

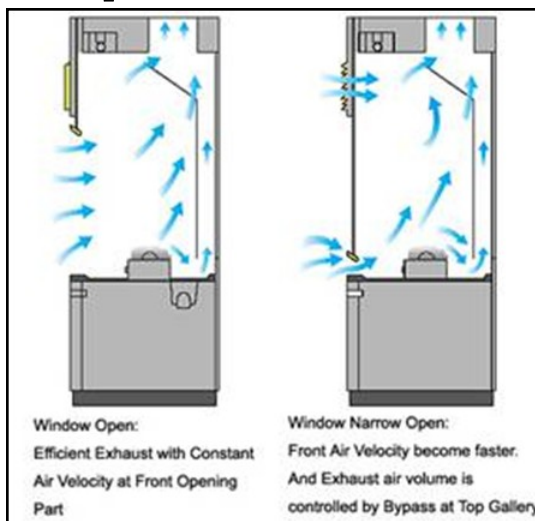


## Use of Volatile Liquids

Researchers should work with volatile chemicals in a chemical fume hood (CFH). The CFH functions as a primary containment device exhausting chemical vapors from the lab. Air flows through the front sash, goes into the baffles at the back of the CFH, and is exhausted out of the building.

CFHs are certified annually by EHSO to ensure appropriate air velocity is maintained. The acceptable range is 80-120 linear feet per minute (LFM) at a sash height of 18 inches. If you suspect that your CFH is not operating properly, secure the CFH and notify EHSO immediately.

The picture above shows how CFHs use directional airflow to protect the user. CFHs should not be used to store chemicals or equipment because it can disrupt the airflow. Thus, it is important that CFH work surfaces are free of clutter and that the sash is at the appropriate height (18 inches).



When volatile chemicals are handled outside the CFH, they can mix with lab air (i.e., Beta-Mercaptoethanol, Phenol, Formaldehyde, and Xylene). This can be hazardous for lab workers because it can lead to the development of a flammable mixture of air. Many chemicals can be extremely destructive to the mucous membranes, the upper respiratory tract, can cause chemical sensitivity or be carcinogenic. Also, some chemicals are toxic if inhaled. OSHA and other agencies have set exposure limits for some of these compounds which are listed on the chemical's MSDS. The limit is referenced as the Threshold Limit Value (TLV) or the Permissible Exposure Limit (PEL). The concentration of any chemical in the air should not exceed the limits established by the PEL or TLV. If it is suspected that these limits are exceeded or if personnel experience symptoms of chemical exposure, the EHSO conducts monitoring to quantify the level of chemicals present. If necessary, EHSO will provide assistance with the remedial measures needed.

Keep in mind that many chemicals have not been investigated, and do not have an associated PEL. Therefore, it is important to minimize exposure to all personnel and observe good chemical hygiene practices:

1. Keep lab doors closed to ensure containment.
2. Read the chemical's MSDS prior to working with it.
3. Read the warning labels.
4. Know how to interpret the NFPA Fire Diamond (see the June 2010 Lab Rat)
5. Wear appropriate PPE.
6. Work in CFHs.
7. Maintain strict control of ignition sources to reduce the likelihood of a fire.
8. Store chemicals by compatibility groups.
9. Ensure that containers are securely closed.

Additional safe work practices are outlined within the Chemical Hygiene Plan available on the EHSO website ([www.ehso.emory.edu](http://www.ehso.emory.edu)).

Reference:

*Committee on Prudent Practices for Handling, Storage, and Disposal of Chemicals in Laboratories. National Research Council (2007). National Academy Press: Washington, D.C.*

## Training

Most of EHSO's Trainings are available online in Blackboard.

[www.ehso.emory.edu](http://www.ehso.emory.edu) for registration information.

### Shipping Training

February 23rd at 12:00 pm

### Radiation Safety Training

2nd Tuesdays at 9:00 am

### Laboratory Safety Training

3rd Thursdays at 10:00 am

### Eye Wash Testing

Someone in your lab should test the eyewash station once a month.

Bio-safety Cabinets/Chemical Fume Hoods Certification required annually.

### **Chemical/Radioactive Waste**

#### **Pick-up Schedule:**

#### Monday Pick-up

RRC

Whitehead

1462 Clifton Road

School of Public Health

#### Tuesday Pick-up

Math & Science

#### Tuesday & Friday Pick-up

Atwood and Emerson

#### Wednesday Pick-up

Emory Children's Center

Clinic Building A & B

Winship Cancer Institute

Yerkes Main Station

#### Thursday Pick-up

Woodruff Memorial Research

Building

EUH (Clifton)

#### Friday Pick-up

All others on Atlanta campus

All **chemical** waste pick up should be requested by emailing

[chemwaste@emory.edu](mailto:chemwaste@emory.edu)

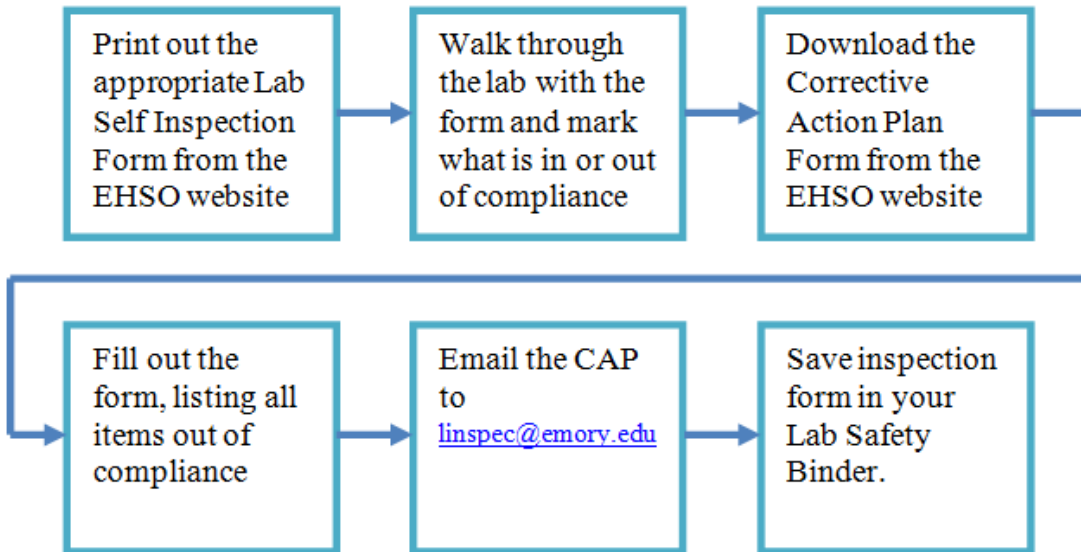
All **radioactive** waste pick up should be requested via EHS Assist pick-up.

**Chemical** waste disposal inventory form and/or **radioactive** waste inventory form should accompany all waste containers at the time of pick-up.

Comment on this [article](#)

## 2012 Lab Self-Inspections

Hopefully by now everyone in research labs on campus are working on their lab self-inspections for 2012 that are **due on February 29<sup>th</sup>, 2012**. Just in case some labs are new to the self-inspection process we reiterated the inspection process below:



*Comment on this [article](#)*

### UCLA Laboratory Incident: Three Years Later

In December 2008, a research assistant was fatally burned while working with tert-butyl lithium, a pyrophoric compound that ignites upon contact with air. Her death was initially ruled as a tragic accident, and was met with a great deal of investigation by regulatory authorities. As a result of these investigations, criminal charges have now been filed against the Principal Investigator of the lab for which she worked for and the University. For more information, access the following links:

- <http://articles.latimes.com/2012/jan/21/local/la-me-ucla-lab-20120121>
- <http://documents.latimes.com/calosha-report-faults-professor-ucla-death-lab-assistant/>

**Coming soon!** Office of Research Administration and Environmental Health and Safety office will be establishing a special task force with faculty to evaluate Emory's research safety culture.



The manual-**Bloodborne Pathogen Exposure Control Plan** has been revised. The most current version can be accessed [here](#).

#### Building Liaisons

**Dionna Thomas 404-727-4673**

Woodruff, Woodruff Extension, & Winship  
(Clinics B & C)

**Meagan Parrott 404-712-9480**

Dental, Medical Office Tower, Emory Midtown,  
School of Public Health (CNR/GCR), & Rollins

**Steve Arehart 404-727-4171**

Clinic B-Eye Center, Pediatrics. North Decatur,  
Carlos Museum, Yerkes, Hope Clinic, Wesley  
Woods, Briarcliff Campus, & Anthropology

**Rodrick Esaw 404-727-1348**

Whitehead, Math & Science, Emerson, Oxford  
College, & Atwood

- This newsletter is a tool to help fulfill a legal requirement for ongoing safety training.
- Supervisors are responsible for ensuring that individuals in their area have read and understood the information that applies to their area.
- The signed newsletter should be placed into the PIs EHSO Binder.

Signature indicates: I have read and I understand the information in this issue of Lab Rat Newsletter. Use an additional sheet of paper for more signatures, if needed and attach to this document.

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_

#### PPE

Personal Protective  
Equipment

Choice to be based on potential exposures involved:

Eye: Glasses, goggles & face shields

Gloves: Appropriate for the type of procedure

Clothing: Gowns, lab coats, aprons, coveralls

Respirators: Appropriate for the type of procedure



#### Fire Extinguishers

Check fire extinguishers in your lab:

A. Is it present and mounted in its proper location?

B. Is it readily accessible?

If it appears to need servicing contact the Maintenance HELP line at 7-7463

Contact Employee Health Services /

Emory Healthcare Corporate

regarding immunization information at

(404-728-6437)



### Lab Rat NEWS February 2012

**We would like to hear from you!**

What do you like most about the Lab Rat?

What do you like least about the Lab Rat?

Which article was most helpful to you?

What topics would you like to be featured in upcoming issues?

Do you have an article you would like to contribute?

Feel free to send your answers to [bio-safe@emory.edu](mailto:bio-safe@emory.edu). We look forward to

reading your ideas and

comments!

Read EHSO [BLOG](#)

Comment on articles!

More achieved articles

