

Hazardous Materials Action Plan

The University Of Iowa
[Environmental Health & Safety](#)
122 Grand Avenue Court
Iowa City, IA 52242-1000
Phone: 319-335-8501
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Building Name:

Building Emergency Coordinator:

Name:

Phone #:

Date:

1. Purpose

The purpose of this Hazardous Materials Action Plan (HMAP) is to assist with the planning, education and subsequent response to a hazardous materials or hazardous waste spill. This plan is designed to help you put into place the necessary resources to maximize your ability to respond to an incident and to minimize injuries, damage, and disruption to normal operations. Preparedness planning will help you judge the difference between a major and minor spill in order to determine whether you are capable of remediating the spill or need assistance from local emergency responders.

2. Procedures

Minor Spills

Definition

A minor spill meets the following criteria:

- Constitutes a non-emergency situation.
- Does not spread rapidly.
- Does not endanger people except by direct contact.
- Does not endanger the environment.
- Can be safely managed by personnel responsible for the spill.

Minor Spill Response Procedure

- Evaluate spill to ensure it meets the definition of a minor spill and is not spreading or reacting with other materials/waste, increasing the nature of the hazard.
- Notify appropriate co-workers, the Building Emergency Coordinator (BEC) and other potentially affected building occupants; do not use the fire alarm system for a minor spill.
- Those responsible for the spill should have the knowledge to contain and remediate the spill.
- Notify affected occupants when the spill has been remediated.

Spill Management Quick Spill Guides

The spill response guides detail the steps to be taken to remediate a minor spill. Use the printable [Spill Response Guides](#).

Occupant Notification in Spill Area

- Immediately notify building occupants, those who are impacted directly or reasonably anticipated to be affected by the hazardous materials or hazardous waste spill.
- Notify the BEC about the spill details so they may respond to other building occupant questions as they arise.
- During the spill response process, continue to assess the extent of the affected area of the spill in case additional staff need to be notified about the spill.

Major Spills

Definition

A major spill meets the following criteria:

- Constitutes an emergency situation.
- Spreads rapidly or reacting with other materials, increasing the nature of the hazard.
- Endangers people or involves serious personnel injury.
- Endangers or is entering the environment.
- Presents an inhalation hazard.
- Presents a fire hazard.
- Personnel in area cannot safely manage the spill.

Major Spill Response Procedure

- Evaluate spill to ensure it meets the definition of a major spill.
- Dial 911 to report the major spill. If necessary, communicate need for medical assistance.
- Notify appropriate co-workers, BEC and other potentially affected building occupants.
- Assess extent of evacuation, and respond appropriately. The BEC may need to implement the evacuation plan.
- Exit the building and awaits the arrival of emergency responders.
- Gather spill information and obtain the necessary Safety Data Sheets (SDS) for the first responders.

Occupant Notification in Spill Area

- Immediately notify building occupants, those who are impacted directly or reasonably anticipated to be affected by the chemical spill.
- Notify the BEC -
- Notify each of these offices after summoning emergency responders and notifying affected personnel.
 1. Regulatory – Environmental Compliance Specialist - Ingrid Anderson (38)4-0993
 2. Property – Risk Management – (33)5-3425.
 3. Public Relations – University Relations – (33)5-0557.
 4. Assistance – EHS: (33)5-8501.

Spill Occurring in an Elevator

- Follow the guidelines set forth in this template for evaluating a minor or major spill and follow the appropriate response procedure above. Additional precautions must be taken when dealing with a spill in an enclosed space, such as an elevator.
 1. If the spilled material is unknown or the spill may have gone down the elevator shaft this is considered to be a major spill.
- Do not enter the elevator and attempt to remediate the spill if you feel the atmosphere in the elevator has been compromised. If you are unsure, contact EHS for advice.
- To prevent use of the contaminated elevator tape or cordon off the doors on each floor or shut down the elevator.
 1. To shut the elevator down call Facilities Management Emergency Services 335-5071 for instructions on how to do this. Or pull the emergency stop and prop open the doors.
- Determine if anyone has tracked the spill out of the elevator. Check floor at each floor the elevator stops at to determine if there has been contamination.
- Additionally, contact Facilities Management to determine which company services the elevator in question.

Spill Occurring in a Parking Lot

- Follow the guidelines set forth in template for evaluating a minor or major spill and follow the appropriate response procedure above.
 1. If the spilled material is unknown or the spill has reached a drain, the sewer system or unpaved areas this is considered to be a major spill.
- Special precautions must be taken to ensure that the spilled material does not reach a drain, sewer system or unpaved areas. If you are unsure if this has already occurred please contact EHS for advice.
- If the spill is outside the area of your control, contact Parking and Transportation at 335-1475.

3. Information Management

Laboratory Shut Down Procedure

- During an incident it may be necessary to evacuate one or more of the affected buildings' laboratories.
- Laboratory personnel should be informed as soon as possible that they may be affected by an evacuation and that they may need to shut down any on-going experiments.
- Each laboratory needs to have a plan in place detailing steps to be taken in the event of a laboratory shut down or building evacuation.
- This plan should include:
 1. Safe shut down or storage of ongoing experiments,
 2. Storage of hazardous materials in use.

3. Effect of electrical outage on lab and how best to mitigate any problems that may occur.
 4. Effect of ventilation/hoods/glove boxes being shut down on lab equipment or experiments.
 5. Equipment shut down.
 6. List of any special problems/hazardous that may occur if lab personnel are unable to implement shut down procedures due to rapidity of building evacuation.
- This procedure should be made available to all personnel working in the laboratory.

Evacuation of a Building Floor

- Based upon the size of the affected area, it may be necessary to evacuate an entire floor of a building especially when the floor is served by a single ventilation system. These factors should be determined as part of emergency preparedness planning.
- Notification should be by word of mouth rather than utilizing the building fire alarm system, unless the alarm is zoned for the floor only. Prior planning is necessary.
- At your point of assembly outside the building, account for all personnel; be prepared to let emergency responders whether or not all personnel are accounted for.

Evacuation of a Building

- Based upon the size of the affected area, it may be necessary to evacuate the entire building.
- Include a contact list for the BEC along with the evacuation plan and instructions on when and under what circumstances the team needs to be contacted. An example chain of contact is: personnel become aware of the spill; they notify co-workers and their supervisor; the supervisor or the person who discovered the spill immediately notifies the BEC.
- Devise an evacuation plan. Place the evacuation plan in prominent areas throughout the building or department. Distribute copies of the plan and discuss it with all permanent occupants of the area(s) in question.
- Include maps of the building showing evacuation routes and assembly areas located outside the evacuation zone. Use the plan to evacuate any sized area, from a single room or floor to the entire building.
- Determine how best to notify personnel when an emergency situation exists and when they must evacuate through prior planning. Notification may be accomplished in several ways:
 1. Use the fire alarm PA system to announce a spill.¹
 2. Verbally warn people either by phone or by physically going to each area.
 3. Notify by E-mail list.²

* **1.** Use of the fire alarm PA system must be coordinated with Facilities Management to determine if it is possible to add a message, and whether or not it is allowed by the Iowa City Fire Department. A determination will need to be made as to whether or not it is permissible to use the fire alarm to evacuate the building under non-fire circumstances.

* **2.** E-mail notifications should be used for non-emergency correspondence only, such as alerting personnel to a minor spill or informing those who are not present during a major spill.

Principal Investigators/Laboratory Lists

Create and maintain a PI and primary lab contact list. Include lab phone, home phone, and cell phone numbers when available.

Building Floor Plans – Hazardous Materials Locations

- EHS can provide a set of building floor plans, on request, that depict locations where significant quantities of hazardous materials have been reported. The areas are highlighted in red crosshatching.
- Building plans are derived from information available from Facilities Management and compiled by Rick Byrum, (33)5-9379, richard-byrum@uiowa.edu(link sends e-mail) in EHS.
- Evacuation routes and assembly areas should avoid these areas.

Building Floor Plans – Evacuation Routes and Assembly Areas

- Each BEC needs to map out evacuation routes and assembly areas on the building floor plans. EHS can provide a set of floor plans for each building for this use.
- At a minimum, evacuation route maps should be given to occupants in areas where a hazardous materials/waste spill is likely to occur. Evacuation route maps should indicate areas marked as containing significant quantities of hazardous materials.
- Assembly area(s) should be upwind and uphill of the spill. If it is determined that more than one gathering area per building is needed, a person designated by the BEC should be in charge of each area. (Include the designated persons' names and cell phone/pager numbers on the map that each individual is responsible for.)
- Contact [Bruce McAvoy](#)(link sends e-mail), Fire Safety Coordinator in University Public Safety for guidance on preparing evacuation routes and reviewing evacuation plans.

4. Training

Preparing the EPP

The primary focus of the training is to provide the BEC with the knowledge and confidence to manage a chemical spill, and either clean it up or summon outside assistance. All training times and dates will be scheduled by EHS with at least two class times being scheduled for each in-house course. BEC will be notified in advance by EHS of all scheduled training.

Classroom Training

- Spill kit preparation and use.
- Spill response procedures.
- Advanced use of EHS Assistant.
- First responder training.

Web Based Training

- Incident Command System (ICS) as part of the National Incident Management System (NIMS) provided by FEMA.

5. Chemical Inventory

EHS Assistant

- EHS Assistant is a web-based inventory system offered by EHS so that chemical owners may maintain information on chemicals/products within their areas. It also permits tracking of chemicals with expiration dates to proactively manage materials that become dangerous due to aging.
- Each BEC will be given access to chemical inventories within their area of responsibility.
- EHS Assistant information is also available to emergency responders, i.e., Iowa City Fire Department, Coralville Fire Department (Oakdale Campus) and the Johnson County HazMat Team. Access is provided for use during an actual spill response.

EHS Assistant Setup, Activation and Training

- EHS Assistant is a Web-enabled system with URL access through [EHS's Web page](#). The BEC must contact EHS to activate log-in privileges. The BEC will have read-only access to the areas specified.
- Training on the EHS Assistant system will be provided by EHS.

Chemical Inventories

- Inventories must be created in EHS Assistant.
- The responsibility for creating and maintaining the chemical inventories rests with the chemical owners.
- The BEC will have read-only access to inventories on EHS Assistant. Unless the BEC is separately responsible for a lab or other building area inventory, they will not be updating or entering data.

Laboratory Inventories

Laboratory locations include teaching, electronic, research and medical laboratories. All laboratory chemical inventories are maintained in EHS Assistant and made available to emergency responders.

Non-Laboratory Inventories

There are locations outside of labs that contain significant quantities of chemicals. These include maintenance areas, water treatment rooms, janitorial closets, and stock rooms. These locations are also identified on the floor plans. Chemical inventories for non-lab areas must also be created, using either EHS Assistant.

Building Systems Inventories

Building Systems such as piping, vats, water treatment equipment in or around buildings may contain hazardous chemicals. Examples include: liquid nitrogen or air tanks, piping

systems for diesel generators. EHS will provide information on the location and size of these storage systems.

6. Spill Cart

Purpose

- Where deemed necessary, EHS has provided spill carts intended to assist the BEC in address chemical spills in their areas. Though useable for hazardous materials or hazardous waste spills within laboratory areas in their departments, the spill cart is not intended to replace laboratory obligations to maintain their own in-lab spill kits.
- The number of carts given to the designated BEC will be determined by several factors including total size of the area of responsibility, number of areas in which spills may occur, and the types of hazardous material stored or used in the area.

Location

Spill cart location is determined by the BEC. EHS suggests a well-known location that is easily accessible to all members of the BEC.

Spill Cart Contents

Contents

Two-wheel cart-empty	INSTA-CHEK pH paper
Silver Shield®/4H® Gloves, 2 pair	Absorbent Socks (3" x 42"), 3 total
Acid spill kit	Mercury Spill Control kit
Caustic spill kit	Scraper
Absorbent pads-universal- (20" x 16"), 25 total	Disposable latex boots, 2 pair
White bag (30" x 18") and twist ties	Disposable dust pan
Tyvek® coveralls X-Large	Disposable whisk broom
Economy goggles	Nitrile gloves, large, 5 pair

Ordering Replacement Supplies

- The BEC is responsible for maintenance and restocking of spill cart(s).
- Carts should be inspected regularly/monthly to determine if restocking is needed.
- Obtain replacement supplies through Biochem Stores located at 4321 BSB. Contact Biochemistry Stores at (33)5-7927, Fax 35305970, email webmater@BiochemStores(link sends e-mail) or web site www.medicine.uiowa.edu/biochem_stores.