



## **ANNEX E**

### **ENVIRONMENTAL HEALTH AND SAFETY**

#### **I. PURPOSE**

This annex provides a point of reference for the Emergency Response Committee in dealing with large-scale on-site emergencies or community-wide catastrophes that may involve:

General Health & Safety

Hazardous Materials

Radiological Hazards

Biological Hazards

Additional detail, specific procedures and up-to-date contact information regarding these topics are maintained by the Office of Environmental Health and Safety.

#### **II. RESPONSIBILITIES**

##### **A. Safety Officer**

The Environmental Health and Safety Coordinator will also serve as the incident Safety Officer. The Safety Officer is tasked with ensuring the safety of all personnel who enter the disaster site. He/she keeps the Incident Commander apprised of all issues related to safety and coordinates the removal of all hazards in the field.

It is also the responsibility of the Environmental Health and Safety Coordinator to advise the Emergency Response Committee on matters relating to Environmental Health and Safety concerns resulting from unexpected incidents involving hazardous materials; radiological hazards; biological hazards; severe weather; or other hazards that may pose a threat to general public safety or

environment. The Environmental Health and Safety Coordinator will plan, manage, coordinate and/or execute activities to mitigate these hazards.

**B. Radiation Safety Officer**

For all emergencies involving radiological materials, it is essential that an Environmental Health and Safety representative or the UNC Radiation Safety Officer be contacted and informed of the situation before any aggressive response activities are undertaken. In the event these individuals cannot be contacted, a qualified member of the UNC Radiation Safety Committee (or qualified School of Chemistry, Earth Sciences and Physics representatives) may substitute. They will provide assistance to the Incident Commander.

**C. Campus Community**

It is the responsibility of campus constituents to cooperate with emergency response efforts and the Emergency Response Coordinator to prevent injury and contain hazards. Employees may be asked to assist with some of these measures and it is their responsibility to render assistance where applicable and reasonable.

**III. GENERAL HEALTH AND SAFETY**

**A. Responsibilities and Operations Concept**

The Environmental Health and Safety Coordinator in cooperation with the Medical Health Officer where applicable, will assess matters that have the potential to affect the general health and safety of campus constituents or the surrounding community. While the Medical Health Officer will coordinate on-site response efforts related to the immediate health care needs of the injured or ill, it is the duty of the Environmental Health and Safety Coordinator to form response teams and coordinate, or conduct monitoring of potential health and safety hazards. Other factions of the Emergency Response Committee or University personnel may be enlisted to assist in assessing potential hazards (e.g., Facilities Management, Construction Services, School of Biological Sciences, etc.). The following are examples of hazards that must be assessed, monitored and controlled by the Environmental Health and Safety Response Team(s):

1. Flood-damaged or tornado-damaged structures, utility systems, food stores, or water supplies.
  2. Contaminated air, waters or soil resulting from hazardous materials releases. Altered or explosive atmospheres (e.g., within confined spaces, buildings or other occupancy or work space).
  3. Structural damage in occupancy or work areas.
  4. Multiple injuries or deaths resulting from large-scale accidents or terrorist/hostage activity.
  5. Bomb threats or explosions.
- B. Outside Agency or Contractor Involvement

The Environmental Health and Safety Coordinator will communicate with local and State agencies to obtain assistance, as needed and when available, in dealing with sanitation and general safety concerns. Contractors and consultants may be contacted to assist in the assessment or abatement of hazardous conditions and may be particularly useful in county-wide incidences where local or state officials may be unavailable.

#### **IV. HAZARDOUS MATERIALS INCIDENTS**

A. Responsibilities and Operations Concept

The Environmental Health and Safety Coordinator will assess matters that have the potential to affect the general health and safety of campus constituents, the surrounding community, or any ecological threats as posed by the release or potential release of hazardous materials on campus.

Small hazardous materials incidents may be contained or abated by campus personnel trained and familiar with the chemical substance and the potential health effects. Any situation posing a potential threat to human health or the environment must be reported to University Police and/or Environmental Health and Safety personnel.

Large or dangerous releases of hazardous materials will be reported immediately to the University Police and appropriate evacuation or protection in-place will be initiated. It is the responsibility of the first responders to an incident involving

hazardous materials to control the scene and follow the guidelines provided in their training. It is not the responsibility of University Police first responders to determine abatement procedures or define specific health hazards. However, every effort should be made to contain spills or abate the source of a hazardous materials release into the atmosphere where it does not pose a threat to the responder or others.

B. Outside Agency or Contractor Involvement

The Union Colony Fire/Rescue Hazardous Materials Response Team (HazMat) is designated as the Emergency Response Agency for hazardous materials incidents within the City of Greeley. They will take control of the hazardous materials scene upon their arrival. Where further assistance is needed in conducting initial abatement, State or National assistance may be required. Information regarding these procedures and contact information is provided in Environmental Health and Safety Emergency Response Plans.

**V. INCIDENTS INVOLVING RADIOLOGICAL HAZARDS**

A. Responsibilities and Operations Concept

It is the responsibility of the Environmental Health and Safety Coordinator and the University Radiation Safety Officer to advise the Emergency Response Committee on matters involving, or potentially involving ionizing radiation sources. Radiation safety and response to incidents involving radioactive materials is a complicated subject involving numerous scientific, safety and biological principles.

The following emergency scenarios have the potential to involve radiological hazards (these are intended as examples and do not include all potential incidents, nor should it be interpreted that all incidents listed will necessarily involve radiological hazards):

Fire: Heat degrading containment, and the potential widespread off-site migration of radioactive materials in the form of products of combustion (smoke). Health hazards involve inhalation of contaminated smoke, particularly of alpha particles which may deposit in lung tissue.

Flood: (line breaks) Potential off-site migration of materials or degradation of containment resulting in a release of radiation.

Theft or Terrorist Incident: Potential exposure or perceived risk of exposure to the public or campus community resulting from the intentional activities of an individual(s) or group. A confirmed theft of radioactive materials from the University would also require notification of the Department of Energy (DOE).

Transportation Incident: Potential incident involving migration onto campus from an off-site source, or off-site migration potential resulting from accidents during delivery or export of University materials or waste.

Severe Weather: Damage to building storing radioactive materials (potential breach of containment facilities).

Radiation Exposure: To staff, faculty or students during the course of research activities.

#### B. Environmental Health and Safety Department Response

An Environmental Health and Safety representative will be in charge of initial response efforts to a radiological incident in cooperation with the University Police. This individual will make decisions based on information and advice provided by the University Radiation Safety Officer. In the absence of the Radiation Safety Officer or qualified University Radiation Safety Committee member, data will be obtained from the State of Colorado Public Health & Environment, Laboratory and Radiation Services Division. Control of the incident scene will be combined with the response activities of the Union Colony Fire/Rescue Authority's HazMat Team upon their arrival.

#### C. Radiation Safety Officer

The Radiation Safety Officer is designated by the State during licensing (typically selected from the UNC School of Chemistry, Earth Sciences and Physics). The Radiation Safety Officer must be contacted in the event of any radiological emergency and should be consulted prior to beginning any aggressive emergency response efforts that may result in an exposure to radiation. This individual is an essential part of radiological incident response and will typically serve as the primary technical resource. The Radiation Safety Officer may also serve as the response team's safety officer.

## **VI. INCIDENTS INVOLVING BIOLOGICAL HAZARDS**

### Responsibilities and Operations Concept

This section was developed to address responses to potential large-scale biological hazards resulting from acts outside the normal University activities. Generally no activities on campus pose biological threats significant to warrant campus-wide concern. This section is therefore focused on unforeseen events or acts of terrorism. Biological hazards may be present during other forms of emergencies and are covered in the General Health & Safety section.

It is the responsibility of the Environmental Health and Safety Coordinator in cooperation with appropriate representatives of the School of Biological Sciences and the Medical Health Coordinator to advise the Emergency Response Committee regarding matters posing biological threats with the potential to endanger human, animal or plant life such as the following:

- A. Accidents resulting from un-authorized use of dangerous biological agents in campus research activities.
- B. Off-campus accidents involving dangerous biological agents posing a threat to the campus community.
- C. Outbreak of extremely communicable diseases posing immediate dangers to campus or community.
- D. Terrorist activity involving dangerous biological agents.

## **VII. EMERGENCY PREPAREDNESS**

In cooperation with the Emergency Response Committee, University Police, and local, State and Federal agencies (where applicable) the Environmental Health and Safety Coordinator will:

- A. Coordinate emergency response exercises to test emergency response readiness.
- B. Coordinate training needed to increase response preparedness for both campus constituents and emergency response agencies serving the University.
- C. Maintain emergency telephone numbers and current contact information for response agencies and other sources that may be deployed during an emergency involving Environmental Health and Safety concerns.

- D. Maintain Departmental Emergency Response Plan with up-dated procedural guidance.
- E. Provide the Emergency Response Committee with limited personal protective equipment that may be needed to conduct assessment tours during emergencies.
- F. Assist Facilities Management with hazard analysis of campus facilities and infrastructure to identify areas of concern and response needs.
- G. Advise the University regarding potential liabilities and conditions that can affect casualty outcomes and emergency preparedness.
- H. Coordinate with and participate in the Weld County Local Emergency Preparedness Committee.
- I. Maintain liaison with other state agencies and universities to coordinate potential response capabilities.
- J. Develop written general health & safety advisories to assist during emergency response.
- K. Maintain minimal on-site supplies to address emergency response efforts to the hazardous materials incident.
- L. Maintain current OSHA Hazardous Waste Operations and Emergency Response certification.
- M. Review Annex annually and meet with Medical Health Coordinator to review cooperative activity plans.