

# The Waste-Paper

“Waste is a terrible thing to mind”

Volume 12 Issue 9

September 2009

## Become familiar with the *Employee Learning Center*...

The University's training management site is available for your convenience at [www.princeton.edu/training](http://www.princeton.edu/training). Despite the name, the *Employee Learning Center* is intended for students, faculty and staff and provides the campus community with a single location for all training needs. This web-based training management system allows individuals to review their own training history as well as view upcoming training sessions offered by several University offices including; Human Resources, OIT, General Council, and EHS. Individuals may enroll in training sessions as they wish, right from the Learning Center.

To register for an EHS training session, go to [www.princeton.edu/training](http://www.princeton.edu/training). On the left navigation bar, at the bottom under “Quick Links”, select “EHS – Health & Safety”. The EHS training calendar is posted on the site and new sessions are added regularly. Simply ‘click’ on the training title to enroll in the training session of your choice.

If you do not see a training session that you need, please contact EHS at 8-5294 to see when the next session is anticipated or to schedule a special session for your group.

March 2009

Enrollments				
Enrollment Name	Event Description	Event Start Date/Time	Event End Date/Time	Event Location
1 Radioactive Materials Safety - 03/03/2009	Radioactive Materials Safety - 03/03/2009 <b>NOTE:</b> Open Source Radiation Basics Training Modules and Test must be completed before being a... IDGCS	3/3/2009 2:00 PM - 4:00 PM (GMT-05:00)	3/3/2009 4:00 PM - 5:00 PM (GMT-05:00)	Lewis Thomas Laboratory, Room 905
2 Hearing Conservation Training 03/11/2009	This training session includes an overview of noise and its measurement, health hazards of noise, permissible noise levels, monitoring, audiometric testing, hearing protection, record keeping, and sources of noise.	3/11/2009 10:00 AM - 11:00 AM (GMT-05:00)	3/11/2009 11:00 AM - 12:00 PM (GMT-05:00)	200 Elm Drive, Room 105 (Dept. of Public Safety)
3 Laboratory Safety Training 03/13/2009	This training session covers the elements of the federal OSHA Laboratory Standard, references and resources, material safety data sheets (MSDS), personal protective equipment, fume hoods, chemical spill response, chemical waste disposal, flammable li... IDGCS	3/13/2009 1:30 PM - 4:30 PM (GMT-05:00)	3/13/2009 2:45 PM - 5:45 PM (GMT-05:00)	Lewis Thomas Laboratory, Room 905
4 Confined Space Entry Initial Training 3/25/2009	Mandatory for all employees who are expected to work in, or supervise entry into, confined spaces.	3/25/2009 7:30 AM - 9:30 AM (GMT-05:00)	3/25/2009 9:30 AM - 11:30 AM (GMT-05:00)	200 Elm Drive, Room 105 (Dept. of Public Safety)

Example – EHS Training Calendar

## Are You New Here?

Welcome to Princeton! By now, you've probably found the Wawa (and know it is referred to as “the Wa”) and Small World Coffee, but there are a few things you should know about the hazardous waste program here at Princeton.

Chemical Waste disposal is highly regulated under federal and state laws and improper container management and disposal may subject the University to serious financial and criminal penalties. The following summary provides guidance on how to manage waste in your lab properly:

### What is Hazardous Waste?

Unwanted stock or used chemicals are considered hazardous waste if they are:

- **Ignitable** (flammable liquid or solid, oxidizer, etc.)
- **Reactive** (unstable under normal conditions)
- **Corrosive** (pH < 2 or > 12.5)
- **Contain certain metals or organics** toxic to humans or that adversely impact the environment (see [web page for more information and chemical lists](#))

### Packaging Chemical Wastes

Place chemical waste in sealable containers that are compatible with the chemical being stored (e.g. no hydrofluoric acid in glass containers). Fill containers completely, but always leave 5-10% volume of headspace to allow for expansion.

Containers must closed except when actively filling. Do not leave open funnels in hazardous waste accumulation containers. This not only constitutes a violation of NJ and Federal laws, but also affects air quality of the lab.

Similar wastes may be combined into containers so long as they are chemically compatible (e.g. acetone and methanol). If you routinely generate significant quantities of compatible chemicals, EHS provides complimentary 5-gallon carboys for this purpose through E-Quad, Frick and LTL stockrooms.

### Labeling of Chemical Waste Containers

Waste containers must be labeled with the words “HAZARDOUS WASTE” along with the names and approximate percentages of the principal chemical constituents, preferably using the hazardous waste labels available through EHS (8-5294). See *label on next page*.

Use full chemical names in English. Do not label waste with symbols, structural diagrams or product trade names (e.g., water not H<sub>2</sub>O, phenol not Trizol).

Labeling should be accurate and legible (to all) and must include contact information for the person knowledgeable about that specific waste.

### EHS HAZARDOUS WASTE CONTACTS

Main Office	8-5294
Jim Boehlert (Chemical Waste)	8-7882
Steve Elwood (Radioactive Waste)	8-6271
Don Robasser (Biohazardous Waste)	8-6256
Tonya Gruchacz (Waste Paper)	8-6255
EHS Web Page <a href="http://www.princeton.edu/ehs">http://www.princeton.edu/ehs</a>	

## Storing Chemical Wastes

Appropriately labeled and sealed containers of waste are to be stored in your laboratory until the scheduled waste pickup. By law, you must keep the waste containers at or near the area where the waste is generated. You may not store wastes in a room other than the room where the waste is generated.

Separate incompatible wastes by isolating those materials in separate areas or by using secondary containment. Secondary containment is required for chemicals and wastes stored near sinks or drains (including cup sinks). Secondary containment pans are available free from EHS.

HAZARDOUS WASTE											
Federal & New Jersey Laws Prohibit Improper Disposal											
Department _____	Phone _____										
Lab Group _____											
Responsible Individual _____											
Date Placed in 90 Day Storage _____											
Contents _____	Approximate % _____										
Use IUPAC _____											
Nomenclature _____											
Hazard Class (if known) <table border="0"> <tr> <td>1. Poison</td> <td>4. Oxidizer</td> <td>7. Sensitive to Shock,</td> </tr> <tr> <td>2. Flammable Liquid</td> <td>5. Corrosive</td> <td>Friction, Air or</td> </tr> <tr> <td>3. Flammable Solid</td> <td>6. Peroxide Former</td> <td>Water</td> </tr> </table>			1. Poison	4. Oxidizer	7. Sensitive to Shock,	2. Flammable Liquid	5. Corrosive	Friction, Air or	3. Flammable Solid	6. Peroxide Former	Water
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## Disposal Procedure

Waste pickups are held on the last Thursday of each month (the November/December pickup is combined to accommodate the holidays). Bring your waste to your designated collection area the day before that month's scheduled pick-up.

There are four main waste collection sites:

- *Frick loading dock (Chemistry, Psychology and Visual Arts)*: Drop off wastes between 1:00 and 2:00pm on the day prior to the pickup or make arrangements with Phil Fairall (8-3913) in the Chemistry stockroom.
- *E-Quad and Bowen*: Bring wastes to Room 7 – E-Quad loading dock between 2:00 and 3:00pm the day prior to the pickup. For special arrangements, see Joe Laskow (8-4563) or Joe Palmer (8-4706).
- *LTL Loading Dock (Molecular Biology, Geosciences, LSI and EEB)*: Bring wastes to room 033 between noon and 4:30pm on Wednesday and 8:00 – 9:00am on Thursday. For special arrangements, see Michael Fredericks (8-1351).
- *Jadwin Hall (Physics)*: contact [Jim Boehlert](#) (8-7882)

**This Month's Waste pickup**

**will be held**

**Thursday, September 24**

**(Bring waste Wednesday 9/23)**

## Waste Disposal Costs

Environmental Health and Safety (EHS) coordinates and pays for routine chemical waste disposal. Departments or laboratories assume the labor costs for specialized services, such as remediation of contaminated equipment or labs, large-scale chemical cleanouts, or characterization of unknown or unidentified chemicals due to improper management.

## Special Problems

Unidentified chemical wastes cannot be legally transported or disposed. The responsibility for correctly identifying waste rests with the person generating the waste. Do not bring unidentified wastes to the pickup site. Contact EHS for guidance. The department or laboratory will be charged for any testing/analysis related to unknown chemicals.

## General Recommendations

Don't purchase more of a chemical than you expect to use in the foreseeable future; researchers should strive to practice "just in time" purchasing of reagents. Remember, disposal of large surpluses of unused chemicals will certainly outweigh any savings associated with bulk purchases.

Scale down experiments to a practical minimum to reduce the total amount of waste generated. Where possible, substitute with less hazardous materials

Dispose of your wastes at the completion of a project - don't abandon them for someone else to handle.

## For More Information

See the [EHS Chemical Waste Disposal](#) web pages for more information on specific wastes:

For additional questions, contact EHS at 8-5294.

## Training Requirements

All faculty, staff, students, and visiting researchers who work in laboratories must attend Laboratory Safety training provided by EHS, regardless of previous training and experience elsewhere.

Any individual working with hazardous chemicals in workplaces on campus other than laboratories must attend Hazard Communication Training offered by EHS.

See the [EHS Training web page](#) or contact [Jim Boehlert](#) for dates and locations of this training.

## Spill Kits

Each lab or work area should have access to sufficient personal protective equipment, absorbents, and other types of [materials to control a spill](#). EHS provides general use spill kits in [laboratory buildings and other locations](#) where chemicals are stored or used. The EHS spill kit includes all of the materials needed to clean up spills of most any material **except hydrofluoric acid and mercury**. Contact EHS or see the website for more [information about HF or mercury use, alternative and spills](#).