

# Laboratory Chemical Hygiene Plan (CHP)

**Building:** East

**Room(s):** E141, 133, 135, 136, gas manifold room

**Principal Investigator (name):** Dr. Vince Hebert

**Implementation Date:** 3/24/2015

**Annual Review Date(s):** \_\_\_\_\_

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## Responsibility for Chemical Hygiene and Safety

Laboratory safety responsibilities are outlined in Washington State University's Laboratory Safety Manual section I.D. Complete the following information for your Laboratory Specific Chemical Hygiene Plan (CHP).

Each CHP must designate a Chemical Hygiene Officer – the person who is primarily responsible for preparing and implementing the CHP. Typically, this is the Principal Investigator or lab supervisor.

The CHP must also identify the area it covers. It may be applied to a single room or a portion of a room, or it may apply to multiple adjoining rooms as long as the CHP is accessible to all laboratory personnel at all times.

Chemical Hygiene Officer: Jane LePage

**Describe the area covered by this plan (room number(s) or location within a room):**

This CHP covers all work performed by the Food & Environmental Quality lab in East 141, E133, E135, E136, E138, gas manifold room

**Describe the typical activities and procedures performed in this area. Specify any activities which require prior departmental approval:**

The FEQL conducts pesticide research. Typical work is defined by regulatory methods or research methods and is characterized by extraction of pesticides from agricultural matrices by organic solvents, cleanup, and analysis by chromatography.

This work also include homogenizing frozen samples using large blenders and dry ice.

Instrumentation uses gas provided via gas cylinders in the manifold room, a nitrogen generator, or liquid nitrogen.

## Chemical Purchasing, Storage, and Dispensing

See Laboratory Safety Manual section II.B for further information.

### **Purchasing**

Authorization to purchase chemicals should be limited to select individuals, in order to prevent duplication of orders and accumulation of excess chemicals.

Identify the individual(s) authorized to purchase chemicals for the laboratory:

Jane LePage

Elizabeth Culbert

List any chemical(s) that require prior departmental and/or laboratory approval for purchase, due to specialized hazards, storage, or use requirements:

tetrahydrofuran

ether

organic peroxide forming compounds

**All chemicals used in WSU Tri-Cities laboratories will be delivered to the Copy/Mail Center, West Building Room 127**

### **Storage and Inventory**

Each laboratory shall designate an individual responsible for:

1. Ensuring chemicals delivered include adequate identifying labels (identity, hazard information, and manufacturer), and are not leaking
2. Maintaining a complete inventory of chemicals in the laboratory, including identification of compounds which require special controls or surveillance (i.e., DHS Chemicals of Interest, Select Agents, Carcinogens, Pyrophorics, or peroxide formers).
3. Ensuring proper storage of chemicals, including concern for hazard, compatibility, and secondary containment.

Person(s) who can accept chemicals and are responsible for the storage of the chemicals for this Laboratory:

Jane LePage

Elizabeth Culbert

### **Dispensing**

Chemicals shall be delivered to, dispensed from, and used within, the same laboratory. No chemicals will be stored in another location and dispensed or picked up for use in the laboratory, without prior arrangement and approval by EHS.

## Secondary Labeling System

The primary labeling for chemical containers is the original manufacturers' labeling system.

Secondary containers filled from the primary chemical container require labels so that occupants will be aware of the contents of the container. WSU's Laboratory Safety Manual [Section II.H](#) provides complete information on labeling requirements.

Secondary containers are required to be labeled with:

- chemical or common name
- hazard warning (GHS system or equivalent)

**If an alternative method of labeling (tags, shelf labels, etc.) is used please describe it in detail below:**

In addition to the above requirements, labeling in the FEQL is carried out according to the FEQL SOPs 307, 308, 309.

- Original Containers require: Received date, opened date, expiration date (see FEQL SOP 306)
- Secondary containers require: Chemical name, concentration, preparation date, expiration date, storage requirements
- Reference substances require: Reference number, chemical name, batch or lot number, expiration date, storage requirements
- Solutions and dilutions of reference substances require: solution number, chemical name, concentration, solvent, expiration date, storage requirements

**The person(s) responsible for ensure all labeling is completed in this laboratory is**

**(Name and title):**

All trained lab personnel.

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## **Safety Data Sheets (SDSs)**

Information on Safety Data Sheets is provided in WSU's Laboratory Safety Manual section II.M.

Describe where current SDSs can be found for the chemicals used in your laboratory, and identify the person responsible for obtaining and maintaining SDSs.

Web address for Online SDSs (if applicable):	<u><b>feql.wsu.edu/msds/</b></u>
Location of hard copies of SDSs: (building, room number, and description of binder)	<u><b>E141, above the desk in yellow binders</b></u>
Name of person responsible for maintaining MSDSs:	<u><b>Jane LePage, Elizabeth Culbert</b></u>

## Standard Operating Procedures for Particularly Hazardous Substances

Standard Operating Procedures (SOPs) are required for the use of particularly hazardous substances (including chemicals) that are used in the laboratory. Particularly hazardous substances include hazardous chemicals, nano-materials, explosive materials, lasers, biological, radioactive materials and other substances as defined by WAC 296-828. Contact EH&S at 372-7163 for assistance.

Laboratory Safety Manual section IV.C provides direction on creating and documenting SOPs. Copies of the SOPs for these materials should be kept with the Laboratory CHP.

Name of person responsible for developing and maintaining SOPs for this laboratory

Jane LePage, Elizabeth Culbert

Location of SOPs:

E141 above desk, red LSM notebook

Does this laboratory utilize any:

Listed or Specific Carcinogens

Yes       No

Select Air Contaminants

Yes       No

Reproductive Toxins

Yes       No

Compounds with a high acute toxicity

Yes       No

If "Yes" to any of the above, identify the compound(s) here:

Carcinogens: ethyl carbamate; Ni-63 in instrumentation;

Air contaminants: methyl isocyanate, some pesticide reference compounds

Reproductive toxins: toluene; some pesticide reference compounds

High acute toxicity: several of our pesticide reference compounds

Additional requirements and procedures are required for use of any of these compounds. Contact EHS for assistance.

## Chemical Spills

**If there is a danger to life and health, or when a large spill has occurred, call 911**

Employees can clean-up minor chemical spills ONLY when all of the following conditions are met:

- The chemical is known and the spill can be cleaned-up in ten minutes or less.
- Employees are trained to safely clean-up chemical spills.
- Employees can wear the same personal protective equipment that they wear during normal work activities.
- Appropriate clean-up supplies are readily accessible.

If ALL of these conditions are not met, evacuate the spill area and call 372-7234 for assistance.

Spill cleanup materials must be disposed of as hazardous waste.

### **Mercury Spills**

Employees cannot clean-up mercury spills. EH&S must respond to all mercury releases.

Person(s) who have completed EHS' small spill cleanup training:

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### **Recommended Spill Clean-Up Kit**

**Each laboratory should assemble a chemical spill clean-up kit consisting of:**

Personal protective equipment normally worn during routine work

Absorbent pads

One-gallon Ziploc bags

Dust pan and brush

Duct tape

Five-gallon bucket with lid

The five-gallon bucket can be used to store spill clean-up materials and then can store contaminated items, such as gloves and absorbent pads, used during the clean-up. Once the spill is cleaned up the bucket must be closed and labeled as Dangerous Waste.

Location of Chemical Spill Kit: E135 near dish washing area

## **Site Specific Ventilation Information**

WSU's Laboratory Safety Manual section III describes fume hood certification, general ventilation, and maintenance and repair requirements for WSU facilities.

**Describe any additional ventilation requirements or usage in your laboratory (i.e. fume hood sashes must be left open at all times, snorkel procedures, clean benches procedures):**

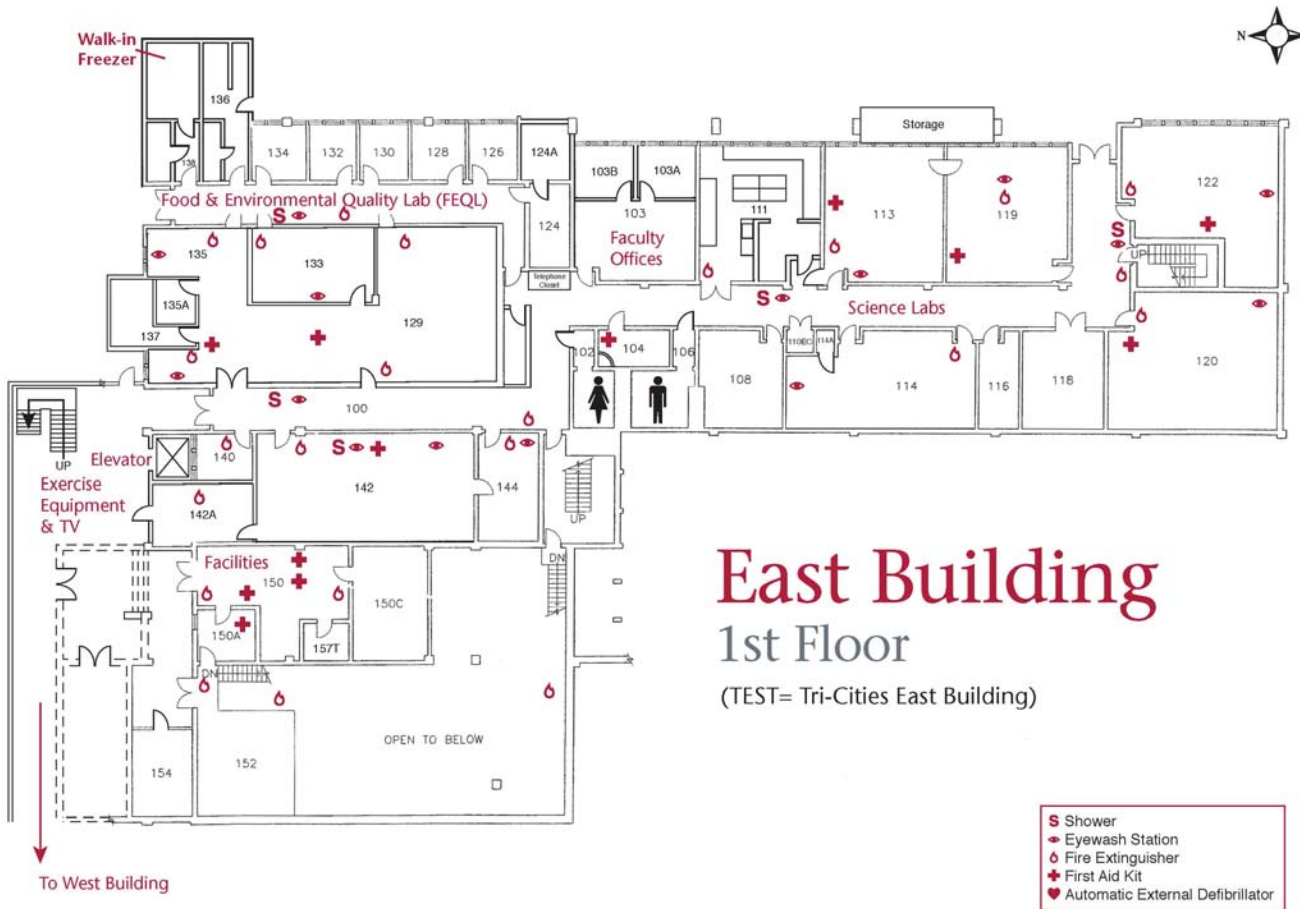
The FEQL Lab is equipped with 8 fume hoods and several bench ventilation arms. All work with volatile substances and solvents should be carried out under the fume hoods.



## Diagram of Laboratory Layout

(emergency wash facilities, fume hoods, biosafety cabinets, exhaust, fire extinguishers, bench tops, and other means of controlling work flow)

<http://tricities.wsu.edu/campusmaps/wp-content/uploads/sites/10/east1.pdf>



## **Employee Training**

A description of basic employee training requirements is included in the Lab Safety Manual, Section II.J.

Additional training which includes information specific to the hazards associated with the employee's assignment and work area, and details of the laboratory Chemical Hygiene Plan and Standard Operating Procedures must also be provided.

Describe the lab-specific training requirement(s) here, including content, frequency, and person(s) responsible for ensuring performance of the training

All FEQL staff receive a safety orientation, including chemical hygiene plan orientation before they begin work in the lab. Additional training is specified by the supervisor and documented in accordance with SOP 111. Training is documented in individual employee training files, maintained by the designated archivist (see SOP 105)

All training must be documented upon completion, and records retained by the department.