Spring Cleaning – Get Rid of Your Old/Unwanted Chemicals

Labs and shops at Tulane have an unprecedented opportunity to do some serious “Spring Cleaning” when it comes to getting rid of old and unwanted chemicals at no cost to the department!

One of the recommendations from the recent voluntary audit of Tulane’s Environmental Health and Safety program included the disposal of old, unused, or unwanted chemicals. As a result, the Office of Environmental Health and Safety (OEHS) received additional funding for a university-wide chemical cleanout. The chemical cleanout is tentatively scheduled for the end of May.

OEHS has asked each department to designate a single point of contact for the cleanout. Each department also has been asked to provide a designated holding area where these unwanted chemicals can be consolidated. Please check with your department chair or department safety representative to find out who the point of contact is for your department and where the designated holding area for your department is located. An inventory form must be completed and sent to OEHS by May 11, 2012 for chemicals to be included in this cleanout.

Types of chemicals that MAY BE included in this cleanout include:
- Compressed gas cylinders (full or empty)
- Lecture bottles (full or empty)
- Chemicals that have not been used for the past 3-5 years with no immediate plans for use
- Unwanted chemicals
- Chemical waste
- Paints and solvents
- Unknown chemicals (missing or illegible labeling)
- Reactives
- Mercury-containing thermometers, manometers, free mercury
- Used oil
- Pesticides and herbicides

Items that MAY NOT BE included in this cleanout include:
- Medical or infectious waste
- Sharps
- Light bulbs
- Batteries
- Electronic equipment
- Controlled substances

Please have your designated departmental liaison contact OEHS at 988-5486 as soon as possible to take advantage of this great opportunity.

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Safe Handling of Toner Cartridges

Toner cartridges are widely used in printers, photocopiers and fax machines. The toner is a powder which is usually composed of a coloring agent, such as a pigment, mixed with a heat-sensitive polymer that melts and forms an image on the paper.

Toner cartridges can be handled with a minimum of safety concerns. It is best to keep cartridges away from the trunk of the body in order to keep clean and to avoid excessively disturbing the cartridge by shaking, dropping or bumping it into objects. Toners are not known skin irritants or sensitizers but some individuals may want greater protection with the use of disposable or household rubber gloves. Likewise, eye contact with toner particles is not expected to cause any significant eye irritation but it is always advisable to minimize eye contact by using the same precautions as above to avoid disturbing the cartridge and causing excess toner particles to be expelled.

Inhalation of toner particles is not a concern due to the extremely small amount of toner particles emitted into the air during normal use. In the case of an unusual event resulting in a large, sudden release of toner particles into the air (such as a cartridge falling and breaking open), inhalation of the airborne dust should be avoided and the surrounding area should be avoided until the dust has settled. Toner particles are extremely fine and will tend to remain airborne for a period of time. Small spills of toner may be cleaned using a vacuum, however, in those cases where a cartridge has been damaged or otherwise opened and a significant amount of toner released, a vacuum should not be used due to the electrostatic nature of the toner particles and the remote possibility of an explosion. In such cases, the area should be avoided and steps taken to prevent the toner particles from entering the ventilation system.

Since the toner polymers are heat-sensitive, always clean toner from the skin or other surfaces with soap and cold water. Use a wet or damp cloth and avoid sweeping or brushing which may cause more particles to enter the air. Warm and hot water will tend to soften and melt the toner particles and cause them to adhere more firmly. Use cold water which prevents the polymer from adhering.

OSHA Revises Hazard Communication Standard

To better protect workers from hazardous chemicals, OSHA has revised its Hazard Communication (HazCom) Standard to align it with the United Nations’ Globally Harmonized System of Classification and Labeling of Chemicals. OSHA’s 1983 HazCom Standard gave worker the right to know about chemicals, whereas the revised standard gives workers the right to understand as well. The new standard establishes consistent labels and Safety Data Sheets for all chemicals made in the United States or imported from abroad. Some of the major changes to the HazCom Standard include the following areas:

- **Hazard classification:** The new standard provides new definitions and specific criteria for classifying health and physical hazards, as well as the classification of mixtures.

- **Labels:** Chemical manufacturers and importers will now be required to provide a label that includes a harmonized signal word, pictogram, and hazard statement for each hazard class and category. Precautionary statements must also be provided on the label.

- **Safety Data Sheets:** Material Safety Data Sheets (MSDSs) will now be called Safety Data Sheets (SDSs) and will have a specified 16-section format.

- **Information and training:** Workers must be trained by December 1, 2013 on the new labels and Safety Data Sheet format to facilitate recognition and understanding of chemical hazards.

OEHS is currently reviewing the new standard and will be revising its Hazard Communication training within the next year to include the new revisions.
Fume Hood Safety

Chemical fume hoods are a form of local exhaust ventilation commonly found in laboratories using hazardous materials. The importance of a fume hood for protection of laboratory workers cannot be overstated.

A fume hood is designed to prevent or minimize the escape of airborne contaminants from the hood into the laboratory. With the sash closed, a fume hood can also minimize the effects of a small explosion or fire that may occur within. To function correctly, a chemical fume hood must be designed, installed, and operated properly.

All chemical hoods at Tulane have an alarm or airflow indicator device to show that they are operating properly. The face velocity of most fume hoods should be in the range of 80-120 fpm. OEHS checks the face velocity at least annually. **Do not assume that your fume hood is operating properly when you go to use it. Check the alarm indicator.** At the very least, use a piece of tissue paper and make sure it is drawn inward. **IF NOT OPERATING PROPERLY, DISCONTINUE WORK WITH HAZARDOUS OR TOXIC CHEMICALS.** Contact OEHS or Facilities Services if you suspect there is a problem with the performance of your fume hood.

Hood performance is adversely affected by drafts across the opening, large equipment placed inside that obstructs the exhaust slots at the rear, and poor operating procedures. The following are some tips to follow when using a fume hood:

- Keep the sash as low as possible.
- Work at least 6 inches behind the sash.
- Keep baffles clear of obstructions – elevate large equipment off of the work surface.
- Avoid rapid movement into and in front of the hood. Pedestrian traffic and portable fans in front of the hood create turbulence and can pull vapors out of hood and into operator’s breathing zone.
- Be aware that opening and closing lab doors can affect hood performance.
- Keep the amount of material in a hood to a minimum – excessive clutter increases turbulence and reduces hood efficiency. Do not use hood as storage cabinet.
- Secure loose lightweight objects such as paper towels.
- Run water in hood sinks often to reduce odors that may develop in the P-trap.
- Ensure adequate illumination in the hood.
- Keep the sash clean and unobstructed.
- Practice good housekeeping. Clean chemical residues and spills from interior hood surfaces
- Do not place absorbent paper under heating appliances.

Remember – the emptier the hood, the better air currents can flow through it. Since these currents are ultimately exhausting harmful chemical vapors and fumes away from your breathing zone and thus protecting you, it is prudent to make sure your hood performs at its optimum efficiency. Contact OEHS if you have questions about fume hood use or operation.

2011 OSHA Summaries

As required by federal law, the OSHA Form 300A Summary of Work-Related Injuries and Illnesses for 2011 of Tulane University must be posted for all employees. It must be posted starting Feb 1 through April 30, 2012. A campus-wide summary as well as summaries for the three major campuses (TUHSC, TNPRC & Uptown) are available at [http://tulane.edu/oehs/posters.cfm](http://tulane.edu/oehs/posters.cfm). For more information, contact Mitzi Hithe at 988-2866 or mhithe@tulane.edu.
Common Safety Hazards to Avoid in the Office

Office areas are not normally considered high hazard areas, but they still can have their share of safety concerns. The following are some photographs taken from a recent OEHS ergonomic survey showing some common office hazards.

![Figure 1: Avoid storing boxes, files, or personal items under a workstation or desk area where they may interfere with your natural sitting position.](image1)

![Figure 2: Avoid trip hazards and/or damage to power cords from foot traffic by providing wire management. Contact your office supply vendor for assistance with product information and recommendations.](image2)

Tripping and power cord damage are not the only hazards associated with exposed cords. There is also the potential for electrical fire, personal injury, property damage, and lost data when using electrical equipment. Do not overload circuits or power strips. At Tulane, extension cords are only allowed for temporary purposes such as for audio/visual equipment or power tools. Multiple outlet strips can only be used with low voltage equipment such as computers. High voltage items such as refrigerators, microwave ovens, etc. should be plugged directly into a wall outlet. If additional outlets are needed in your area, contact Facilities Services.

For more information on office or electrical hazards, or to schedule an ergonomic survey of your area, please contact OEHS at 988-5486.

Lab Safety Paperwork Reminder

If you are a laboratory principle investigator, it is time once again to update your laboratory safety paperwork including: chemical safety standard operating procedures, chemical inventory, personal protective equipment hazard assessments, door label updates, laboratory safety training documentation, quarterly or focus safety inspections of your laboratory, and any Animal Handler Health Surveillance Program verification statements. Please submit documentation that your paperwork is up to date (including any changes, additions, or deletions) to OEHS in a timely manner. Please contact Pam Fatland at OEHS if you have questions.