Environmental Health & Safety

Laboratory Safety Compliance Leader – EHS Quick Safety Guide

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Introduction:

The Laboratory Safety Compliance Leader (SCL) serves as a resource for ensuring safe practices in the laboratory as well as serves as a role model for safety in the laboratory. The primary responsibility for the laboratory's activity and safety still resides with the Principal Investigator (PI). Larger groups may have more than one SCL in order to fulfill all duties. In some areas, the Principal Investigator acts as the SCL. Below is a list of the routine responsibilities of the PI that may be delegated to the SCL. The SCL can create a group safety sub-committee and assign some of these tasks to different members of the team. Please note that "BioRaft" refers to this position as the "Group Compliance Liaison".

1. **Responsibilities of the PI include:**
   - PIs and SCLs are expected to be role models for safety. This includes adhering to all PPE and other safety requirements and setting a good example for their peers. SCLs are encouraged to seek assistance from their PI if a lab member ignores these requirements.
   - Assist EH&S in evaluating program effectiveness.
   - Attend departmental safety meetings.
   - Bring safety concerns to the attention of building safety manager and lab safety coordinators for assistance.
   - The writing and maintenance of specific standard operating procedures (SOPs).
     - Mentors researchers with the writing of SOP/templates
     - Assists with the review of SOP draft and provides feedback.
     - Uploading of final SOP to group website
   - Maintaining up-to-date door lab hazard signage and door safety contact information
   - Identifying and resolving Issues involving biosafety, radiation, lasers, and other hazardous materials or procedures.
   - Perform laboratory safety inspections four times a year (once with EHS, a minimum of one with the safety committee representative, and two others).
     - Entering findings in BioRAFT on the 3 audits not led by EHS
     - Ensuring all items have been corrected and training given to researchers before closing BioRAFT report
   - Ensure the maintenance of group safety equipment and maintain records for your area regarding safety training (in BioRAFT), area-specific training procedures and safety equipment maintenance (for instance, eyewash testing, spill control kits, first aid kits, fire extinguishers, chemical leak detectors, rupture disk, special PPE like UV glasses, non-disposable gloves) .
   - Know the proper steps for reporting and follow-up investigation of incidents.
   - Be familiar with emergency procedure information (what to do, where to go, etc.) and pass that along to all lab occupants.
   - Be able to identify safety showers, eyewashes, first aid kits, fire extinguishers, etc. in each area and ensure every new member learns where these are located.

- Be familiar with hazardous waste requirements and storage. Ensure that area waste is being collected, segregated, and tagged properly during day-to-day work.
- Promote safety lab practices during daily work
    - Use of PPE (eye protection, lab coats, gloves, closed shoes, long pants or skirt). Shields and other PPE as required by job hazard analysis.
    - No blocking of emergency equipment/egress area
    - Sash down when not in use
    - Putting away chemicals when not in use. No storage of chemicals in hood/bench/floor/drawers
    - Keeping doors closed and labs locked
- Organize frequent group clean-up and housekeeping activities
    - Clean-up and maintenance of equipment, furniture and surfaces
    - Disposal of old, no longer used chemicals
    - Inspection of waste container integrity and secondary containers
- Chemical (and compressed cylinder) ordering and management of chemical inventory
- Proper management of compressed cylinders in the lab
    - Maintain a cylinder inventory indicating location of cylinders
    - Ensure flammable/toxic cylinders and lecture bottles are not brought to the open lab area without proper approvals
    - Ensure cylinders safety safeguards are not being bypassed by researchers

2. Transferring the SCL Position:

If you are transferring the SCL position to a different group member or assuming the SCL position, you must complete the following steps:

When LEAVING the SCL position:

- Make sure that your PI is aware and has appointed a person from the group to take over the SCL position.
- Update the SCL (Group Compliance Liaison in BioRaft) position in Bioraft (https://delaware.bioraft.com/)
- Mentor the next SCL for two months before leaving the SCL position completely.

When beginning the SCL position:

- Make sure that you have the PI's approval and that you are comfortable with this position/responsibilities.
- Be mentored by the previous SCL or PI for a minimum of two months before taking on the SCL position fully.

3. **Benefits of becoming the laboratory SCL:**

   In the lab setting there are many hazardous materials/compounds/situations that users interact with every single day. This occurs in the academic research laboratories and private industry laboratories. The SCL provides a safe work place for all users in the lab. The SCL position can be stated on an individual's resume to show their experience with laboratory safety protocols and their commitment to providing a safe laboratory work place. Companies that have a laboratory workspace desire individuals that have an understanding of safety procedures and management experience in the laboratory.

Specific safety tasks/job assignments:

The PI and/or SCL should assign and track the following tasks to different members of the group.

- Chemical and Compressed Gas (cylinder) ordering
  - Maintain information on the ChemInventory.com website
    - Update the inventory as new chemicals are received and old/expired chemicals are removed from the lab.
    - Barcode all of the new chemicals that are received.
- Shower testing/eye wash testing
  - Safety Shower testing is to be performed by UD Facilities (plumbing) annually.
  - Eye wash testing is to be performed by UD Facilities (plumbing) annually.
  - ANSI standards required that the eye wash be activated weekly (between thirty seconds to one minute).

*** Duration of the activation shall be sufficient to ensure all stagnant water is flushed from the unit itself and all sections of piping that do not form part of a constant circulation system, also known as "dead leg" portions. (The duration is determined by the length of piping where stagnant water could be sitting before it reaches the head(s) of the unit.) "
https://ohsonline.com/Articles/2017/10/01/Testing-Your-Emergency-Showers.aspx?Page=1

- UD plumbing advises that 30sec is sufficient

- Chemical and/or Infectious Waste disposal
  - Submitting waste pick-up request.

  - Inspection of the waste collection/storage areas in the lab on a weekly basis.
  - Ensuring that the waste is prepared for pick-up based on the guidelines set forth in the Chemical Waste Disposal Training from EHS.
- Maintain BioRaft
  - Lab personnel list, training records, equipment, and responding to inspection reports.

https://delaware.bioraft.com/

- Maintain Chemical Inventory
  - Chemical inventory should be done/audited on an annual basis.

https://udel.cheminventory.net/

- Equipment management (calibration)
- SOP/SDS/Laboratory Policies Maintenance
- Personal Protective Equipment (PPE) Supplies and Laboratory Supplies Ordering
  - Maintaining the inventory of:
    - Lab Coats
      - Purchased through the stockroom in Brown Lab 063
      - Cleaning/rental service provided by CINTAS

        - Laboratory/departments pays for the charges associated with these services. Please check with PI and/or department before setting up these services for your lab.
    - Sharps containers (Red and Green) – provided by EHS
    - Lab Trash Boxes – provided by EHS
    - Bio Safety Box supplies – provided by EHS
    - LDPE and Justrite Chemical Waste Containers – purchased by the Lab
    - Secondary containment trays (for under hood cabinets, inside hood, floor, bench).
        - Example: http://www.scientificplastics.com/spill-trays.htm
- Housekeeping
    - Ensure that all of the aisles are clear of debris/materials
    - Facility/"Fix It" requests at ext. 1141
        - Examples for "Fix It": Ventilation system not working, pipe leaking, etc.
- Shipping Samples and Material off site
    - Contact the Research Office to determine if a Material Transfer Agreement (MTA) is required for the sample.
    - Complete EHS - DOT Shipping Request Form on the EHS website
- Transporting Chemicals on Campus
    - Samples:
        - Non Hazardous compounds can be transported (by walking) across campus as long as it is secondary containment.
        - Hazardous samples – contact EHS for guidance
    - Chemicals/Compounds:
        - Non Hazardous compounds can be transported in UD vehicles as long as they are in secondary containment.
        - Hazardous compounds must not be transported by UD users. An "On-Campus Chemical Transfer Form" can be submitted (found at http://www1.udel.edu/ehs/research/chemical/hazmat-transport.html) and EHS will transport the material within one week of the request.

Quick Reference Guide:

1. Reporting an Incident:

    a. University of Delaware Policy 7-3 Campus Injuries and Illness.
        i. The First Report of Injury Report (due within 24hrs) must be followed-up by an investigation report within a week. The type of report depends on whether the injured person is an employee or a student/visitor.

Injury/Illness Reporting and Investigation Program	Injury Treatment Location Decision Tree	State of Delaware First Report of Occupational Injury or Disease	Student/Visitor First Report of Injury
http://www1.udel.edu/ehs/generalhs/indhygiene/injury-reporting.html	http://www1.udel.edu/ehs/generalhs/downloads/injury_treatment_flowchart_2-2018.pdf	http://www1.udel.edu/ehs/generalhs/indhygiene/employee-injury-rep.html	http://www1.udel.edu/ehs/generalhs/indhygiene/student-injury-rep.html

2. First Aid Kits and Chemical Spill Kits
    a. Both must be present in the laboratory (or in the building within reasonable distance). Everyone must know where they are located and have access to them at all times.

First Aid Kit Program	Chemical Spill Kit Program
http://www1.udel.edu/ehs/safetycomm/first-aid-kit.html	http://www1.udel.edu/ehs/waste/chemical-spill-kit.html

3. Chemical Waste Disposal

Chemical Waste Disposal Guidance	Laboratory Chemical Waste Management Procedures	Low Density Poly ethylene containers (for Solvents and Non-Corrosive aqueous waste streams)	Justrite Containers (for corrosive waste streams)
http://www1.udel.edu/ehs/waste/waste-guidance.html	http://www1.udel.edu/ehs/waste/chemical-waste-management.html	https://www.fishersci.com/shop/products/nalgene-ldpe-jugs-closure/p-4521783	https://www.fishersci.com/shop/products/justrite-nonmetallic-self-close-corrosive-safety-containers-4/p-28112

4. Chemical Hygiene Program and Laboratory Inspection Program

Chemical Hygiene Program	Laboratory Inspection Program
http://www1.udel.edu/ehs/research//chemical-hygiene.html	http://www1.udel.edu/ehs/research/chemical/laboratory-inspection.html

5. Procedures for Shipping Chemicals
    a. DOT Shipping Request Form must be completed and sent to EHS.

http://www1.udel.edu/ehs/research/chemical/shipping-chemicals.html

6. Infectious Waste/Biosafety

Infectious Waste Management	Shipping Biological Materials	Biosafety
http://www1.udel.edu/ehs/waste/biological.html	http://www1.udel.edu/ehs/research/biological/biological-transport.html	http://www1.udel.edu/ehs/research/biological/biosafety.html