

# ENVIRONMENTAL HEALTH AND SAFETY – LABORATORY SAFETY

## Objective:

To determine whether the department has established reasonable procedures for environmental protection and occupational safety in the workplace and are monitoring compliance with those procedures as well as institutional policies/procedures. Additionally, to ensure the department is enforcing the completion of all training required by employees.

## Potential Impact:

Results in occupational injury, illness or death, as well as significant property damage, violation of local, state and federal laws, fines from regulatory enforcement action and negative publicity.

## Helpful Tools:

- UH System Administrative Memorandum:  
[01.C.07 - Safety Administration](#)
- UH – Downtown Policy Statements:  
[Personnel - 02.B.03 - Discipline and Dismissal of Regular Staff Employees Policy](#)  
[Administrative - 01.A.09 - Smoking Policy](#)
- UHD Website:  
[UHD Report of Safety or Health Hazard Form](#)  
[Safety Culture @ UHD PowerPoint](#)
- SDS Websites:  
[Safety Information Resources Inc.](#)  
[Department of Labor - OSHA](#)

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## Frequently Observed Weaknesses/Deficiencies:

- Failure to periodically communicate policies and procedures governing environmental protection and occupational safety and reporting job-related injuries
- Lack of reasonable policies and/or procedures for ensuring safety in the workplace
- Failure to ensure all faculty/students have received all required training
- Failure to monitor and ensure compliance with workplace safety policies and procedures
- Absence or inadequate labeling of chemicals
- Failure to have Safety Data Sheets (SDS) or access to SDS readily available in areas with chemicals
- Failure to properly label work areas/laboratory entrances

- Failure to promptly address violations noted in inspections/audits
- Failure to keep work areas clean and free from obstructions
- Failure to appropriately dispose of chemicals, materials, and wastes

#### **Best Business Practices:**

##### 1. Policies and Procedures

- Develop internal policies, procedures, and awareness programs as warranted by the operations of the laboratory.
- Communicate safety policies and procedures to all students in the laboratory to promote workplace safety awareness.

##### 2. Reports

- Ensure all emergencies and near misses are promptly reported to the Environmental Safety and Health Office (EHS) (713-221-8040 or 713-221-8232).
- Ensure faculty is aware of UHD's accident injury reporting policy and are compliant with this policy.
- Encourage faculty and students to pay attention when entering all laboratories and to report any concerns and/or suspected violations to EHS.

##### 3. Equipment

- Ensure appropriate safety equipment is available and functional.
- Ensure proper safety gear, i.e. safety goggles, gloves, etc. are used when performing procedures.
- Ensure all laboratory equipment is properly cleared and checked prior to surplus, disposal, relocation or repair.

##### 4. Work Area

- Ensure entrances to laboratories are labeled with the appropriate Caution Placard (indicates the hazards in that area), telephone numbers, safety shower and eyewash station locations.
- Locate a first-aid kit in a clearly visible place in each laboratory.
- Keep work areas clean and free from obstructions.
- Lock work areas/laboratories in the absence of authorized personnel.
- Limit access to work areas, laboratories, chemical inventory, etc. to only necessary and/or authorized employees/students.

##### 5. Training

- Establish a monitoring program to ensure required training is complete.

##### 6. Chemical and Hazardous Waste

- Maintain an accurate inventory of all chemicals. The chemical inventory should be updated annually and when chemicals are purchased.
- Ensure SDS and/or on-line access to SDS is readily available for all areas with chemicals.
- Ensure proper disposal procedures are followed for all chemicals, materials and supplies. (Do not pour chemicals down the drain.)
- Ensure all primary and secondary containers of hazardous materials are labeled with the appropriate information.
- Ensure an emergency response chart is in each laboratory where chemicals are used.

## 7. Other Safety Issues

- Perform the self-audit checklists and reviews made available through EHS to identify where health and safety risks may exist.
- When in doubt or questions arise, contact EHS (713-221-8040 or 713-221-8232).

**Case Scenario:** We were lucky...we dodged a bullet. Someone could have been seriously injured in the laboratory, but when all was said and done no one was injured/the injury was minor. Do I need to report this to EHS?

**Case Scenario Answer:** Yes. Reporting the near miss incident immediately allows EHS to investigate the incident as well as the scene of the incident. The investigation provides valuable information and sheds light on practices and/or procedures that need to be corrected before someone is seriously injured.

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This questionnaire is designed so that “no” answers indicate that an internal control weakness may exist and the procedure/process may need to be examined in greater detail. When such weaknesses are identified, a change in the process may be necessary OR a control may need to be put into place to address the weakness. The appropriate UHD contact office (as outlined in the self-assessment text) may be contacted for assistance with identified weaknesses.

| Self-Assessment of Internal Controls for Contracts  | Yes                      | No                       | N/A                      | Comments |
|---|--------------------------|--------------------------|--------------------------|----------|
| Are faculty/students familiar with policies and procedures governing environmental health and safety in the laboratory?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |          |
| Is faculty made aware of the process for reporting work-related injuries?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |          |
| Does management monitor and ensure all laboratory personnel/students have received appropriate and/or required training?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |          |
| Are other hazardous items disposed of properly (i.e. chemical containers, NiCad batteries, broken glass, hazardous wastes, etc.)?                                   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |          |
| Are SDS or a computer to access SDS readily available for all laboratories with chemicals?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |          |
| Are chemical inventories accurately maintained at the beginning and end of each semester?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |          |
| Are chemical inventories updated with each chemical purchase?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |          |
| Are chemicals and hazardous waste containers labeled correctly?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |          |
| Are work areas kept clean and free of obstructions?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |          |
| Are chemical and biological fume hoods free of excessive items (i.e. chemical containers, equipment, broken glass, hazardous wastes, used as a storage area, etc.)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |          |
| Are fume hoods sashes kept closed when not in use?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |          |
| Is a first-aid kit located in each laboratory?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |          |
| Are showers and/or eye-wash stations checked monthly?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |          |
| Are emergencies promptly reported to EHS?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |          |
| Are fire extinguishers easily accessible and visible?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |          |

| Self-Assessment of Internal Controls for Contracts  | Yes                      | No                       | N/A                      | Comments |
|---|--------------------------|--------------------------|--------------------------|----------|
| Is EHS notified when there is a known deficiency with a fire extinguisher (i.e. the indicator not on the green safe zone or the pin has been pulled out)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |          |
| Are safety concerns and/or violations addressed promptly?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |          |
| Is there are a list of emergency phone numbers posted inside or outside the laboratory?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |          |
| Are all laboratory refrigerators/freezers/microwaves labeled "Not For Food Use"/"Not For Flammable Liquids"?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |          |
| Is all food and drink prohibited in laboratories?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |          |

This is a living document and will be updated as revisions are necessary. Periodically, you may want to check for updates and revisions. We welcome any questions and feedback regarding the information contained in this tool including any comments regarding how this may be more useful and effective.