

# UNIVERSITY OF TOLEDO

SUBJECT: HAZARDOUS MATERIAL SPILL PROCEDURES

Procedure No: HM-08-013

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## PROCEDURE STATEMENT

The procedures described in this policy shall be followed in order to allow for proper clean up and protection of the University of Toledo employees in the event of a hazardous material spill (incident) occurring on any property owned, or leased by the University.

## PURPOSE OF PROCEDURE

To identify proper procedures, ensure corrective actions are instituted and to document compliance with OSHA, NRC, JCAHO and EPA regulations.

## PROCEDURE

If at anytime you do not feel comfortable cleaning up any spill involving hazardous materials at the University of Toledo, call "77" on the Health Science Campus or X2600 on the Main Campus, to report the following information:

1. Type of material spilled.
2. Amount of material spilled.
3. Location of spill.

Four major varieties of spills involving hazardous materials at the University of Toledo can occur under a number of different circumstances, they can be grouped into one of the following categories and found in the listed appendices:

1. Chemical Hazardous Materials (Appendix A)
2. Infectious Hazardous Materials (Appendix B)
3. Radioactive Hazardous Materials (Appendix D)
4. Chemotherapeutic Hazardous Materials (Appendix D)
5. Mercury Spill Procedure (Appendix E)

The Safety and Health Department will have responsibility for assisting in the event of Chemical, Infectious and Chemotherapeutic Hazardous Material Spills, while the Radiation Office will be responsible for all spills of Radioactive Hazardous Materials.

**Note:** (For specific information on each spill procedure see the attached copies of written spill procedures)

In the event that a spill/ hazardous material incident occurs each staff member, student, or faculty member should be able to refer to this policy, or the spill kit itself for specific instructions on how to deal safely with a spill involving any of these hazardous materials.

Each individual, depending on the severity of the spill/ hazardous material incident has the opportunity to either utilize appropriate spill clean up materials (in the form of a kit), or call in assistance from trained personnel in response to a spill at the University.

A "Code Orange" (Policy # EP-08-003) will be called in the event of a large number of individuals are contaminated during a spill that require decontamination prior to treatment in the Emergency Department from on or off of the campus of the University of Toledo.

A Hazardous Material Incident Report (Appendix F) shall be completed following the clean up of the spilled material providing information on the details of the spill, corrective actions taken as well as any follow up that may be required.

A copy of the Hazardous Materials Incident Report is to be sent to the responsible individual for the department in which the spill/incident occurred, along with any pertinent recommendations that need to be instituted.

The Safety and Health Department will consider any hazardous materials incidents requiring extensive follow-up open and Safety and Health Supervisors will not sign off as complete until follow-up is completed.

The Safety and Health Department will perform a quarterly review of hazardous material incidents to analyze emerging spill trends and common occurrences. This information will be made available to the University of Toledo Safety and Health Committees upon request or as warranted.

**Attachments**

- Appendix A - Chemotherapeutic (Hazardous Drug) Hazardous Materials
- Appendix B - Chemical Hazardous Materials
- Appendix C - Infectious Hazardous Materials
- Appendix D - Radioactive Hazardous Materials
- Appendix E - Mercury Spill Procedure
- Appendix F - Hazardous Material Incident Report

Source: Safety & Health Committee

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## Appendix A    Emergency Procedures Involving Chemotherapeutic Hazardous Materials Chemo Spill Procedure

1. Read this instruction card completely before starting clean-up.
2. Inform individuals in area to keep clear of spill area, posting signs if necessary.
3. Open and remove contents of Chemo Spill Kit located in zip-lock bag. Each kit will include, at a minimum:
  - 2 Each Chemo Gown (blue in color)
  - 1 Pair Latex Chemo-Safe glove - Medium
  - 1 Pair Latex Chemo-Safe glove - Large
  - 30 Each Paper towels
  - 1 Each Small scoop
  - 1 Each Large Chemo bag (yellow)
  - 1 Each Zip-lock Chemo bag
  - 1 Each Spill clean up procedure

Note: If sharps are involved, bring a chemotherapy sharps container to the area of the spill.

4. Don Chemo-safety gown and gloves. Pull cuffs of second pair of gloves over cuffs of gown so no skin is exposed. (If a splash risk is present wear protective eyewear.)
5. If there is overt contamination of employee, hospital equipment or carpeting, or if you feel uncomfortable cleaning up spill call Campus Police at "77" (HSC).
6. Contain the spill and absorb liquid with the paper towels.
7. Discard the used paper towels in the small yellow zip-lock bag.
8. If pieces of broken glass or sharps are present use disposable scoop to remove.
9. Discard broken glass and sharps to chemotherapy sharps container and wipe down the area with isopropyl alcohol or bleach (not contained in kit) soaked paper towels. Please contact the UPMC Pharmacy at (419) 383-3898 for drug destruction/cleanup suggestions.
10. Once spill is cleaned up, remove outer chemosafety gloves, chemo-safety gown and place in small yellow zip-lock bag.
11. Seal yellow zip-lock bag closed.
12. Place small yellow zip-lock bag in large yellow waste bag.
13. Remove inner chemo-safety gloves to large yellow disposal bag.
14. Close the large chemotherapy waste bag, expelling the air in the bag away from you. Tie a knot, or tape the waste bag.
15. Discard the large yellow bag to a chemotherapy waste container located in the department, or contact Environmental Services (x5353) or Safety & Health (x5069) for removal of waste.
16. Once spill clean up is complete contact Environmental Services to have the area thoroughly cleaned with hospital approved disinfectant.
17. Order a new chemotherapy spill kit from Central Service at X3884(HSC).
18. Report all spills to the Safety and Health Department within 24 hours, at (419) 383-5069. Report should include:
  - exact location of the spill, and names of all employees involved
  - date, time, and a short, detailed summary of the spill
  - procedure used to clean-up spill
  - this information will be logged as a hazardous material incident.

**NOTE:** For Chemo spills on carpet, call x77 (HSC) immediately to get assistance from the Safety & Health Department.

Missing, outdated or damaged supplies should be appropriately replaced by the department that utilizes the spill kit, and the Safety & Health Department will monitor the type and number of supplies maintained in areas that utilize these spill kits to ensure that they are consistent with the needs of the area as provided. Continuing need for replacement of supplies/equipment beyond what is expected or requests for additional supplies will be brought to the attention of the Safety & Health Director.

## Appendix B    Emergency Procedures Involving Chemical Hazardous Materials Chemical Spill Procedure

**\*\*Note:** If at anytime you feel you are not qualified, or are unsure of yourself, call and report any chemical spills to the Campus Police Department at x77 (HSC) or x2600 (MC) so that trained spill personnel may be involved in the clean-up procedure.

### REMEMBER

1. Protect yourself first, personal protective equipment.
2. Protect the people around you, evacuate?
3. Protect against contamination of equipment.

### PROCEDURE

1. **Small spills** less than one gallon of relatively non-hazardous materials (i.e. isopropyl alcohol)
  - a. Assess the situation and determine types of materials involved.
  - b. Put on appropriate personal protective equipment.
  - c. Apply suitable absorbent materials (ie paper towels)
  - d. Dispose of all waste materials to suitable waste stream.
  - e. Call Environmental Services to mop area with plain water.
  - f. Report all spills to the Safety and Health Department within 24 hours, at (419) 383-5069. The report should include:
    - exact location of the spill, and names of all employees involved
    - date, time, and a short, detailed summary of the spill
    - procedure used to clean-up spill
    - this information will be logged as a hazardous material incident.
2. **Large spills** or for more hazardous materials (ie mercury or formaldehyde)
  - a. Call Campus Police at extension x77 (HSC) or x2600 (MC). Campus police will notify the Safety & Health Department.
    - (1) Tell them what has been spilled.
    - (2) Size of spill.
    - (3) Location of spill.
  - b. Remove nonessential personnel, evacuate if necessary.
  - c. Restrict area to traffic, close doors.
  - d. Wait for trained clean-up personnel from Safety & Health to arrive.
  - e. Assist in anyway possible with spill clean-up.
  - f. A decision will be made between Campus Police and Safety & Health to call an outside contractor if the spill represents a serious threat to the health and safety of patients, visitors, faculty, staff, students or volunteers.

### **LOCATIONS OF CHEMICAL SPILL KITS (MC)**

NORTH ENGINEERING BUILDING	2 <sup>nd</sup> Floor	- Safety and Health Department Offices
PLANT OPERATIONS	HazMat Building	- Eastern Compartment
BOWMAN-ODDY BUILDING	Ground Floor	- Chemistry Stockroom

**LOCATIONS OF CHEMICAL SPILL KITS (HSC)**

DOWLING HALL	Ground Floor	- Interior Dowling Hall Emergency Generator - Exterior Dowling Hall Emergency Generator - Central Distribution Area
HEALTH EDUCATION BUILDING	1st Floor	- Mechanical Area
HEALTH SCIENCE BUILDING	Ground Floor	- Chemical/Hazardous Waste Storage Area
FACILITIES SUPPORT BUILDING	Ante Room	- Chemical/Hazardous Waste Storage Area
	Near Ante Room Door	- Chemical/Hazardous Waste Storage Area

Note: Many small chemical spill kits/supplies are located in laboratories are not captured in this inventory.

All listed spill supplies are inventoried by the Safety & Health Director or designee after each use as part of the incident follow-up procedure, or at least annually. Missing, outdated or damaged supplies are appropriately replaced, and the Safety & Health Department will monitor the type and number of supplies maintained on the spill carts to ensure that they are consistent with the needs of the area as provided. Continuing need for replacement of supplies/equipment beyond what is expected or requests for additional supplies will be brought to the attention of the Safety & Health Director.

## Appendix C     Emergency Procedures Involving Infectious Hazardous Material Infectious Spill Procedure

For emergency assistance with large spills (greater than one gallon):

Contact the Safety & Health Department through Campus Police x77 (HSC) or at x2600 (MC).

During a spill or release of potentially infectious materials (beyond internal capabilities to safely manage) Safety & Health may direct Campus Police to secure assistance from external agencies.

These agencies include (but may not be limited to):

Health Department (419) 213-4100

Ohio Department of Health (888) 411-4142

EPA 419-352-8461 or (800) 282-9378 for major spills.

All areas of the Institution treating, packaging, or otherwise handling infectious waste will implement procedures listed below subsequent to a spill of infectious waste (for definition of infectious waste, see Disposal of Infectious Waste Policy, HM-08-019).

1. A spill kit is to be maintained in a ready-access area in all central areas of waste generation, storage, packaging and in autoclave areas.
2. The spill kit will include (minimum):
  - a. one set of liquid impermeable, disposable overalls or impervious gown, boots
  - b. gloves: exam and rubber
  - c. Shoe covers, cap and mask
  - d. protective eyewear: goggles, faceshields, etc.
  - e. red disposable infectious/biohazardous waste bags
  - f. disinfect solutions (hospital approved/EPA approved)
  - g. absorbent material
  - h. scoop and brush
  - i. 1-roll of clear and boundary tape
  - j. paper towels and rags

### For Management of Infectious Material Spills at University of Toledo:

1. Limit access to the spill area to only authorized personnel.
2. Apply protective barriers as appropriate (for example, if splashing is anticipated, protective eyewear should be worn with an impervious gown or apron).
3. If the spill does not contain any sharps (i.e., broken glass), the visible material should first be removed with disposable towels or other appropriate means that ensure against direct contact with potentially infectious fluids.
4. If a liquid spill includes sharps (i.e., broken glass) absorbent powder should be used to solidify the liquid, then visible material should be removed using a no-touch technique (i.e., a dustpan and sweeping tool).
5. The area of the spill should then be decontaminated with the University-approved disinfectant from the kit.
6. Any absorbent materials used in disinfecting the area, as well as other supplies and refuse from the spill, shall be placed in a red bag and disposed of as infectious waste.
7. Soiled non disposable items will be cleaned and disinfected according to accepted practices, for reuse.
8. Hands will be washed after spill clean up.
9. Notify the Safety & Health Department (x5069) to replenish the spill kits.

10. Report all spills to the Safety & Health Department within 24 hours, at extension 5069. Report should include:
- exact location of the spill, and names of all employees involved
  - date, time, and a short, detailed summary of the spill
  - procedure used to clean-up spill
  - this information will be logged as a hazardous material incident..

For Management of Major Spills (Greater Than One Gallon):

1. Limit access to the spill area to only authorized personnel.
2. Contact the Safety & Health Department through Campus Police x77 (HSC) or at x2600 (MC).
3. Complete steps 2-10 under Management of Minor Spills.

**LOCATIONS OF INFECTIOUS SPILL KITS**

HOSPITAL	5th Floor	Room 5169 (dirty utility room) 5186 (bathroom shower area)
	4th Floor	Room 4169 (dirty utility room) 4186 (bathroom)
	3rd Floor	Room 3127 Hemodialysis (under sink) Heart Station (exercise lab 1-under sink)
	2nd Floor	Operating Room (dirty utility room) Near O.R. room 2272 (in sink) SICU (dirty utility room) Recovery Room Clinic 2B (back hall in small cabinet above copier) Nurses station room 2164 (under sink)
	1st Floor	Emergency Department (dirty utility under sink) Radiology (housekeeping closet) Cardiovascular Labs (housekeeping closet) MRI (supply closet across from computer room) Clinic 1B (rm 1136-under sink) Clinic 1C x 2---one in lab/one in O.R.
	Ground Floor	Pathology Lab (in trash room) Histology Pathology (inside caged area under hood to left of entrance) Central Service (Decontam-enter through back hallway Rm 0221) Audiology (in PPE cabinet) CT Scan (under x-ray reading shelf) DH loading dock inside red tub area

REHAB HOSPITAL	Nursing Unit (dirty utility room) Physical Therapy (hydrotherapy)
KOBACKER / CAPH	Nurses Station (exam room in cabinet)
RUPPERT HEALTH CENTER	1st floor OB/GYN (Lab 1) Fertility Clinic(dirty room) Pediatric Clinic (rm. 13) General Medicine Clinic (rm. 12) Occupational Medicine (under sink in back) Ambulatory Vehicle(shuttle bus/under back seat) Ground floor Eye Clinic (exam 4, under sink)
GLENDALE MEDICAL CENTER	Virology Lab/Molecular Biology(room 0006 under counter) South Toledo Internists - 2 kits--one at each nurse's station under sink Geriatrics-inside storage closet
FAMILY PRACTICE	Lab (under counter)
HEATHERDOWNS SCHOOL	Prescribed Pediatric Care (under sink)
HEALTH EDUCATION BUILDING	HEB 032 Path Lab (by chemical spill kit) HEB 048 Located under table by autoclave HEB 238 Located under sink
BLOCK HEALTH SCIENCE BUILDING	HSB 029 Under lab table HSB 305 Beside inner lab door(per request) HSB 336 Near inner lab door, by shelves HSB 331 Located on shelf by autoclave HSB 343 Under lab bench near inner door

Note: In addition, all Biosafety Level Two (or higher) labs on campus must have a biosafety spill kit. These spill kits are not reflected in this inventory.

## Appendix D Emergency Procedures Involving Radioactive Hazardous Material Radioactive Spill (decontamination) Procedure

### HOSPITAL PATIENT AREAS

In case of a spill of radioactive materials in the patient areas of the hospital contain the spill with towels or blankets, secure the area, hold any contaminated persons until monitored by Radiation Safety, contact the Radiation Safety Office immediately at (419) 383-4301 or through Campus Police x77 (HSC).

### RESEARCH LABORATORY AREAS

In the research laboratory areas decontamination shall be accomplished by the Approved User and/or his laboratory personnel under the direction of the Radiation Safety Office. Decontamination procedures depend upon source type, strength, chemical and physical properties, and total area contaminated. For emergency assistance with spills of Radioactive Materials contact the Radiation Safety Office at 4301. After hours contact Campus Police x77 (HSC) or x2600 (MC).

### PROCEDURES

1. Decontamination of any area shall be accomplished by working from the outer edges towards the center.
2. Make full use of protective clothing, footwear, gloves, masks, etc. to reduce the possibilities of personnel contamination for those conducting the decontamination procedures.
3. Do not wear protective clothing, ect. outside of a designated change area.
4. Handle all equipment used in decontamination and all run-off solutions as ones which are potentially contaminated.
5. Make provisions for the disposal of all used cleaning materials and equipment as well as other contaminated articles in the area. Therefore, always bring the necessary collection receptacles to the area in question, not vice versa.
6. Make full use of available instrumentation for monitoring, choosing the most effective for your purposes.
7. Make a complete record of the decontamination operations.
8. After decontamination has been completed, do not permit any work or occupancy within the area(s) until approval has been obtained from the Radiation Safety Office.
9. Monitor each step of the decontamination operation just as if it was a separate, unrelated incident.
10. Suggested agents for removal of contamination from various surfaces can be found in appendix #10 of the Radiation Safety Manual.

## Appendix E Emergency Procedures Involving Mercury Hazardous Materials Mercury Spill Procedure

Do not attempt to clean up a mercury spill yourself. Mercury spills must be cleaned up by trained personnel using specialized equipment. Even small thermometers contain enough Mercury to present a significant hazard if cleaned up improperly.

1. Restrict access and do not allow anyone to walk through the spill area – this can spread mercury contamination to adjacent areas.
2. Protect floor and sink drains from mercury contamination if applicable.
3. Contact Campus Police at x77 on the HSC, or x2600 on the MC to allow trained responders to be involved. Let Campus Police know the location of the spill, if the spill is in a residential area, or an instructional/research area, if it located on tile, or carpet, and the approximate amount of mercury that was spilled.

Appendix F Hazardous Materials Incident Report

Incident No.:

Actual Date:

Actual Time:

Record Date:

Employee Filing Report:

Location:

Cause:

Material:

Detail:

Corrective

Action:

Follow-up:

Notified:

Attachment:

Reviewed: \_\_\_\_\_

cc:

M. Valigosky