

Environmental Health and Safety

Introduction

When properly stored and handled, chemical and biological materials normally pose no extreme threat to the campus. However, during times of natural or man-made disasters, these materials become a special hazard to the campus and to emergency personnel.

This type of hazard could arise out of any one of a number of emergency situations, including earthquake, fire, explosion, hazardous materials spill, aircraft accident, flood or sabotage. Therefore, hazard control procedures may be required when any of the above events occurs. This is especially important consideration when the emergency or disaster involves any of the science buildings.

The individual assigned responsibility for Environmental Health and Safety will:

- ◆ Determine, detect and identify hazardous biological and chemical agents and make necessary recommendations.
- ◆ Provide hazardous materials control and assist monitoring clean-up operations.
- ◆ Assist in directed evacuations and building clean-up when hazardous materials are involved.

Under emergency or disaster conditions, admission to the following types of locations will be restricted:

- A. Rooms containing pathogenic organisms:
 1. Only trained personnel will be allowed to enter, wearing protective clothing and biological respirators.
 2. All fires must be contained in these rooms and be allowed to burn themselves out. Firefighters then may enter with respirators after all walls and contents of the room have been wetted down with a fine spray of water.

3. Refrigerators and freezers, in most cases, should remain intact; however, they should be isolated under a special tent and removed or disposed of only with the protection of a self-contained breathing apparatus.
- B. Rooms containing radioactive chemicals:
1. Only authorized radiation safety personnel should be admitted, wearing protective clothing, a filtered breathing apparatus and a radiation badge. Radiation detectors such as Geiger counters should be carried.
 2. Short exposure to radiation at the levels present in these rooms is not considered to be lethal; therefore, entry to save human life by emergency personnel other than radiation safety officers should not be prevented.
- C. Rooms/locations containing toxic, flammable, explosive or carcinogenic chemicals:
1. In chemistry storage areas, it is preferable that entry be restricted to emergency personnel who are familiar with chemical hazards and equipped with personal and respiratory protection.
 2. Acknowledge any posted warnings (NFPA Diamonds) and relay that information to all concerned.

Note: If the incident proves to be serious in nature, the County-wide Hazardous Materials Incident Response Plan will be activated, which provides immediate mutual aid and resources needed for a serious incident. Copies of the County-wide Plan are available at the EOC and University Police Department.

Radiological Protection

Small amounts of radioactive materials are present on campus for research and educational purposes. A radiological hazard could result from accidents during the

use or storage of radioactive materials or could result from events such as fire, explosion or an earthquake.

If radioactive materials are involved in an emergency, the Campus Environmental Health and Safety (EH&S) Officer is responsible for:

- A. Ensuring that all emergency responders are notified of the radiation hazard.
- B. Providing radiation survey equipment, as appropriate, to emergency workers and analyzing radiological information.
- C. Advising the EOC Director on appropriate response procedures. Recommending effective countermeasures to the EOC and any other emergency staff.
- D. Assisting in the proper handling of contaminated individuals, materials and structures.
- E. Performing decontamination, as needed.
- F. Record-keeping of radiation exposure. Compiling and transmitting radiological data to the appropriate local and state officials.

Prior to an emergency, the EH&S Officer will ensure the proper identification and listing of all campus locations where radioactive materials are handled.

Dose Control and Dose Documentation for Emergency Workers

Under emergency or disaster conditions, admission to rooms/locations containing radioactive material will be restricted as follows:

- 1. Only authorized radiation safety personnel should be admitted, wearing protective clothing, filtered breathing apparatus and radiation badges. Radiation detectors such as Geiger counters should also be carried.
- 2. Short exposure to radiation at the levels present in these rooms is not considered to be lethal; therefore,

entry to save human life by emergency personnel other than radiation safety officers should not be prevented.

3. HSU emergency workers with potential for radiation exposures will be equipped with self-reading dosimeters. The EH&S Officer is responsible for issuing the dosimeters and thermoluminescent dosimeters (TLDs) to HSU emergency workers and recording the doses received. When the emergency has been concluded, the records are forwarded to the EH&S Officer for filing.

Monitoring Equipment

Radiation monitoring equipment will be inspected, inventoried and operationally checked quarterly and after each use.

Chemical/Biological Protection

The University, in the conduct of its educational programs, utilizes potentially dangerous chemical and biological materials. Although special storage facilities are used and special precautions are taken with their use, these materials may be released into the environment. The materials may escape as the result of other emergency events such as a fire, explosion or an earthquake.

Organization and Responsibilities

- A. If chemical or biological materials are involved in an emergency, the Campus EH&S Officer is responsible for:
 1. Ensuring that all emergency responders are notified of the type of hazard.
 2. Providing information on the hazard as appropriate to emergency workers.
 3. Advising the EOC Director on appropriate response procedures.

4. Assisting in the proper handling of contaminated individuals, materials and structures.
5. Record-keeping of chemical or biological exposure.

Analysis of Chemical or Biological Hazard Situation

1. The nature of the chemical or biological incident must be determined so that proper emergency responses can be accomplished.
2. This information may be derived from Material Safety Data Sheets (MSDS), chemical or biological reference (safety) manuals, or outside agency personnel and consultants.

Evacuation and Control of Affected Areas

Under emergency or disaster conditions, admission to rooms containing chemical or biological material will be restricted to:

- ◆ Authorized safety personnel, wearing protective clothing and filtered breathing apparatus.

The first response will normally be evacuation and control of the affected area and the treatment of individuals who might have been contaminated. Containment and clean up countermeasures will then be initiated.

Reporting of spills both internally (to identify controllable hazards) and externally (e.g., to state and federal regulatory agencies) will be made after each incident.

Resource List for Dealing with a Chemical or Biological Emergency:

CAL/OSHA Consultation Service
2424 Arden Way, Suite 90
Sacramento, CA 95825
916.920.6131 or ATSS 430.6131

Agricultural Commissioner
5630 So. Broadway

Eureka, CA 95501
707.443.7057

Department of Health Services
Toxic Substances Control Division
2151 Berkeley Way, Annex 7
Berkeley, CA 94704
415.540.2747 or ATSS 571.2747

Hazard Evaluation System & Information Service (HESIS)
2151 Berkeley Way
Berkeley, CA 94704
415.540.3014

Arcata Fire Department
631 Ninth Street
Arcata, CA 95521
707.822.5984

State Fire Marshal
619 Second Street, Room 110
Eureka, CA 95501
707.445.6515

Humboldt-Del Norte County
Department of Public Health
Environmental Health Office
529 I Street
Eureka, CA 95501
707.445.6215

Humboldt County Sheriff's Department
826 Fourth Street
Eureka, CA 95501
707.445.7505

Humboldt County Department of Public Works
1106 Second Street
Eureka, CA 95501
707.445.7491

North Coast Unified Air Quality Management District
5630 So. Broadway
Eureka, CA 95501
707.443.3093

City of Arcata
Public Works Department
736 F Street
Arcata, CA 95521
707.822.5956

State of California
Highway Patrol
Highway 101
Arcata, CA 95521
707.822.5981

State of California
Department of Transportation—CALTRANS
District 01 Office
1656 Union Street
Eureka, CA 95501
707.442.5761

Water Quality Control Board
North Coast Region
1000 Coddington Center
Santa Rosa, CA 95401
707.576.2220

United States Government
Department of Transportation
Coast Guard
Arcata Airport
McKinleyville, CA 95519
707.839.3241

Equipment Technician
Biological Sciences Department
Humboldt State University
707.826.4338 or 707.826.3376

Bacteriology Lab Supervisor
Biological Sciences Department
Humboldt State University
707.826.3248

Stockroom Manager
Natural Resources Department

Humboldt State University
707.826.3620

Stockroom Manager
Biological Sciences Department
Humboldt State University
707.826.3232

Stockroom Technician
Geology Department
Humboldt State University
707.826.4247

Stockroom Manager
Chemistry Department
Humboldt State University
707.826.3242

Equipment Technician
Psychology Department
Humboldt State University
707.826.3746

Equipment Technician
Marine Laboratory
Humboldt State University
707.677.3671

Equipment Technician
Industrial Technology
Humboldt State University
707.826.4984

IT Corporation
17605 Fabrica Way
Cerritos, CA 90701
714.523.9200

CHEMTREC Emergency Call
(24 hours a day)
800.424.9300

Position: Environmental Health & Safety Officer

Position Responsibility: Coordinate resources necessary to determine, detect and identify hazardous biological and chemical agents and make necessary recommendations for actions. Provide hazardous materials control and assist monitoring and clean-up operations. Assist in evacuations and building clean-up when hazardous materials are involved.

Duty—Checklist:

- ◆ Determine from field units the nature and seriousness of the incident.
- ◆ Assign staff to affected areas or to pre-determined hazard areas.
- ◆ Report to the campus EOC.
- ◆ Obtain briefing from EOC Director and Operations Section Chief.
- ◆ Determine, detect and identify hazardous biological, radiation and/or chemical agents and make necessary recommendations.
- ◆ Provide hazardous materials control and assist by monitoring clean-up operations.
- ◆ Determine ongoing needs, request additional resources as necessary and resolve logistical problems.
- ◆ Keep records/logs of calls, assignments and actions.
- ◆ Secure operations and forward the necessary reports and logs to the Operations Section Chief.
- ◆ Participate in the development of an after-action report.