Appendix VII: Safety Orientation Checklist Laboratory

Department Safety Program, Crop and Soil Sciences, Washington State University

Employee: _____ Supervisor:_____

General Safety and Lab Safety

___ 1. Work in a safe manner for yourself and others. It is not recommended to work alone after hours because of the potential emergency situation that could occur in the event of an accident.

___ 2. Eating and drinking is not allowed in labs using radioactive, biohazardous, carcinogenic, or hazardous chemicals.

___ 3. Food storage is not allowed in lab refrigerators, and food and beverages are not allowed in the lab microwave oven.

___ 4. Beakers or other laboratory containers are not to be used for eating or drinking.

___ 5. Working with solutions or air borne chemicals may require wearing appropriate safety clothing (lab coats, lab aprons, dust masks, etc.) and chemical resistant safety goggles, chemical resistant rubber gloves, etc. These are located _____.

___ 6. The lab supervisor approves the use of safety glasses and/or safety shoes. All personal safety equipment is the responsibility of the individual to properly maintain.

___ 7. Avoid wearing sandals or shorts as these provide no protection against spills or broken glass; tie long hair back to prevent both contamination and combustion.

___ 8. Laboratory sinks should have rubber or plastic mats in the sink, and soap and hot water available.

___ 9. All electrical outlets should carry a grounded connection requiring a 3-prong plug. Outlets within six feet of water source should be equipped with ground fault circuit interrupters (GFCI).

___ 10. Electrical equipment which is operated in areas exposed to flammable vapors shall be explosion proof.

___ 11. Open flames or spark producing equipment is kept away from flammable vapors and liquids.

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___ 12. If you are to use power supplies in your work, be shown how to use them properly and safely.

___ 13. If you use shop or power tools, your supervisor is to instruct you regarding their safe use and proper safety gear to wear.

____ 14. You have been instructed on the proper methods for transportation of chemicals (see section IV.C.3 in the CSS Department Safety Program).

____ 14a. Laboratory inspections should be performed on a regular basis by supervisor. See Section II.L. Inspections of the Laboratory Safety Manual. http://www.ehs.wsu.edu/LSM/S2_L.asp

Materials Handling in Laboratory

___ 15. Know what other lab workers are doing and handling to avoid cross contamination and creation of possible hazardous combinations.

___ 16. Take care when lifting heavy objects. Hand carts are used to move heavy sample or chemical materials.

___ 17. Chemicals which might react together to produce dangerous fumes, fires, or explosions, are stored away from each other.

___ 18. Transporting chemicals from lab to lab requires any chemical not in its primary container to be placed in a secondary container.

___ 19. Dangerous, extremely hazardous materials used in the lab are kept in small quantities and are clearly labeled with hazard warnings.

___ 20. Mouth pipetting is not allowed. Use pipetters, aspirator bulb, or pipette bulb.

___ 21. Volatile liquids and vapors are kept away from heat sources, sunlight, and electrical ignition sources.

___ 22. Metal built-in cabinets under the fume hood are available for storing flammable and combustible chemicals.

___ 23. Annual certification of the ventilation system (fume hood) is performed by inspectors from Facilities Operations. Review Section III.C of the Laboratory Safety Manual http://www.ehs.wsu.edu/LSM/S3_C.asp for specific information regarding fume hood in your laboratory. Know which procedures in your lab require use of an exhaust hood: Perchloric and hydrofluoric acid are not used in standard hoods.

___ a. Is it on?
___ b. Is it drawing air? (Check for air movement using KimWipe)
___ c. Are air flow areas unobstructed?
___ d. What is the level of the sash? At what level should it be set?

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___ e. Do not use for chemical storage. Do not use for disposal by evaporation.

___ 24. Make sure hose materials and connections are appropriate and in good condition; replace tubing when needed.

___ 25. Tongs or gloves designed for special use are kept readily available for use.

___ 26. Lubricate glass tubing and protect your hands with a towel before inserting a glass tube into a stopper. Never force the tubing into the stopper.

___ 27. Apparatus and glass tubing do not project beyond the edge of the lab bench. Bulky and fragile apparatus are solidly clamped in place to prevent jarring or knocking off.

___ 28. All sharp objects, glass, razor blades, scalpel blades, Pasteur pipettes, etc., must be properly disposed in "Glass Disposal" containers or "Sharps Disposal" containers. Review the Sharps and Glass Waste Disposal procedures in WSU SPPM, S80.13 and S80.14. Locate the specific disposal containers in your laboratory:

_____

___ 29. If your laboratory uses or produces biohazardous material and/or waste, disposal is the responsibility of _____. All biohazard materials must be autoclaved and/or placed in "Biohazard Disposal" boxes for incineration (See SPPM S.80.12). If biohazard is to be incinerated, it does not have to be autoclaved.

___ 30. Acid bottles are always rinsed on the outside before putting away, and before opening, and kept tightly stoppered when not in use.

___ 31. Laboratory personnel are to ALWAYS pour acid into water, never the reverse.

___ 32. Dewar flasks and large vacuum vessels are screened, taped, or contained in a metal jacket.

___ 33. Handle dry ice and liquid nitrogen containers with gloves to prevent skin burns, and wear goggles to prevent eye injury. Use in well ventilated areas to prevent suffocation by replacement of oxygen with CO_2 or N_2.

___ 34. If applicable to your laboratory, review safe handling of compressed gas cylinders. Understand the correct use of the safety cap, qualified cart for transportation, and proper restraining straps. Always shut off main tank valve and then disconnect the regulator valve (in this order!) when changing tanks. Reverse the process when a new tank is connected. Check MSDS for specific precautions for the gas you are dealing with, and for its use in the specific procedure. Cylinders are to be anchored to a stable structure at all times.

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___ 35. If autoclaves are used, follow posted instructions for each autoclave unit very carefully to avoid serious steam burns. Use hot mitts and proper containers.

___ 36. Combustible chemicals, volatile liquids, and acids are cleaned up using appropriate methods immediately after spillage. See the Chemical Spills Emergency Plan in the Department Safety Program. Assure the supervisor is notified and trained personnel are used for the cleanup effort. The waste product must be clearly labeled and handled as a hazardous waste product for disposal. See the Hazardous Waste Handling and Disposal section of the Department Safety Program. **Mercury globules must be cleaned up by EHS officials only.**

___ 37. Established good housekeeping standards are maintained in the lab. The primary rule is, if you make a mess, clean it up. Leave work areas clean and organized.

___ 38. Be familiar with dishwashing procedures for your laboratory. When a chemical container is emptied, wash, label as washed, and set in trash for disposal (unless your laboratory collects such containers for eventual disposal of chemical wastes).

Personal Protection

___ 39. A lab coat is worn for most basic procedures.

___ 40. Face masks or goggles are worn where there is danger of splashing chemicals or flying particles.

___ 41. Goggles or safety glasses are worn when working with glass apparatus used in high temperatures or high or low pressure operations.

___ 42. Emergency eye wash facilities are located at _____ in case of chemical contamination of the eyes. These facilities are flushed weekly to ensure a fresh water supply.

___ 43. A safety shower is available in Room _____. Flushed by Facilities Operations annually.

___ 44. Sinks should be flushed with water weekly to prevent traps from drying out and allowing vapors from sewer line to seep into the laboratory air flow.

___ 45. Protective gloves are worn when transferring hazardous materials. Use the right glove for the job. See Sect. II, p. 12, Appendix F of the Laboratory Safety Manual and manufacturers guidelines for the best glove type for your procedure. Supplies of appropriate disposable gloves are kept in the laboratory.

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___ 46. If respiratory protection is necessary for your procedure(s), be instructed on proper use of mask or respirators through your supervisor (WSU SPPM S80.80 to 87, or Appendix D of the Laboratory Safety Manual). Must contact EH&S for medical monitoring, fit test, training.

___ 47. If you will be using radioactive materials, be instructed on radiation safety regulations (see page 24). Your authorized user is: _____

___ 48. A spill kit for clean up of chemical spills is located _____.

___ 48a. Should discuss Chemical Hygiene Plan (Lab Safety Manual requirement) Implementation (yellow pages).

Hazard Communications/Workers' Right to Know

___ 49. Each worker is shown the location of the Written Hazard Communication Program. The following have been reviewed thoroughly with the worker in compliance with WAC 296-62-054. See section V.A of the CSS Department Safety Program:

___ a. Container labeling
___ b. Purchase and inventory of chemicals
___ c. Material Safety Data Sheets (MSDS) - (what, how to use, where)
___ d. Classes of potentially hazardous materials
___ e. Safety precautions
___ f. Emergency procedures in case of accident, exposure, contamination, or spill
___ g. Location of WISHA Regional Directive re: WAC 296-62-054

Chemical Spills Emergency Plan

___ 50. In compliance with the WSU Safety Policy and Procedure Manual, Environmental Health - S 70.45.1-8, an Emergency Plan for Chemical Spills has been compiled. It is located in section V.C of the CSS Department Safety Plan and personal copies are available for workers upon request. The following components of the plan have been reviewed thoroughly with the worker:

___ a. Evaluation of the situation
___ b. Response
___ c. Reporting
___ d. Disposal of spill/waste
___ e. Location of protective equipment and spill kit

gloves, goggles: _____
lab coats: _____
spill kit: _____
eyewash _____
shower _____
fire extinguisher _____

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other specialized equipment_____

_____

First Aid and Medical

___ 51. Employees shall be briefed on how to call the emergency medical people responsible for responding to the location.

___ 52. First aid supplies are readily available, clearly marked, and are in the hands of trained first aid providers. The laboratory has someone trained in CPR and first aid.

Hazardous Waste Disposal

___ 53. Hazardous waste disposal is monitored by the lab supervisor. Hazardous waste is identified and disposed of according to procedures outlined in the MSDS for the chemical(s), Section II.K. in the red Laboratory Safety Manual, and S70.40.1-8 (Environmental Health Services) in the green WSU Safety Policies and Procedures Manual. See page section V.B.3 of this program.

I have been introduced to all points in this safety check list and fully understand them.

_____ _____

Employee Date Orientation Supervisor Date

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