Lab Safety Awareness for Non-Lab Staff
Environmental Health & Safety
ELS 008

EH&S training – available classes are listed on the web site: http://www.stonybrook.edu/ehs/training
EH&S Policies are available on the web site: http://www.stonybrook.edu/ehs/policy/campus.shtml

Who do you call?
University Police (emergency)
911 from a campus phone or 631-632-3333 from your cell phone

Environmental Health & Safety (non-emergency)
631-632-6410 - Located in Suffolk Hall, South Campus

About Stony Brook University Labs
There are about 1000 laboratories in 21 buildings that include research, medical and academic labs which contain hazardous materials that include chemicals, biologicals, radioactive, magnetic, lasers, etc.

General Practices
- Always assume everything you touch is contaminated.
- Always wear gloves if you are going to touch lab equipment. Remove gloves before leaving the lab!
- Don’t work in labs if lab staff is working.
- Never touch or move lab equipment yourself - always ask the lab staff to do it.
- Never touch a “sharp”.
- Never take anything out of the lab because “its really cool”.
- Don’t remove empty chemical containers unless they’re marked as “triple rinsed”.
- Lab Clean-outs:
  o Always check countertops & cabinets before work
  o Call EH&S for advice before work - “clearance”
  o Lab clean-outs are full of unknowns: remember to look inside drawers & cabinets before moving them

Building Work
- Fume hood shutdowns – notify labs affected that no work can occur during shutdown.
- Water shutdowns – notify building that no lab work can occur during shutdown.
- Security – notify UPD of suspicious persons or missing hazardous materials and contact EH&S for missing hazardous materials.

Service Interruption Notice for Water Shutdown
Laboratory Safety Precautions: Considering that the scheduled shutdown of water will affect sinks, safety showers, eyewashes, and fire protection systems, normal laboratory operations with biohazardous, radiological and chemical hazardous materials must be discontinued during this period. In addition, there should not be any use of heating equipment/elements, open flames, etc. Please ensure that all department staff are informed and all such operations are suspended during this time. Realizing that there may be certain critical operations that must continue, please contact Robert Holthausen or Kim Auletta, EH&S Lab Safety Specialists at 2-6410 to discuss special precautions that must be taken.

Lab Equipment Project
Annual testing & repair for Fume Hoods, Eyewashes, and Safety Showers
Regular testing & maintenance:
- EH&S measures air flow in hoods
- Lab staff must test eyewashes weekly
- CO&M repairs & conducts regular maintenance
Air quality issues
Dusts, fumes and other irritating materials created by your work must be controlled. Control methods include:

- Isolation of construction areas
- Negative pressure ventilation
- Exhaust airborne materials outside
- Use materials at times when area is less occupied
- Use safer, low-emitting, non-solvent materials
- Provide EH&S with your product MSDSs

Asbestos
EH&S is responsible for asbestos surveying, monitoring and abatement. If asbestos (known or suspected) is discovered during a project, stop work and contact EH&S.

- Asbestos may be present in the lab – floor tiles, transite panels, lab bench tops & doors.
- Never dispose of suspected asbestos material in the regular trash!

Lead
EH&S monitors and disposes of lead containing material. If lead material is discovered, contact EH&S. Lead may be present in:

- Battery backup power supplies in emergency lighting systems
- Lead shielding on high voltage electrical cables
- Lead shielded drywall, doors, doorframes in areas utilizing x-ray or radioactive devices
- Lead bricks
- Lead based plumbing fixtures
- Lead based paint

Mercury
EH&S monitors and disposes of mercury containing material. If mercury is discovered, contact EH&S. Mercury may be present in drains, traps and under floor tiles.

Mold
Leaks must be fixed quickly to avoid mold. Call 632-6400 to report leaks and floods as soon as they are discovered. Water damage is reported to CO&M through FIXIT so that repairs can be made from excess moisture. EH&S can provide information and guidance on mold.

Disposal of Empty Containers
All empty containers must be triple rinsed before disposal. Destroy label by using a black marker to cover label or tear off label. Mark empty bottle “triple rinsed.” Recycle glass, bottles and cans if possible.

To be considered an “empty” container:

- If the container held liquids - no material can be drained from the container.
- If the container held solids, no material can remain that can feasibly be removed by physical means.

Under no circumstances may a container labeled with the radioactive or biohazard symbol or with the words “Hazardous Waste” be disposed of in the regular trash.

Universal Wastes
Universal Waste must be collected and disposed of separately from other waste.

Examples are:
- Lead-acid, nickel/cadmium, lithium and mercury batteries (not alkaline = regular trash)
- Mercury switches & equipment
- Fluorescent bulbs (contain mercury)
- High Intensity Discharge (HID) lamps
Lab Safety Awareness for Non-Lab Staff
Environmental Health & Safety
ELS 008

Used Fluorescent Bulbs
Fluorescent bulbs contain Mercury. Proper disposal includes:
- Pack used bulbs in original box or box provided by EH&S.
- Close the box when not in use and tape both ends when full.
- Put universal waste label & date box when first lamp is placed inside.
- Notify your supervisor when box is full.

Fluorescent bulbs are picked up by Central Stores on a regular schedule. Disposal of other universal waste is coordinated through EH&S.

Broken Bulbs
- Wear gloves when handling broken bulbs & debris.
- Carefully scoop up glass pieces and powder using stiff paper or cardboard and place debris in a metal can, plastic or fiber drum.
- Use sticky tape, such as duct tape, to pick up any remaining small glass fragments and powder.
- Wipe the area clean with damp paper towels or disposable wet wipes. Place towels in with other debris.
- Do not use a vacuum or broom to clean up the broken bulb.
- Label container with “Hazardous Waste: Broken Fluorescent Bulbs”

Aerosol Cans
Do not dispose of aerosol cans in the regular trash if:
- The can is still pressurized.
- The propellant is chlorinated
- The propellant is isobutene, ether or some other flammable gas.
- The material contains lead, pesticides or another hazardous constituent.

Contact EH&S for disposal of these aerosol cans.

Personal Protective Equipment
Safety glasses
Gloves
- Always wear gloves when working in labs and handling lab equipment.
- Wear gloves that will protect you – not latex!
- Remove gloves before leaving the lab.
- Remove gloves so you don’t become contaminated.
- Dispose of gloves – do not reuse disposable gloves.
- Rinse reusable gloves and check for cracks or holes before reusing.
- Remove gloves without contaminating your hands.
- Always wash your hands when you take off gloves.

Hazard Identification - Utility Lines
Lab utility lines include gas, air, vacuum, and deionized/reverse osmosis (DI/RO) Water. Vacuum lines may be contaminated with hazardous materials.

Hazard Identification - Labs
Entrances to labs and storage areas must have signs to warn emergency response staff of unusual or severe hazards, such as: unstable chemicals, radioactive materials, carcinogens, mutagens, teratogens, pathogens, high-pressure reactions, lasers, water reactive materials, cryogens, compressed gases and includes names and home phone numbers of lab director.
- Look at the symbols and signs posted on the lab door
- Know what the signs mean before you enter the lab
- Ask EH&S if you are not sure if there are special entry requirements
Lab Safety Awareness for Non-Lab Staff
Environmental Health & Safety
ELS 008

Room Hazards - Lasers
- Always get Lab Supervisor approval before entering to do work.
- Never enter a room if the laser is operating.
- Never touch or move a laser.

Room Hazards – Ultraviolet Lights
- UV lights may be installed in the overhead lights on a 3-way switch.
- Do not enter or work in a room if the overhead UV lights are on.
- UV lights may be used in a biosafety cabinet.
- Do not look into the biosafety cabinet if the UV lights are on.

Hazard Identification - Exhaust
Exhaust systems used for the removal of hazardous materials may be identified to warn personnel of possible hazards.

“WARNING - Laboratory Hood Exhaust”
“BIOHAZARD”
“CAUTION - RADIOACTIVE MATERIAL”

Discharge stacks, vents, and exhaust system fans should be marked to identify the labs or work areas being served.
Contact EH&S before working on any system marked with these warnings.

Hazard Identification - Containers
All chemical containers must be labeled with the proper name and precautionary information.
This is part of your Right-to-Know training.

Material Safety Data Sheets
Where do you get an MSDS?
Ask your Supervisor, Contact EH&S (632-6410) or EH&S Website: http://www.stonybrook.edu/ehs

Biological Material
Biohazardous material includes human blood, tissue, fluids, virus & bacteria and lab material contaminated with biohazardous material. Biological materials may be found in:
- Sewer lines
- Drain traps
- Waste storage areas
- Lab benches
- Biosafety cabinets
- Freezers
- Cold boxes

Radiation
Lab staff working with radioactive materials wear personnel dosimetry (passive radiation detectors) to measure any exposures. The average dose to full-time lab workers in our facilities is generally too low to be detected.

Never touch items with the radiation warning symbol - it may be contaminated. Lab surfaces are regularly checked for contamination by both EH&S and the laboratory staff.

Industrial Radiography
Industrial radiographers may be present to test the integrity of crucial welds and other structures. Industrial radiographers use radioactive Iridum-192 and other isotopes to identify flaws in metal castings and welded joints. These radiographic sources are constructed of metal discs or pellets in a welded stainless steel capsule, and their activity levels range from less than one Curie to several hundred curies. Each area being tested must be posted with the Radiation Area sign. Additionally, each area will have physical border such as a rope or other barrier. Never cross this border!
The Building Manager will be notified by Radiation Protection Services if radiography activities are taking place in the building and they will notify all affected building occupants to ensure they are aware that radiography is taking place. If you notice any unsafe conditions, please report it to Radiation Protection Services as soon as possible (632-6410).

**Compressed Gas**
- Secure cylinders from tipping over
- Keep cylinders capped when not in use
- Release pressure on regulator to zero when not in use

**Welding, Cutting, Soldering**
You must have a “Hot Work Permit”!
- Permits issued by EH&S Fire Marshal’s Office. Must call 24 hours before hot work is scheduled. Do NOT start hot work until Fire Marshal issues permit.
- When performing hot work:
  - Keep area free of combustible material
  - Have a fire extinguisher handy
  - Disconnect or blank pipelines and connections
  - Control fumes and protect fire alarm devices
  - Establish a Fire Watch
  - Monitor worksite for smoldering fires at least 30 minutes on both sides of wall following job completion

**Storage**
- Do not store hazardous or combustible materials (paper, boxes, pallets) in exits, stairways or hallways.
- Hazardous chemicals stored in the open must be kept to the minimum necessary for the work being done. Flammable liquids containers cannot be larger than 1 gallon if glass or 5 gallons if metal.

**Emergencies**
You need to be able to:
- Recognize the presence of hazardous substances in an emergency. Leaks? Smoke? Unusual smells?
- Identify the hazardous substances, if possible. Door or container labels?
- Realize the need for outside help, and to make immediate calls with accurate information.
- Always call University Police: 911 campus phone or 631-632-3333.
- Help in preventing unauthorized entry into the emergency area.
- Keep others out until lab or department staff or EH&S HAZMAT/Fire Marshals come!

**Hazardous Chemical, Biological or Radiological spills:**
- Close door to area and find someone from the lab or department & let them know.
- Contact your Supervisor if no one from the lab is around.
- Call 911 campus phone or 631-632-3333 (University Police) and ask for EH&S Emergency Response.
- Keep non-lab people from entering the lab.

**Emergency Equipment**
Equipment available for emergencies includes emergency eyewash and shower, Fire Extinguisher and AEDs. Know the locations and how to use them before you need them!

Know how to use fire extinguishers:
- P.A.S.S. (Pull, Aim, Squeeze, Sweep)
- Most extinguishers in SBU buildings are 5lb ABC Dry Chemical.
Lab Safety Awareness for Non-Lab Staff
Environmental Health & Safety
ELS 008

- Contact the EH&S Fire Marshal’s office for maintenance issues or to replace a used fire extinguisher.

Automatic External Defibrillator (AED):
- Always call 9-1-1 if you need to use the AED.
- Contact the EH&S Fire Marshal’s office for maintenance issues.

Fire Prevention Procedures
Prevent fires by using proper handling and storage of chemicals, flammable and combustible liquids and gases. Use all precautions when using an open flame and spark-producing equipment. Inspect all the portable electric cords and don’t overload them.