

The Waste-Paper

“A Waste is a terrible thing to mind”

Volume 12 Issue 8

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Cleaning Chemical Spills

Like death and taxes, chemical spills are practically inevitable. Spill cleanup might appear to be a daunting task, but actually is rather simple. Be proactive and take steps to ensure you have the knowledge and proper materials to deal with a spill *before* it happens.

Carefully consider the following:

1. Does your area have a fully stocked spill kit and where is it?
2. If not, where is the [nearest EHS spill kit](#)?
3. What types of chemicals are in your area?
4. Do any chemicals require special spill control materials or processes, like mercury and hydrofluoric acid? If so, do you have access to these spill control materials?

Once a spill happens, assess the situation. If the spill is greater than 1 gallon, is an unknown material, went down the drain, is on fire, is reacting violently, is creating overwhelming and/or harmful vapors, or is otherwise too hazardous for you to clean up, contact Public Safety at 911 from any campus phone or (609) 258-3333 from a non-campus/cell phone. Public Safety will contact EHS to provide assistance and advice.

Notify everyone in the adjacent area, evacuate the area and close the doors.

If the spill is manageable, two people from the lab should clean it up. **Never ask a janitor or maintenance worker to clean up any spill other than water.** One person should be responsible for cleaning the spill; the other will assist with supplies.



Consider what you will need to do to protect yourself from overexposure to the

Guide to using loose absorbent



Surround spill



Work from outside in



Scoop up carefully



Place in container for disposal



chemical and to handle the material safely. If you are unsure or do not have what you need, contact EHS for advice (via Public Safety after hours). Consult the MSDS or other sources of information, as needed.

Put on appropriate protective equipment. Tyvek booties will protect your shoes and help prevent spread of contamination. Gloves, chemical splash goggles and vinyl aprons prevent bodily exposures. This personal protective equipment is available in the EHS spill kit.



The assisting worker should hand materials as needed to the person cleaning up the spill, from a clean area, to avoid spreading contamination. Contain the spill by surrounding it with loose absorbent or spill pads. Start from the outside and work your way towards the center. Once it is covered and absorbed, sweep the material into the collection bag and label it as hazardous waste, if applicable.

Special Materials

Hydrofluoric acid is incompatible with many spill control materials. Keep a supply of 3M Powersorb or similar HF-compatible materials on hand. Do not collect and store in glass.

Mercury spills also require special handling and materials. Contact EHS for guidance to assess and manage chemical spills 8-5294.

This Month's Waste Disposal Drop Off: Wednesday, August 26, 2009

Lewis Thomas loading dock

- Collection room open from 1:00 - 4:30 PM
- Coordinators: [Michael Fredericks](#) (8-1351) or [Mary Zikos](#) (x8-4095)

Jadwin Hall (Physics only)

- E-mail boehlert@princeton.edu with the chemicals, quantity, location, contact person.

E-Quad Room 7 (E-Quad and Bowen)

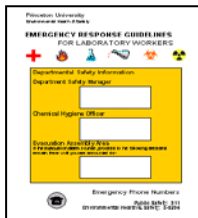
- Collection room open from 2:00 - 3:00 PM
- Coordinators: [Joe Laskow](#) (8-4739) or [Joe Palmer](#)

Frick loading dock (Chemistry, Psychology, Vis Arts)

- Collection room open from 1:00 - 2:00 PM
- Coordinator: [Phil Fairall](#) (x8-3913)

HELP!

It takes quick, decisive action to minimize the impact of unexpected incidents. Each laboratory worker should be familiar with the *Emergency Response Guidelines for Laboratory Workers*, which provides specific information on medical, fire,



chemical exposure, chemical spill, biological and radiation incidents. EHS recommends posting a copy of the response guidelines within your lab. Contact your lab manager or Chemical Hygiene Officer if you cannot find a copy of the guidelines. Replacement copies are available through the EHS office.

To ensure the best outcome during an emergency or any other off-normal event, follow the procedures in the table below.

Incident	Normal Hours	Off-Normal Hours
Small Fire	Alert others in lab, activate fire alarm, call Public Safety (911), smother or extinguish fire with appropriate fire extinguisher (if you have been trained to use one), evacuate to assembly area, await the arrival of Public Safety, Contact University Building Services at 8-3490 to replace fire extinguisher	
Large Fire	Inform others to evacuate, activate fire alarm, call Public Safety (911) if it is safe to do so, close doors as you exit, evacuate to your designated Evacuation Assembly Area, and remain at the assembly area until released by Public Safety Officers	
Medical/Injury	If injury is not severe, report to McCosh Health Center for evaluation. Contact Public Safety (911) if an ambulance is needed, or for transportation to McCosh or University Medical Center at Princeton	Contact Public Safety (911) Public Safety Communications Officer will send a Public Safety Officer and ambulance
Chemical Exposure <ul style="list-style-type: none"> • Skin or Clothing • Chemicals in eyes 	<ul style="list-style-type: none"> • Flush with water minimum of 15 min., remove and discard contaminated clothing prior to water flush, seek medical attention at McCosh Health Center {See alternative instructions in the Guidelines for hydrofluoric acid or phenol } • Use eyewash to flush eyes for 15 min. (hold eyes open), remove contact lenses, seek medical attention 	Same as 'Normal Hours', contact Public Safety (8-1000) for transportation to medical attention if necessary. Note that during the summer and University holidays, McCosh Health Center may not be open after hours; go to Emergency Room at University Medical Center at Princeton or other hospital
Chemical Spill (≤ 5 L)	Alert others in lab, control sources of ignition, don personal protective equipment (gloves, safety glasses, lab coat, and respirator if needed), soak up spill with appropriate neutralization or absorption media, package materials for proper disposal	Same as 'Normal Hours' If you are unable to clean up the spill safely and need assistance, contact Public Safety (8-1000) – Public Safety Communications Officer will contact EHS
Chemical Spill (> 5 L)	Prevent the spread of the spilled material if possible (e.g., create a berm using spill control media), contact Public Safety (8-1000) for outside assistance	
Infectious/Biological <ul style="list-style-type: none"> • Spill of material • Skin, eye, ingestion exposure 	<ul style="list-style-type: none"> • Wear disposable lab coat and gloves, spray or wipe surfaces with disinfectant (allow 20 min. contact), absorb disinfectant and spill with paper towels, autoclave all clean-up materials, package materials for proper disposal, wash hands thoroughly • Wash affected skin with soap and water, flush eye with water for 15 min., do not induce vomiting unless directed by medical staff, and seek medical attention at McCosh Health Center 	Same as 'Normal Hours', contact Public Safety (8-1000) for transportation to medical attention if necessary. Note that during the summer and University holidays, McCosh Health Center may not be open after hours; go to Emergency Room at University Medical Center at Princeton or other hospital
Radiation Incident <ul style="list-style-type: none"> • Spill of material • Widespread lab contamination • Any skin or clothing contamination • Possible exposure to Laser or x-ray source 	<ul style="list-style-type: none"> • Refer to Section 1 of the <i>Radiation Safety Manual</i> for detailed spill clean-up procedures • Prevent personnel from entering/exiting the contamination zone, notify EHS (8-5294), survey all personnel that may have come in contact with contamination • Remove contaminated clothing, note initial radiation level, wash affected skin with soap and water, re-survey affected area, contact EHS (8-5294) • Contact EHS (8-5294) immediately for consultation 	Same as 'Normal Hours', contact Public Safety (8-1000) – Public Safety Communications Officer will contact EHS for assistance