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I. General Guidelines

Policy

The following plan has been developed to minimize the severity of damage to human health and the environment in the event of an unexpected hazardous material release in compliance with CFR 1910.120. The Emergency Hazardous Spill Response Plan pertains to any hazardous release, confirmed fire, serious injury or death resulting from the release of a hazardous material throughout the campus.

Scope

Facilities Services employees or maintenance workers are neither expected, nor allowed to clean up chemical spills other than their own, if appropriate. The Public Safety staff has been trained to make proper assessments, contain the spill and delegate clean-up to appropriate people or outside agencies, but not to clean up chemical spills.

Lab workers are qualified to clean up spills that are minor (an accidental spill that does not pose a significant safety or health hazard to those in the immediate vicinity nor has the potential to become an emergency within a short time frame). If the spill exceeds the scope of the lab employee's experience, training and/or willingness to respond, the employee must be able to determine that the spill cannot be handled internally and must contact Public Safety.

II. Authority & Responsibility

Office of Public Safety

On duty PSO will serve as the initial on-site Incident Commander and will make all operational decisions upon arrival and initiate the response sequence

- ✓ PSO will alert the area occupants and evacuate the area, if necessary
- ✓ If fire or medical attention is needed, PSO will notify dispatch
- ✓ Dispatch will contact Rock Island Fire Department
- ✓ PSO will cordon off area and contain spill with appropriate materials, if trained
- ✓ PSO will advise dispatch to contact Safety Coordinator of a spill of any size

In the event of a significant release, personnel below will be contacted. Upon notification, the following individuals will ensure that appropriate personnel are on campus and available to carry out designated duties.

a. Director of Public Safety: Upon arrival, serves as lncident Commander
b. Vice President of Business and Finance: Coordinates financing and purchasing for the incident
c. Director of Facilities Services: Coordinates, supports and assists with people/material at the site

d. Deputy Chief of Police: Policy/training; serves as liaison with outside authorities; coordinates follow-up
e. Director of Public Relations: Designated campus communicator with the media

The Rock Island Fire Department (RIFD) will assume command of the scene upon arrival. RIFD will make all operational decisions concerning further evacuation and mitigation of the release.

- ✓ Public Safety will provide assistance to RIFD, as requested
- ✓ Public Safety will contact clean-up agency when directed by RIFD

Deputy Chief of Police – Safety Coordinator

Coordination between RIFD and Augustana College will be initiated through the Deputy Chief of Police serving as the Safety Coordinator.

The Emergency Response Plan for Hazardous Materials will be reviewed and amended by HR on an annual basis and/or when any of the following occur:

a. Applicable regulations are revised
b. The plan fails during an emergency
c. The list of emergency equipment changes
d. There is any facility change that would affect the plan

The Safety Coordinator will contact the following agencies if a hazardous spill is reportable or in excess of reportable quantity (RQ or TPQ per EPA List of Lists):

a. Rock Island County Emergency Service Disaster Agency (ESDA): 799-5166
b. Illinois Emergency Management Agency: (217) 782-3637
c. National Response Center: (800) 424-8801
d. Resource for assistance in determining the need to call: (800) 424-9346
e. Reference for reporting quantities of hazardous substances on EPA List of Lists website: www.epa.gov/swercepp/pubs/title3.pdf

The Safety Coordinator will provide a written After Action Report to the President of the college through the Vice President of Business and Finance. This report will include, but not be limited to:

a. Actions taken
b. Injuries
c. Property damage
d. Assistance of outside agencies

Departments Using Hazardous Materials

The Safety Officer/Department Chair of departments using hazardous materials must ensure the following:

- ✓ Faculty and lab instructors know the characteristics of chemicals they are working with and take precautions to protect themselves and students in preventing/containing spills
- ✓ All employees know the characteristics of the chemicals they work with and take precautions to prevent spills and protect themselves and others in containing spills that occur.
- ✓ Appropriate spill clean-up supplies and PPE are available on-site
- ✓ Effective spill response procedures are followed
- ✓ Employees (and student employees) have HazCom training initially and whenever a new chemical is added to the operation
    - Ensure all affected employees understand HMIS labels
    - Have SDS available and easily accessible for every chemical used
- ✓ Use only approved containers for hazardous materials with HMIS label
- ✓ Store only necessary amounts of hazardous materials/chemicals
- ✓ Store hazardous materials away from drains
- ✓ Prominently display Emergency Spill Response Poster with emergency numbers and keep information updated by phones in areas where chemicals are stored or locations of possible spill.
- ✓ Ensure that all employees in the department are familiar with emergency procedures
- ✓ Advise the Office of Public Safety immediately if spill is
    - Over 300cc of any hazardous material
    - Any size of an extremely hazardous substance

III. Proactive Spill Prevention

Everyone handling chemicals/hazardous materials should be aware of:

a. The hazards associated with the materials they work with
b. How to manage any spills of these materials

Everyone handling chemicals/hazardous materials must be trained to find needed information in the chemical SDS:

a. Study the SDS before starting any procedure
b. SDS are available both online at https://augustana.net/offices/safety/MSDS/ or master copies are located on the 1st floor of Hanson Science.

Training will be provided for all individuals using chemicals/hazardous materials by the supervisor/department safety officer/department head. Training will include procedures for safely working with chemicals, including response to chemical spills.

IV. Assessing Spills

Simple/Minor Spill

A simple/minor spill is defined as one that:

- ✓ Does not spread rapidly
- ✓ Does not endanger people or property, except by direct contact
- ✓ Does not endanger the environment outside the building

All other spills/releases should be considered hazard emergencies

A simple/minor spill can be neutralized, absorbed or otherwise mitigated by the user(s) of the chemical.

No notification of emergency responders is necessary for simple/minor spills. However the Safety Coordinator must be notified of all spills over 300cc or any amount of an extremely hazardous substance.

Hazardous Emergency Spills

A hazardous emergency spill is defined as one that:

- ✓ Causes injury or chemical exposure that requires medical attention
- ✓ Causes a fire hazard or uncontrollable volatility
- ✓ Requires the need for breathing apparatus of the supplied air or self-contained type to handle the material involved
- ✓ Causes airborne contamination that requires local or building evacuation
- ✓ Involves or contaminates a public area
- ✓ Causes a spill that cannot be controlled or isolated by laboratory personnel
- ✓ Causes damage to Augustana property
- ✓ Involves any quantity of metallic mercury (other than a thermometer breaking in a laboratory only)
- ✓ Cannot be properly handled due to lack of trained personnel and/or equipment to perform a safe, effective clean-up

- ✓ Requires prolonged clean-up
- ✓ Involves an unknown substance
- ✓ Enters the land or water

Emergency chemical spills/releases are handled by the Office of Public Safety and the Rock Island Fire Department.

a. A call to Public Safety at 7711 will initiate the response
b. If you are unaware of a spill's fire potential:
    i. Even a small amount of spilled flammable liquid or reactive substance presents a significant fire hazard
    ii. There are many spark sources in laboratories
    iii. Check the SDS
    iv. Do not hesitate to evacuate
    v. Notify Public Safety at 7711
    vi. Pull the fire alarm and assemble in assigned location

Evacuation

Initiate evacuation if:

- ✓ Uncontained chemicals can disperse fumes, gases or dusts that may be hazardous to your health or the health of those around you
- ✓ If you suspect the released chemical is toxic
- ✓ If others in the area could be exposed to the chemical

V. Emergency Actions

Spill Evaluation

Determine severity of the spill by identifying:

a. The chemical spilled
b. Approximate quantity
c. Location of the spill

If fire/explosion/hazardous vapors are present:

a. Pull the fire alarm to evacuate the building

b. Evacuate the area and tell others to evacuate to the pre-determined assembly location
c. Close, but do not lock the doors behind you to isolate the area
d. If time allows to do so safely, ensure fume hood sashes are closed
e. If time allows to do so safely, post a sign to warn others not to enter the area
f. If fire, smoke, gases or vapors are spreading to other areas:
    i. Pull the fire alarm to evacuate the building
    ii. Call Public Safety (7711) from a remote location and advise of the spill
    iii. Identify yourself to emergency response personnel when they arrive
    iv. A representative for the room/department should be present to provide details of the incident to emergency responders. This individual should be able to identify the types and quantities of chemicals stored and their locations within the room/department.

First Aid

Any spill that results in personal exposure should be treated immediately. Check the SDS for specific information.

Eyes/Skin Contact

a. Assist person to sink/eyewash
b. Remove contaminated clothing
c. Flush eyes or affected skin area with water thoroughly and continuously for a minimum of 15 minutes
d. Facilitate medical attention for victim

Inhalation

a. Move the victim into fresh air
b. Give CPR, if needed
c. Facilitate medical attention for victim

Clothing Fires

a. Extinguish burning clothing/hair by dousing victim in safety shower or other water source OR smother the fire with lab coat or other fabric
b. If these resources are not available, have victim stop, drop and roll
c. Facilitate medical attention for victim

VI. Spill Cleanup Procedures

Simple Spills

Persons causing simple spills are responsible for clean-up to the extent of their abilities. At a minimum, individuals causing or discovering chemical spills are responsible for:

- ✓ Assessing the spill
- ✓ Promptly advising the supervisor/appropriate laboratory personnel for appropriate clean-up
- ✓ Notifying Public Safety and the Safety Coordinator

The Office of Public Safety does not clean up any spill.

Clean-up Procedures

a. Check SDS
b. Attend to anyone contaminated
c. Notify supervisor
d. Evacuate all nonessential personnel from spill area
e. If spill material is flammable, remove all ignition and heat sources
f. Avoid breathing vapors of the spilled material
g. Establish ventilation if safe to do so
h. Secure supplies for clean-up
i. Don appropriate PPE per SDS
j. Follow procedure on SDS
k. Flooding is not recommended in storerooms where violent spattering may cause additional hazards or in areas where water-reactive chemicals may be present
l. Mop up the spill, wringing out the mop in a sink or a pail equipped with rollers
m. Carefully pick up and clean any cartons or bottles that have been splashed or immersed
n. If needed, vacuum the area with a HEPA filtered vacuum cleaner approved and designed for the material involved
o. If the spilled material is extremely volatile, let it evaporate and be exhausted by the laboratory hood
p. Spilled solids:
    i. Generally, sweep spilled solids of low toxicity into a dust pan and place into a container suitable for that chemical. (Additional precautions such as the use of a

vacuum cleaner equipped with a HEPA filter may be necessary when cleaning up spills of highly toxic solids.)

ii. Dispose of residue according to recommendations on SDS

Hazardous Emergency Spills

Although the following measures are prioritized in terms of usual preferred action sequences, each spill incident is unique and involves persons with varying levels of expertise and experience. Thus, for any individual accident, isolation of the spill and/or securing the area might best occur prior to or simultaneously with contacting the Office of Public Safety.

If known substance:

a. Contact Public Safety at 7711
b. Send for help, if possible
c. If the spill presents an immediate danger, leave the spill site and warn others, control entry to the spill site and wait for Public Safety response.
d. Control sources of ignition
    i. Do not operate electrical switches unless to turn motorized equipment off
    ii. Try to remove heat sources, if safe to do so
e. Immediately alert area occupants and supervisor and evacuate the area
f. Protect yourself, then attend to/remove injured persons to fresh air, if safe to do so
    i. Contaminated clothing must be removed immediately
    ii. Skin/eyes flushed with water for no less than 15 minutes
    iii. Clothing must be decontaminated before reuse
g. Refer to the SDS or other references for information
h. When a spill does not present immediate personal danger, try to control spread or volume of the spill (i.e. shutting doors, moving nearby equipment to prevent contamination, repositioning overturned containers, creating a dike by putting an absorbent around the spill, opening windows, sashes or fume hoods to facilitate removal of vapors). Protect floor drains or other means for environmental release. Spill socks and absorbents may be placed around drains as needed.
    i. Determine the extent and type of spill. If the spill is large, there has been a release to the environment and/or there is no one knowledgeable about spill clean-up available; Public Safety will contact the appropriate responders

If unknown substance:

a. Protect yourself
b. Notify Public Safety
c. Isolate the chemical if possible; do not touch the spill
d. Evacuate and secure the area

VII. Spill Kits

Spill kits are located throughout campus for use by first responders. The locations and contents are as follows:

Locations

Building	**Location**	**Type of Kit**
Power House	By Chill Room	30 Gallon Drum Kit
Public Safety	PSO Vehicle	Portable Spill Kit
Sorensen Hall	(1)Dock Area (2)Garage (next to hoist)	(1)30 Gallon Drum Kit (2)Spill Response Kit
Science Building	(1)Chem. Labs: 219,325,422 Basement Storage Area (2)Bio. Labs: 213,216,217,221,319 Prep. Room Boiler Room	(1)Chemical Spill Kit, Mercury Spill Kitty Litter (2)Mercury Spill Kit Kitty Litter 30 Gallon Drum Kit
Westerlin Hall	By hot water boiler #2	30 Gallon Drum Kit
Erickson Hall	Next to boiler	30 Gallon Drum Kit
Carver Center	Mechanical Area of Pool	Neutralizer/Baking Soda

Contents

30 Gallon Drum Kit	
Amount	**Item**
10	3 ½” x 4’ Socks/Booms
15	Pillows
24	Disposable Bags
2 pr.	Silver Shield Gloves (Large)
2 pr.	Nitrile Gloves (Size 10)
2 Pr.	Goggles

2	Tyvek Coveralls, XL
1 Qt.	Non-sparking Scoop
1	Floor Stand Spill Sign
2.5#	Spill X-A
2#	Spill X-C
1 Jumbo	pH Paper
1	Spill Response Guide
1	Safety & compliance Directory
1	DOT Label Pkg.
25#	Kitty Litter (clay based)

HazMat Spill Response Kit (Hazorb)	
Amount	**Item**
10	3 ½" x 4' Booms
1 pr.	Silver Shield Gloves (Large)
1 pr.	Nitrile Gloves, size 10
2	Disposable Bags
1	20 gallon Lab Pack
1	Safety & Compliance Directory
1	Spill Response Pocket Guide
1	DOT Label Pkg.
25#	Kitty Litter (clay based)

Security Portable Spill Kit	
Amount	**Item**
10	16" x 10' Pads
2	SOCs 3" x 4"
1 pr.	Nitrile Gloves
1	Disposable Bag
1 pr.	Goggles

Accessibility

First responders are responsible for reviewing the location of the Spill Kits and contents. Employees using the Spill Kits are responsible for reporting the information to their supervisor and Department Safety Officer. The Department Safety Officer is responsible for ensuring that the Spill Kit is restocked after each use. The Department Safety Officer is also responsible for ensuring the pH paper is replaced after opened.

Appendix A

Developing an Effective Departmental Spill Response Plan

A. The complexity and detail of the plan will depend upon:

   1. The physical characteristics and volume of materials being handled
   2. Their potential toxicity
   3. The potential for releases to the environment

B. Department Safety Officers and/or Department Chair/supervisors are to develop a plan using the following information as a guideline:

   1. Review SDS or other references for recommended spill clean-up methods, materials and need for PPE (e.g. respirator, gloves, protective clothing, etc.)
   2. Acquire sufficient quantities and types of appropriate spill control materials to contain any spills that can be reasonably anticipated. The need for equipment to disperse, collect and contain spill control materials (i.e. brushes, scoops, sealable containers, etc.) should also be reviewed

C. Acquire recommended PPE and training in its proper use. For example, if an air purifying respirator or self-contained breathing apparatus are needed, personnel must be enrolled in the Respirator Protection Program and have annual training and fit testing

D. Place spill control materials and protective equipment in a readily accessible location within or immediately adjacent to the lab/work area.

E. Develop a spill response plan that includes:

   1. Names & telephone numbers of individuals to be contacted in the event of a spill.
   2. Evacuation plans for the room or building, as appropriate
   3. Instructions for containing the spilled material, including potential releases to the environment (i.e. protect floor drains).
   4. Inventory of spill control measures and PPE
   5. Means for proper disposal of clean-up materials, including contaminated tools and clothing.
   6. Decontamination of the area following the clean-up.

Appendix B

Personal Protective Equipment (PPE) for Spill Clean-up

Eve Protection: Safety goggles are the absolute minimum for working in a lab or cleaning up spills of hazardous materials; for corrosive and/or reactive materials, a face shield is also necessary.

Skin Protection: All personnel in laboratories should at least be wearing a lab coat. If splashing is a possibility, an apron should be worn as well. Tyvek suits, boots or shoe covers may be necessary for large, liquid spills.

Gloves: Cloves are important for hand protection. A pair of heavy nitrile, butyl or neoprene gloves and one box of disposable polyethylene gloves are recommended for each person involved in a clean-up.

Respirators: Respirators are *not* recommended. If your spill results in the generation of toxic vapors or gasses, it is a high-hazard emergency. You should evacuate and let trained professionals handle the spill. Respirator use requires training, medical evaluation and fit testing.

Appendix C

Chemical Spill Clean-up Procedures & Response Supplies

Step	Supplies Needed
1. Control the spread of the liquid. Make a dike around the liquid by placing absorbents at the outside edge of the spill	*Absorbent Material (i.e. paper towels, cat litter, spill pillows)
2. Treatment for acids and bases is optional, but preferred. Spills of most acids or bases, once neutralized, can be mopped up and rinsed down the drain. A neutralizing spill absorber simplifies clean-up and disposal.	* For acids: sodium carbonate, calcium carbonate or sodium bicarbonate * For bases: citric acid powder * pH paper to indicate when spills of acids and bases have been neutralized
Absorption: Add the absorbents to the spill, working from the outer edges toward the center.	* Absorbent material such as: paper towels, cat litter or oil-dry, diatomaceous earth or vermiculite. A 25 lb. bag of oil-dry will be sufficient for a one gallon solvent spill. * Spill pillows are an alternative way to absorb solvents, acids and bases. * Activated carbon is an excellent absorbent for solvents and especially odorous organic chemicals.
Recovery and Containment for Disposal: the neutralized spill residue or the absorbent should be scooped or swept up into a 5 gallon plastic bucket, jar, or other container. For dry powders or liquids, absorbed to dryness, you can double bag the residue into plastic bags (clear plastic) and place the bags into a box. For spills of powders or solid materials, either sweep up the material or add something to lower the dust and/or the volatility of the material (i.e. sweeping compound or a spill mix consisting of calcium carbonate, oil-dry or kitty litter and sand - 1:1:1 mix	* Plastic bag, jar, bottle, jug or plastic pail * Forceps (to pick up broken glass), broom, shovel, dust pan * Mop and bucket
Decontamination: Ventilation may be necessary. Open windows or use a fan for ventilation.	* For most spills, conventional cleaning products applied with a mop will decontaminate satisfactorily * For toxic chemicals, use a suitable solvent
Disposal: The identity of the spilled material and whether it is absorbed or neutralized should be written on the container and also indicated on the Surplus Chemical Form in the Surplus Room.	* Surplus Chemical forms * Sturdy cardboard boxes * Packing material (vermiculite, newspaper, Bentonite) * Packing tape

Category	Size	Response	Treatment Materials
Small	Up to 300cc	Chemical Treatment or Absorption	Neutralization or Absorption Spill Kit
Medium	300cc - 5L	Absorption	Absorption Spill Kit
Large	More than 5L	Call Outside Resources	Outside Resources