

Clemson University Hazardous Materials Emergency Response Plan

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Introduction

Numerous state and federal regulations require an expedient and safe response to chemical releases. All major chemical emergencies must be reported immediately to Clemson University Public Safety by calling 656-2222 or 911. University Fire/EMS staff will assume Incident Command. University personnel should not exceed their level of skill and training.

Note that this plan covers only spills on the Main Campus – spills onto adjacent property not owned by Clemson or at Clemson owned Satellite Facilities are not covered in this plan.

This plan will also be used for HazMat non-emergencies (i.e. uncovering hitherto unknown underground storage tanks, etc.).

Hazardous Materials Spills

Upon receipt of initial report

Upon notification of a chemical release, Public Safety Communications will:

1. Alert the CU Fire/EMS service of the hazardous condition.
2. If appropriate, advise the caller to activate the building fire alarm and to meet Fire/EMS outside, upwind of the spill location.
3. If the report includes sight of flames, serious injury, or human chemical contamination, request Fire Department Hazardous Materials Unit immediately.
4. Notify a police supervisor immediately.
5. Notify the Director of Environmental Health & Safety:

Name	Work Phone	Home Phone	Cell Phone
W. Robert Newberry, IV CIH, CHMM	656-1806	654-2628	650-8150

In the event of a chemical/biological incident and the EHS Director is unavailable, attempt to contact:

Name	Work Phone	Home Phone	Cell Phone
Naomi Kelly	656-7154	654-8715	650-8155
Phil Carroll	656-1770	868-7142	650-8158

In the event of a radiological incident and the EHS Director is unavailable, attempt to contact:

Name	Work Phone	Home Phone	Cell Phone
Jess L. Addis	656-7162	63.8-6783	650-8153
Stephen Price	656-7162	222-0010	650-8152

If no EHS representative is available, request the Fire Department Hazardous Materials Unit respond.

Operations

All emergency operations shall be conducted in accordance with the following 10-step incident management procedure:

1. Isolate Area/Deny Entry
2. Identify Material(s)
3. Evaluate Hazards and Risks
4. Choose Protective Clothing/Equipment
5. Coordinate Information/Resources
6. Control and Confine Product/Material
7. Cleanup Spilled Product
8. Decontaminate
9. Return Area to Service
10. Terminate (Debrief/Document/Critique)

All Hazardous Materials responses will be considered high risk until confirmed otherwise.

CU Fire/EMS will:

1. Approach the spill from upwind.
2. Provide emergency medical aid to victims ONLY if it can be done without risking the responders' personal safety and/or contamination.
3. Establish a perimeter, isolate the area, and prevent entry into the spill scene.
 - a. Use the DOT Emergency Response Guide Book to set the evacuation perimeter.
4. Detain knowledgeable individuals at the scene and obtain as much information as possible concerning the incident (Document!!).
5. Notify communications of the staging area for incoming Police and EHS units. (safe distance upwind).

The Director of Environmental Health & Safety (or designee) will:

1. Conduct a site hazard assessment to determine:
 - a. What spilled.
 - b. How much.
 - c. Hazards of the material.
 - d. The location of injured or contaminated individuals.

- e. The need to shut down mechanical and electrical systems.
- f. The potential for environmental contamination.
2. Determine if a Fire Department/HazMat or clean up contractor response will be needed.
3. If time permits, relay hazard assessment information to communications for use by responding units.

If an Environmental Health & Safety representative is unavailable, the Incident Commander will assist the Fire Department with the hazard assessment, and determine whether a Fire Department/HazMat or clean up contractor response will be needed

The Fire/EMS Department will:

1. Establish Incident Command or Joint Incident Command depending on the needs of the incident.
2. Identify hazards and mitigate immediate threats to life, the environment and property.
3. Remain on scene until they are satisfied that the clean up is proceeding in a safe and effective manner.
4. In the event it is determined that the Fire/EMS service can safely clean up the spilled material, they shall proceed as Directed by EHS, and collect all wastes and contaminated materials for later disposal by EHS.

EHS is responsible for providing contract clean up services, not the Fire Department. For chemical and bio-hazard response and clean up notify JBR Environmental Services at 1-800-513-3019. The EHS representative will activate the response/clean up contract; in the event that there is no EHS representative, the Incident Commander will activate the response/clean up contract. In that event, the Incident Commander will notify EHS that the contract has been activated immediately upon establishing contact with an EHS representative. The Department causing the spill will be charged for the clean up costs.

The Hazmat Unit will:

1. Coordinate information, resources and activities with the first-arriving unit and Incident Commander.
2. Review the initial hazards and risk assessment with the EHS representative.
3. Confirm identity of all materials involved, considering:
 - a) Container Shape(s)
 - b) Markings/Colors
 - c) Placards/Labels
 - d) Shipping Papers/Documents
4. Don appropriate Protective Clothing and Equipment

The choice of protective clothing will depend upon the hazards and properties of the involved materials. The following levels of protection shall be employed by Clemson University Fire Department personnel, as appropriate:

Level A

Fully-encapsulating gas tight chemical suit, chemical-resistant outer and inner gloves, chemical-resistant outer boots and self contained breathing apparatus.

Level B

Non-encapsulating chemical suit, chemical-resistant outer and inner gloves, chemical-resistant outer boots and self contained breathing apparatus.

Level C

Non-encapsulating chemical suit, chemical-resistant outer and inner gloves, chemical-resistant outer boots and air-purifying respirator.

Level D

Coveralls and chemical resistant boots.

5. Coordinate Information and Resources
 - a) Assemble all information regarding the hazardous material, container, conditions, etc., in order to develop tactical options.
6. Product/Material Control and Confinement
 - a) Spill Control
 - b) Leak Control
7. Cleanup of Product
 - a) Cleanup spilled materials in accordance with FERS SOP's Section 4.
8. Return Area to Normal
 - a) Check contaminated area by visual observations, air surveillance etc. to ensure area is safe for personnel to reenter.
 - b) Notify OSHB personnel if follow up is needed.
9. Termination
 - a) Debrief emergency personnel and civilians involved in the incident.
 - b) Document the incident and advise individuals involved as to effects of exposure, properties of the materials, etc.
 - c) Critique

The Director of Redfern Student Health Services will:

1. Provide medical care response in the event of injuries to personnel.

Hazard Zones

1. Hot Zone - (High Hazard)

Immediate danger area surrounding the problem site. Only to be entered by Hazardous Materials Technician level trained personnel, or individuals possessing particular knowledge of the problem/situation, under monitored conditions. During actual operations, a back-up team with appropriate protection will be stationed at edge of the Hot Zone.

2. Warm Zone - (Potential Hazard)

Area surrounding the Hot Zone which presents a minimum hazard to Department personnel. Restricted to those assigned by the Incident Commander.

3. Cold Zone - (No Hazard)

Area surrounding Warm Zone which presents no hazard to emergency services personnel and equipment. Reserved for emergency services functions only, (i.e., command post, triage, agency liaison, news media etc.).

Non-Fire Department Personnel - certain Hazardous Materials incidents may require the use of technical and manufacturer representatives, etc., to evaluate hazards and/or perform specific functions inside the Hot Zone. Such operations will only be conducted with the approval of the Incident Commander and will be under the direct supervision of the Hazardous Materials Team Leader.

Incident Command System

The following designations and subsequent position responsibility descriptions are derivatives of those contained in, and mandated by, the **Incident Command System (ICS)** and the **Standardized Emergency Management System (SEMS)**. The ICS organization develops around five major functions that are required on any incident whether it is large or small. For some incidents and in some applications, only a few of the organization's functional elements may require the filling of a specific position. In those cases where a specific position is not filled, the duties remain the responsibility of the next higher position in the chain of command. However, if there is a need to expand the organization, additional positions exist within the standard ICS framework to meet virtually any need. The five primary S.E.M.S. functions found in ICS for EOC staffing are:

1. **Incident Command and Management:** Is responsible for directing, ordering, and/or controlling resources and is responsible for coordination and overall emergency policy.
 - a) Staffing: Director Public Safety, EH&S, University Communications Officer
2. **Operations:** The coordinated tactical response of all field operations units in accordance with an Incident Action Plan.
 - a) Staffing: Public Safety designee, Medical Services, Transportation

3. **Planning / Intelligence:** Responsible for the collection, evaluation, documentation and use of information related to the incident.
 - a) Staffing: Public Safety and/or Facilities Management personnel. Planning and other departments can contribute personnel depending on the nature of the emergency.
4. **Logistics:** Provides facilities, services, personnel, equipment and materials in support of the incident.
 - a) Staffing: Facilities Management, Fiscal Affairs, Housing, and Transportation. Other departments may also have the background to assist in this function.
5. **Finance / Administration:** Provides financial and cost analysis and administrative support not handled by the other functions.
 - a) Staffing: Fiscal Affairs and Human Resources staff.

Off Campus Hazardous Materials Incident

Large-scale hazardous material releases either on contiguous highways or from local jurisdictional areas have the potential time impact the Clemson University main campus; causing serious injuries and fatalities, millions of dollars in property damage, and /or requiring major evacuations.

1. A sudden release of hazardous materials may allow little time for an organized response. The appropriate action may be to “shelter in place,” (remain in a closed building) or if appropriate and circumstances permit, university personnel may be directed to designated collection points/staging areas.
2. Depending on the circumstances, evacuation may be the appropriate protective measure to take. Any evacuation will be coordinated by Clemson University Fire/EMS.
3. The Clemson University Fire Chief or designee will instruct the university community to exit the campus through specific, and predetermined safe routes.
4. Control of perimeter ingress / egress routes will be maintained by University Police following the evacuation to prevent unauthorized entry to University property.

Campus Notifications

Details on disseminating information to the campus community and the public can be found in the Clemson University Disaster Management Plan, Annex E. Public Affairs is responsible for leadership and management of the University’s public relations, marketing and communications programs. The Chief of Public Affairs Officer is designated to handle all university crisis communication, and to serve as university spokesperson in crisis, emergency, or sensitive situations. The back-up is the Director of News Services.

Environmental Health and Safety is responsible, if available, for notifying Public Affairs and the appropriate University executives of hazardous materials incidents that involve major injuries, property damage, the need for contract remediation services, or media involvement. Procurement should be advised of activation of contract services. The Incident Commander will be responsible for making these notifications in the absence of an EHS representative.

The Chief EHS Officer, his designee, or the Incident Commander will notify Public Affairs of a HazMat incident as soon as possible after assessing the scene.

All news releases, official statements, publications, flyers, Inside Alerts, mass e-mails, direct mail or other communication related to the crisis will be coordinated through News Services.

Regulatory Notifications

If available, EH&S will make the required regulatory notifications. If unavailable, notifications will be made by the Incident Commander. Minor spills/incidents DO NOT require reporting. Required notifications should be made as soon as possible following initiation of the emergency response. Document all notifications.

Report hazardous materials releases equal to or in excess of 55 gallons of a liquid, 200 cubic feet of a gas or 500 pounds of a solid to listed agencies.

2. Hazard and Risk Assessment, considering:

- a) Current status of Hazardous Materials; properties, etc.
- b) Overall condition of Hazardous Materials containers.
- c) Environmental conditions; wind, topography, environmental controls.
- d) Exposures; civilian, emergency services.
- e) Comparison of resources available vs. the problem at hand.
- f) Estimation of likely harm without active fire department intervention.
- g) Suggested perimeters of the Hazard Zones.