



## **Specialized and Laboratory Safety Inspection Program Standard Operating Procedure**

The University values the contribution of every faculty, staff, and student member in making the University a safer and healthier place to work. Environmental Health and Safety (EH&S) established this procedure to ensure that all facilities are in compliance with standard governmental, environmental health and safety regulations, and in accordance with requirements from the Office of the General Counsel.

Beginning Spring 2021, all areas of EH&S inspection will start with:

1. a Walk-Through Inspection, or
2. a Full Inspection for any area not previously inspected by EH&S.

### **Meetings:**

Meetings are encouraged and can be requested by either EH&S or pertinent parties at any time to discuss any questions regarding the inspection findings or process.

### **Walk-Through Inspection:**

1. The purpose of the Walk-Through Inspection is to do a simple, quick assessment of any major safety issues or findings in labs, classrooms, shops, studios, and other special hazard locations of campus.
2. Walk-Through Inspections are unannounced unless otherwise arranged and will occur at least once during the academic year.
3. The attached list summarizes the main criteria and common findings that will be reviewed, but any of the full inspection findings may be cited.
4. A report will be produced and sent to known pertinent individuals (Principal Investigators, Lab personnel, etc.) and department chairs regarding the area(s) reviewed. The report will include notice of one of three EH&S follow-up actions:
  - a. No scheduled follow-up required. No corrections needed. Area(s) maintains Compliance Level Green.
  - b. Follow-up audit in 30 days to confirm corrections made.
  - c. Full Inspection and/or meeting with pertinent individuals within 90 days. Area(s) is assigned Compliance Level Yellow.
5. Any report with 3 or more repeat findings will also be copied to the Dean.
6. Any report with 2 or more of the same repeat findings as the previous 2 reports will be copied to the Provost.

### **Criteria to be reviewed during Walk-Through Inspections:**

1. EH&S Safety training completion within a year for all pertinent faculty, staff, and student personnel?
2. Are a safety procedures binder and safety data sheets (binder) on hand, in print, and up-to-date for each hazardous chemical used, and made readily accessible?

3. Have all emergency shower(s), eyewash station(s), and/or drench hose(s) been inspected and water activated routinely, and then documented accordingly?
4. Are all pertinent hazard signs posted, accurate and visible? (NFPA, biohazard, laser, radiation, showers, eyewashes, first aid, fridges and freezers, spill kits, chemical cabinets, etc.)
5. Does it appear that the "No Food or Drinks" policy is enforced and followed?
6. Is a current chemical inventory readily available through the official FGCU chemical inventory system (LabCup)?
7. Are all containers labeled with contents (full names, percentages, and date; no conflicting labels; and including wastes)?
8. Are all containers in good condition and closed when not actively in use (including wastes)?
9. Are all chemicals segregated and stored by compatibility?
10. Are cylinders stored in upright positions, immobilized by chains or brackets, and located in designated spaces where they will not be knocked over, damaged by passing or falling objects, or subject to tampering?
11. Are biological waste containers available if needed, dated, in good condition, clean, less than 3/4 full, and disposed in less than 30 days?
12. Are sharps stored properly, and sharps containers in good condition, clean, less than 3/4 full, and free of soft biological waste?

#### **Full Inspections:**

If a Full Inspection is conducted, EH&S will send the report of findings to pertinent individuals, department chairs, and deans.

#### **Criteria that may be reviewed during Full Inspections:** *(Some items are for informational purposes only)*

##### Location Contact Information:

Names and Phone numbers of at least 2 contacts for area(s)

1. Primary Contact present during inspection?
2. EH&S Safety training completion within a year for Contact #1?
3. Secondary Contact present during inspection?
4. EH&S Safety training completion within a year for Contact #2?
5. Other Personnel working in this area?
6. Other Personnel who were present during inspection?
7. EH&S Safety training completion within a year for Other Personnel?

##### Documentation and Training

8. Is a Safety Binder located in this area, or accessible and the location known to all personnel?
9. Are all personnel aware of how to document all near-misses, injuries, accidents, and/or spills?

##### Hazard Communications

10. Are chemicals or other materials requiring Safety Data Sheets used and/or stored in this area?
11. Are safety data sheets on hand, in print, and up-to-date for each hazardous chemical used and made readily accessible to personnel?

12. Are all containers labeled with contents (full names, hazard warning, and date; no conflicting labels)? Containers must be labeled in a permanent manner; not marker- per Health Dept.

#### Emergency Equipment

13. Is a landline telephone within this area, or accessible within a reasonable distance?
  - a. What is the extension?
14. Is an Automated External Defibrillator (AED) present?
  - a. Is the battery on the Automated External Defibrillator (AED) less than 5 years old and pads within valid dates (not expired)?
  - b. Does the Automated External Defibrillator (AED) have a testing log?
  - c. Does the Automated External Defibrillator (AED) testing log show that the AED has been tested on a monthly basis?
15. Are any Emergency Shower/Eyewash Stations present?
16. How many ER Shower/Eyewash combo?
  - a. Has each ER Shower been tested/run and documented within the past year?
  - b. Has each Eyewash been tested/run and documented on at least a monthly basis?
  - c. Is there appropriate clearance (16 inches) around the ER Shower/Eyewash combo?
17. How many Wall Eyewash Solution Stations?
  - a. Are eyewash solutions within their expiration date? (Not expired)
18. How many Drench Hose/Sink Eyewash Stations?
  - a. Has each Drench Hose/Sink Eyewash Hose been tested/run and documented on at least a monthly basis?
19. Is a First Aid Kit or first aid supplies stored in this area?
  - a. Is signage for the First Aid Kit clearly visible and in the appropriate location?
  - b. Is the First Aid Kit properly stocked with non-expired items?
20. Is an appropriate Chemical Spill Kit clearly labeled, accessible, and the location known to personnel working in this area?

#### Fire Safety

21. Are an adequate number of Fire Extinguishers charged and present in this area?
  - a. How many extinguishers?
  - b. Is Fire Extinguisher signage clearly visible?
  - c. Is Fire Extinguisher(s) tag up-to-date?
22. Does storage leave an 18/ 24 inch clearance from the ceiling? (24 inches in required in non-sprinklered buildings)
23. Heating equipment present? (Autoclaves, drying ovens, incubators, kilns, laundry dryers, muffle furnaces, other?)
  - a. How many?

#### Housekeeping

24. Are all work areas properly illuminated?
25. Are noise levels within acceptable limits?
26. Is the work area clean, orderly, and sanitary?
27. Is work area properly ventilated for type of materials in use?

28. Is the furniture appropriate for activities it is currently being used for?
29. Do temperature and humidity seem within acceptable ranges?
30. Is the area free of visible fungal/mold growth and associated odors?
31. Are walls, ceilings, and floors free from signs of mold or moisture damage?
32. Is ladder, stepladder, or step-stool stored in this area?
  - a. Is ladder, stepladder, or step-stool maintained in good usable condition at all times?
33. Are exit routes free and unobstructed? No materials or equipment may be placed, either permanently or temporarily, within the exit route.
34. Is this a restricted access/secured area or room?
  - a. Prior to inspection, if no one was currently occupying the area, were doors closed and locked?
35. Is working alone prohibited and enforced in this area?

#### General Safety & Hazards

36. Is a current NFPA Fire Diamond posted on each entry to this area?
  - a. Are emergency contacts and hazard information posted on each entry to this area up-to-date?
37. Are Biohazard signs posted on each door to this area?
38. Are Radiation signs posted on each door to this area?
39. Are Laser Warning signs posted on each door to this area?
40. Do activities of this area require that the "No Food or Drinks" policy be enforced?
  - a. Are "No Food or Drinks" signs posted on all doors to this area?
  - b. Does it appear that the "No Food or Drinks" policy is enforced and followed?
41. Do activities of this area require closed-toe shoes, long pants and sleeved shirts?
  - a. Does it appear that wearing closed-toe shoes, long pants and sleeved shirts is enforced?
42. Are work practices observed during inspection done safely?
43. Are refrigerators and/or freezers in use in this area?
  - a. Are all refrigerators and/or freezers labeled with food and drink specifications?
44. Are hand washing facilities readily accessible with an operational sink, soap, and towels before leaving the area?

#### Personal Protective Equipment

45. Personal Protective Equipment available: Please select all that apply: Safety Eye/Facewear, Hand Protection, Hearing Protection, Head Protection, Foot Protection, Protective Clothing, Respiratory Protection, Not applicable.

##### Eye Protection

- a. Safety/Impact Glasses (Z87+” indicates high-velocity impact, and “Z87” alone means basic impact)
- b. Splash Goggles/Glasses (D3 for splash and droplet; D4 or D5 for dust)
- c. Face Shield
- d. Other eye protection (W for welding; U for UV; R for Infrared; L for Visible Light; V for photochromic; S for Special lens tint)

- e. When use required, is eye protection available, in good condition, and worn while participating or observing activities involving specific hazards? (explosive materials, hot liquids or solids, welding operations of any type, servicing of vehicles, heat tempering of metals, the shaping of solid materials, laser device operation and experimentation, liquid chemicals, acids or caustic liquids, chemical gases or vapors or potentially injurious radiation, or a combination of these hazards)

#### Hand Protection

- f. Hand Protection available: Please select all that apply. Gloves- Disposable/Nitrile, Gloves- Leather, Gloves- Heat Resistant, Gloves- Cut Resistant, Gloves- Cold Resistant, Other hand protection
- g. When use required, is hand protection available, in good condition, and worn while participating or observing activities involving specific hazards? (potential skin absorption of harmful substances, severe cuts, lacerations, abrasions, punctures, chemical burns, thermal burns, harmful temperature extremes, or a combination of these hazards)

#### Hearing Protection

- h. Hearing Protection available: Please select all that apply. Ear Plugs, Ear Muffs, Other hearing protection
- i. When use required, is hearing protection available, in good condition, and worn while participating or observing activities involving specific hazards? (exposure to noise levels at or above 85 dBA as an 8-hour time-weighted-average)

#### Head Protection

- j. Head Protection available: Please select all that apply. Hard Hats, Other head protection
- k. When use required, is head protection available, in good condition, and worn while participating or observing activities involving specific hazards? (protect from impact and penetration from falling and flying objects and from limited electric shock and burn)

#### Foot Protection

- l. Is protective footwear used wherever there is the danger of foot injuries due to falling or rolling objects, or objects piercing the sole, and where feet are exposed to electrical hazards?

#### Protective Clothing

- m. Protective Clothing available: Please select all that apply. Apron, Lab Coat, Tyvek Suit, Other protective clothing
- n. Are fire-retardant lab coats available, in good condition, and worn where pyrophoric reagents are used?
- o. When use required, is protective clothing available, in good condition, and worn while participating or observing activities involving specific hazards?

#### Respiratory Protection

- p. Respiratory Protection available: Please select all that apply. Surgical masks, Dust Masks (not N95), Filtering Facepieces (N95, P100, etc), Half-face Cartridge Respirators, Other respiratory protection
  - q. Is respiratory protection available, in good condition, and worn while participating or observing activities involving specific hazards?
  - r. Are initial and annual respirator training and certification complete?
  - s. If wearing cartridge respirators, are medical clearance and fit-testing up-to-date?
46. Are procedures available that detail when appropriate PPE types are required for activities in this area?
47. Are all areas and equipment requiring the use of PPE devices posted with a sign indicating this requirement?
48. When use required, is other PPE available, in good condition, and worn while participating or observing activities involving specific hazards?

#### Electrical Safety

49. Are all plugs, cords, outlets and covers in good condition?
50. Is the area free of overloaded outlets, daisy-chained power strips or daisy-chained extension cords?
51. Is the area free of extensions cords used as permanent wiring?
52. Is the area free of power taps used in place of surge protectors?
53. Are power cords and extension cords taped down, properly covered, and not run under doors, under carpets or through ceilings?

#### Chemical Storage & Compatibility

54. Are Chemicals present in this area? Used and stored, Stored only, Used but not stored, Not applicable
- a. Are the laboratory's current Chemical Hygiene Plan and standard operating procedures available for review?
  - b. Is a current chemical inventory readily available through the official FGCU chemical inventory system (LabCup)?
  - c. Are all chemical containers properly labeled and closed when not in use?
  - d. Are all chemical containers in good condition and stored according to chemical compatibility guidelines outlined within the SDS?
  - e. Is the use of flames or sources of ignition prohibited in areas where flammable vapors may be present?
  - f. Are 10 gallons or less of flammables located outside of flammable storage cabinets in this area?
55. Are Cryogenic materials and/or equipment stored or used?
- a. Are Cryogenic materials and/or equipment stored upright and secured if necessary?
  - b. Is proper ventilation provided when Cryogenic liquids are in use?
  - c. Are the proper PPE and procedures available for use with Cryogenic materials?

#### Fume Hoods & Biosafety Cabinets

56. Are Chemical Fume Hoods in this area?
- a. How many Fume Hoods?

- b. Are all Fume Hoods in this area certified within one year?
- 57. Are Biosafety Cabinets in this area?
  - a. How many Biosafety Cabinets?
  - b. Are all Biosafety Cabinets in this area certified within one year?
- 58. Are all Fume Hoods and/or Biosafety Cabinets labeled with proper sash height?
- 59. Are all Fume Hood and/or Biosafety Cabinet sashes at or below marked height?
- 60. Is the illumination functional in all Fume Hoods and/or Biosafety Cabinets?
- 61. Is the audible and/or visual alarm functional in all Fume Hoods and/or Biosafety Cabinets?
- 62. Do all Fume Hoods and/or Biosafety Cabinets have minimal clutter and are not used for storage?

#### Compressed Air & Cylinders

- 63. Is compressed air used or stored in this area?
  - a. Are compressed air piping, hoses, and fittings in good condition?
- 64. Are compressed gas tanks used or stored in this area?
  - a. Are cylinders only moved by the vendor or is a cylinder cart available for transportation of cylinders?
  - b. Are cylinders stored in upright positions, immobilized by chains, in designated spaces where they will not be knocked over, damaged by passing or falling objects, or subjected to tampering by unauthorized people?
  - c. Are all compressed gas cylinder valve covers in place when cylinders are not in use?
  - d. Are all compressed gas cylinders legibly marked, for the purpose of identifying the gas content, with either the chemical or the trade name of the gas? Is marking stenciling, stamping, or labeling, and not readily removable?
  - e. Acetylene, Argon, Carbon Dioxide, Compressed Air NOS, Dive Tanks, Ethanol, Helium, Hydrogen, Methane, Nitrogen, Oxygen, Other? How many full? How many half?
  - f. Are oxygen cylinders stored a minimum distance of 20 feet away from highly combustible material, especially oil, grease, carbide, acetylene, other fuel-gas cylinders, and any other substance likely to cause or accelerate fire or separated by a noncombustible barrier at least 5 feet high having a fire-resistance rating of at least one-half hour?
  - g. Are cylinders stored away from incompatibles, excessive heat, continuous dampness, salt or other corrosive chemicals, and any areas that may subject them to damage?
  - h. Are all empty gas cylinders labeled "Empty", valves closed and caps on?

#### Chemical, Biological & Other Wastes

- 65. Are broken glass containers present?
  - a. How many broken glass containers?
  - b. Are broken glass containers less than 3/4 full?
  - c. Are broken glass containers in good condition?
- 66. Is the regular trash free of hazardous chemicals, biological, or other hazardous materials?
- 67. Are hazardous wastes produced and/or stored in this area?

- a. Are all waste containers closed except when adding waste?
  - b. Are all waste containers in good condition?
68. Are chemical waste containers properly labeled?
- a. Is each chemical waste stream stored in a compatible container?
  - b. Are only compatible chemicals stored in the same waste container?
69. Are less than 10 gallons of total waste in this area?
70. Is a sturdy cart available for the transport of hazardous waste as needed?
71. Is used oil properly collected and stored for recycling?
72. Are sharps and/or sharps containers present?
- a. How many sharps containers?
  - b. Are sharps properly stored, handled, and disposed of?
  - c. Are sharps containers less than 3/4 full?
  - d. Are sharps containers in good condition?
  - e. Are sharps containers free of soft biological waste?
73. Are biological wastes produced and/or stored in this area?
- a. Are biological wastes managed, and stored properly?
  - b. Are biological wastes disposed of properly in less than 30 days?
  - c. Are biological waste containers labeled, dated, in good condition, clean, and less than 3/4 full?

#### Advanced Biological Safety

74. Is this a Biological Safety Level 2 or higher area?
75. Is a written, current, area-specific Biological Exposure Control Plan available?
76. Is a current inventory of biological agents readily available?
77. Are biological items shipped out?
- a. If biological items are shipped out, has proper DOT and IATA training been completed and records available for review?
78. Are all biological agents stored in secured rooms within locked freezers/ refrigerators?
79. Have lab personnel been advised of hazards and required immunizations, and documentation available for review?
80. Have lab personnel received appropriate immunizations and tests for agents handled? Documentation available for review?
81. Are specimen containers leakproof and covered during transport?
82. Are equipment and work surfaces disinfected daily?
83. Are equipment and work surfaces disinfected after a spill?
84. Has work been approved by the proper committees (IACUC, IRB, etc.) and documentation available for review?
85. Are all spaces accessible for cleaning and easily cleaned?
86. Is a Biosafety Cabinet(s) or other containment device available for use when appropriate?
87. Are mechanical pipetting devices and centrifuge safety caps/cups utilized by all?
88. Are Biological Safety Level 3 areas under negative pressure with respect to other areas?
89. Is a hands-free/automatic sink provided near the exit door?
90. Are all floor drain traps filled with disinfectant?



### Radioactive Materials & Radiation Safety

91. Radioactive materials or radiation equipment in this area?
92. Is laboratory possessing or using radioactive isotopes licensed by the Nuclear Regulatory Commission (NRC) and/or by a state agency that has been approved by the NRC?
93. Is a written, current, area-specific Radiation Safety Plan available?
94. If ionizing radiation sources are used (such as radioactive materials or X-rays), are precautions taken to protect against radiation exposure?
95. Are activities involving ionizing radiation sources performed by competent persons who have documented training in the proper and safe operation of such equipment?

### Lasers & Laser Safety

96. Laser equipment or laser equipped instruments in this area?
97. Are laser or laser equipment standard operating procedures available?
98. Has the Laser Safety Officer been notified when maintenance work on laser equipment is expected?
99. Are all appropriate laser labels present?
100. Are appropriate warning/danger signs on doors to the laser area?
101. Is warning posted for invisible radiation?
102. Is protective housing present and in good condition?
103. Are interlocks on protective housing?
104. Is a service access panel present and requires a tool for removal or is interlocked?
105. Is high voltage equipment appropriately grounded?
106. Is high voltage warning label in place?
107. Is high voltage equipment located away from wet surfaces or water sources?
108. Has laser awareness training been completed by others who work in the same area and are records available for review?
109. Have laser users completed appropriate training and are records available for review?
110. Are viewing cards used for laser alignment?
111. Are laser alignment procedures available?
112. Is beam enclosed as much as possible?
113. Is beam attenuator present?
114. Is laser table below eye level?
115. Is beam directed away from doors or windows?
116. Are beams terminated with fire-resistant beam stops?
117. Do surfaces minimize specular reflections?
118. Are controls located so that the operator is not exposed to beam hazards?
119. Is eye protection appropriate for wavelength and has adequate Optical Density?
120. Are warning/indicator lights able to be seen through protective filters?
121. Does area have limited access to spectators?
122. Has the Nominal hazard zone been determined and marked?
123. Do operators avoid wearing watches, reflective jewelry or loose clothing (such as ties) while laser is operating?
124. If curtains are present, are they fire-resistant?

Kitchen Areas

- 125. Do hand or lift trucks have a lock or other device to hold the handle in vertical position when the truck is not in use?
- 126. Are racks equipped with handles located so that no part of the operator's hands extends beyond the outer edge of the frame when holding onto the handles?
- 127. Do large air-conditioning units equipped with doors have door locks operable from both inside and outside the units?

Machinery & Tools

- 128. Are all machines guarded to protect the operator and other people in the machine area from hazards such as those created by point of operation, ingoing nip points, rotating parts, flying chips, and sparks?
- 129. Are all portable hand or power tools maintained in a safe condition?
- 130. Are power tools equipped and used with guards whenever possible?
- 131. Are all portable, electrically powered tools properly grounded or double insulated?

Miscellaneous

- 132. Curtains present?
  - a. If curtains are present, are they fire-resistant?
- 133. Spa present?
  - a. Spa Water Temp within Department of Health requirements?
- 134. Spray booths present?
- 135. Welding performed?

Any additional notes for inspection?