



Laboratory Safety Inspection Program

December 1, 2014

Section 1: Introduction

1.1 Purpose, Scope and Applicability

This Laboratory Safety Inspection Program has been implemented to ensure student, staff and faculty safety by providing quality assurance reviews of active laboratories within the Wilkes University Science Department. The use of quality assurance reviews, including inspection of laboratory facilities, emergency equipment, academic/research activities and protective measures, is intended to identify potential hazards prior to incident. Oversight of the inspection program will ensure findings are identified, corrective measures implemented and patterns reviewed to minimize the potential for injury.

The scope of this program applies to all laboratory settings, activities and personnel within the Science Department at Wilkes University, as defined below. This program will be implemented in conjunction with the Wilkes University Chemical Hygiene, Biosafety and Laser Safety Plans. All activities covered under these plans are intended to meet compliance with applicable regulations and best practices (e.g. OSHA, American Chemical Society, ANSI, etc.).

Laboratory activities are defined as handling or manipulation of hazardous chemicals in reactions, transfers, etc. in small quantities on a non-production basis.

Laboratory personnel include faculty, staff, research associates and assistants, technicians, teaching assistants, graduate and undergraduate students.

Laboratory settings under the scope of this plan include any Wilkes University building where the above laboratory operations occur. This includes laboratories within the Cohen Science Center (CSC) and Stark Learning Center (SLC).

1.2 Responsibilities

This program will be developed and implemented by the Laboratory Safety Committee, a subcommittee of the Wilkes University Environmental Health and Safety Committee. Members of this subcommittee will be responsible for performing or facilitating the inspections, providing recommendations for corrective measures, and recordkeeping. Additional responsibilities will be required of the Chemical Hygiene Officer, Biosafety Officer and Laser Safety Officer.

1.3 Recordkeeping

All inspection results will be reviewed at the monthly subcommittee meeting. All records associated with the inspection program will be maintained by the EHS Office. These records include:

- Inspection log forms
- Recommendations for corrective measures
- Documentation of corrective measure completion (Work Orders, Purchase Orders, Training, photo documentation, etc.)

Section 2: Procedures

2.1 Weekly Emergency Equipment Inspections

Weekly emergency equipment inspections shall be performed to ensure the accessibility, availability, and operation of the following emergency equipment:

- Fire Extinguishers
- Eye Washes and Drench Showers
- Spill Kits
- First Aid Kits

Additionally, general safety elements of each laboratory will be reviewed. These inspections will be performed by _____ utilizing the Weekly Lab Safety Inspection Form found in Appendix A of this program (See Figure 1). This form may be completed by hand or electronically (e.g. Tablet or Laptop).

WILKES UNIVERSITY Weekly Lab Safety Inspection Form
Lab: _____

Fire Extinguishers						
No.	Type	Location	Gauge	Condition	Hose	Mount/Case

Spill Kits				
No.	Type	Location	Inventory	Accessibility

Eye Wash/Drench Shower				
No.	Type	Location	Accessibility	Flush Test

First Aid Kits			
No.	Location	Inventory	Accessibility

General Safety		
Item	Pass	Fail
Verify all aisles and doorways clear.		
Verify all chemicals are labelled and free of leaks, damage.		
Confirm that all fume hoods are clear from excess storage.		
Confirm that all fume hoods are within the annual certification.		
Verify that there are no food or drink items within the lab.		

Print Name: _____ Initial: _____ Date: _____

Figure 1: Weekly Lab Safety Inspection Form

The process for the Weekly Emergency Equipment Inspections is as follows:

1. The _____ will perform the inspection no later than 3:00 PM Friday each week.
2. The inspection will include Fire Extinguishers, Spill Kits, Eyewashes, Drench Showers and First Aid Kits in accordance with the requirements below. General safety elements of the lab will also be reviewed. The Lab Safety Inspection Form will be completed by the inspector.
3. After each inspection, the completed Laboratory Safety Inspection Form will be forwarded electronically to the EHS Office for review.
4. The EHS Office will review each completed form and provide recommendations to the Lab Safety Subcommittee. Situations requiring immediate attention will be addressed upon review.
5. Corrective measures will be recommended and implemented as necessary. Follow-up confirmation will be performed by the Laboratory Safety Committee.

Fire Extinguishers

1. Confirm ring pin in place and secure
2. Confirm extinguisher is fully charged (gauge reading is **green**)
3. Inspect shell of extinguisher for damage
4. Verify the label is in place and legible
5. Verify the hose, nozzle and hose holder are not damaged
6. Annual and monthly inspection tags are in place and current

Also:

- Confirm each extinguisher is accessible and available
- Confirm the extinguisher is mounted
- Verify the case is not damaged



*Note that the monthly and annual inspection and corresponding tagging will be facilitated by Facilities outside of the scope of this program.

Spill Kits

1. Confirm each kit is available and accessible
2. Review each kit's inventory list to ensure the kit is fully stocked. This may be accomplished by ensuring the tamper-evident seal is not broken.

Eyewash Stations

Eyewash stations will be inspected on a weekly basis per recommendations outlined by ANSI in ANSI Standard Z358.1-2009. This process is outlined below:

1. Confirm each eyewash station is accessible
2. Activate each eyewash station to confirm they are operational and to clear sediment
3. Measure the water released from the eyewash (minimum of 0.4 gpm)
4. Confirm the water is tepid (between 60-100°F)
5. Ensure any guards are in place after the test
6. If the station passes the inspection, initial tag to document inspection

Drench Showers

Each Drench Shower will be inspected on a weekly basis per recommendations outlined by ANSI in ANSI Standard Z358.1-2009. This process is outlined below:

1. Confirm each station is accessible
2. Activate each shower to confirm operation and to clear sediment or debris
3. Use a bucket as necessary to contain water
4. Confirm the water is tepid (between 60-100°F)
5. Measure the water released from the shower (minimum of 20 gpm)
6. Ensure drain (if present) is functional and clear
7. If the station passes the inspection, initial tag to document inspection

First Aid Kits

First aid kits will be inspected weekly to confirm accessibility and inventory per ANSI Z308.1.

1. Confirm each kit is available and accessible
2. Review each kit's inventory list to ensure the kit is fully stocked. This may be accomplished by ensuring the tamper-evident seal is not broken.

General Safety

General safety items to be reviewed include:

- Verify all aisles, walkways and doors are clear (36-inch walkway clearance)
- Verify all chemicals are labelled and free of leaks, damaged, etc.
- Confirm that all fume hoods are uncluttered and within annual certification date
- Verify that there are no food or drink in the laboratory

2.2 Periodic Compliance Inspections

Compliance Inspections will be performed at least once per academic year for each laboratory. These inspections will be unannounced and conducted by members of the Laboratory Safety Committee and the Wilkes University Environmental Health and Safety Consultant. The scope of the inspection may vary for each laboratory, but may include the following elements:

- General Safety (housekeeping, postings, electrical safety, life/fire safety)
- Infrastructure and emergency equipment (fume hoods, flammable storage cabinets, spill kits, cold storage refrigerators)
- Chemical Safety (labeling, handling, storage)
- Biological Safety (sharps, biohazard practices, storage)
- Hazardous Waste (storage, accumulation limits, labeling)
- Other: Laser Safety; Animal Safety

The inspections will be completed by hand or electronically using the Laboratory Safety Compliance Review Form (Figure 2) found in Appendix B of this program.

The process for the Compliance Reviews is as follows:

1. At the monthly meeting, the Laboratory Safety Committee will determine which laboratories will be inspected and when.
2. The inspection will not be announced to faculty or staff outside of the Laboratory Safety Committee.
3. The inspections will be completed by hand or electronically using the Compliance Review Form (Figure 2) found in Appendix B of this program.
4. After each inspection, the completed Form will be forwarded electronically to the EHS Office for review.
5. The EHS Office will review each completed form and provide recommendations to the Laboratory Safety Committee. Situations requiring immediate attention will be addressed upon review.
6. Corrective measures will be recommended and implemented as necessary. Follow-up confirmation will be performed by the Laboratory Safety Committee.

Lab Safety Compliance Review Form

Lab: _____

General Safety

Item	Pass	Fail	Item	Pass	Fail
PIZZI readily available (power, microwave)			Proper disposal for sharps is present		
Lab safety manual present			Spill disposal equipment in lab		
General PPE (eye, gloves, lab coat) in use			Electronic waste in good condition		
Waste is appropriate			Electronic wastes are clear and unobscured		
Emergency information posted			Open flames and hot plates not unattended		
Spills are clean from observations			Flammable liquids not stored near flammables		
Spills are marked and accessible			Flammables not stored within 4 ft of open flame		
No food or drink in fume hood/lab			Lab is secured or under controlled access		
Lab safety signs in place (this, laser, etc.)			Power strip use is appropriate		

Infrastructure and Emergency Equipment

Item	Pass	Fail	Item	Pass	Fail
Fume hood is not cluttered			Fire extinguishers accessible and unobscured		
Fume hood not used for personnel storage			Eye wash, shower are accessible, unobscured		
Fume hood operation done right			First aid kit are accessible, stocked		
Fume hood with alarm always operative			Spill kit are accessible, stocked		
Pressure wash, readily accessible in fume hood			First aid kit are accessible, stocked		
Hand washers are in or below marked level			Lab safety refrigerators are labeled		
Emergency eyewash readily accessible, never blocked			Food storage are used in lab refrigerators		
Hand washing station accessible					

Chemical Safety

Item	Pass	Fail	Item	Pass	Fail
Chemicals stored in labeled glass			Refrigerator is in good condition		
Incompatibles are physically segregated			Chemicals in carts in secondary containment		
Containers are in good condition			Eye wash and kit are accessible, stocked		
Containers are properly labeled			Spill kit are accessible, stocked		
Chemical containers are closed			First aid kit are accessible, stocked		
Chemicals not stored above eye level			No more than 10 gal of flammable out of PDC		
Chemicals stored properly (vents, capped)			Chemicals are not stored near shelves		
Chemical storage cabinets are labeled			High hazard stored appropriately		

Biological Safety

Item	Pass	Fail	Item	Pass	Fail
No evidence of spill operations			All international work under BSL		
Safe handling of sharps (needles) evident			Checkweighing maintained with log		
Wetware removed immediately after use			Appropriate decontamination materials		
Spills contained present			Biological safety labels present		
Wetware "red bags" available and in use					

Hazardous Waste

Item	Pass	Fail	Item	Pass	Fail
Hazardous waste labels complete			No evidence of water disposed to drain		
Hazardous waste in use from other labs			Leak from or spillage of waste to lab		
Hazardous waste containers sealed					

Animal Safety

Item	Pass	Fail	Item	Pass	Fail

PIZZI Name: _____ Initial: _____ Date: _____

2.3 Reporting and Correction of Findings

As discussed above, the completed inspection forms will be forwarded electronically to the EHS Office for review and recordkeeping. Corrective measures will be recommended to the controlling individual, who will be responsible for implementing the corrective measures. The Committee will track progress on the corrective measures and maintain completion records as deemed necessary.