulatory inspections or findings.

Release outside of secondary containment includes, for example:

- Spill of a material outside of its laboratory facility and outside of its primary and secondary containers.
- Medical/biohazardous waste that has not been decontaminated but is disposed of in a sanitary sewer or in trash outside the laboratory where the work is conducted.
- Environmental release of a viable agent, animal, plant, or pest material that is regulated against release or may cause damage to humans, plants, animals, or the environment.

BIOLOGICAL INCIDENTS

Please verify the most current information at www.lbl.gov/ehs/ep

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