OR-OSHA requires that all laboratories have a written Chemical Hygiene Plan. CHP’s must include laboratory specific hazard and safety information including the online information at the link below. This CHP template must be completed by someone familiar with the hazards in the lab. All lab employees must read this document and supplemental online information and sign the last page of the CHP. The CHP Flipchart should then be prominently displayed in the laboratory and its provisions enforced.

Web Link: www.pdx.edu/environmental-health-safety/chp

This Chemical Hygiene Plan must be reviewed at least annually by the Principal Investigator (or designate) and updated so that it is current and accurate. Refresher training (read and sign) for all lab personnel must take place at least annually and be documented in the training section of this CHP Flipchart.

This CHP Flipchart was last reviewed and evaluated for effectiveness (incorporating necessary changes) on the following dates:

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Principal Investigator Signature  Date

PSU wishes to thank University of California, Berkely for permission to use their CHP as a template.

October 2012
ENVIRONMENTAL HEALTH & SAFETY
Portland State University
Life Threatening Emergency
Hazardous Material Spill

911
CPSO Dispatch 5-4404

Catastrophic Incidents
- Attend to injured or contaminated persons.
- Alert people in immediate area to evacuate if necessary.
- Call 911.
- Allow knowledgeable persons to assist as directed by emergency personnel.
- Notify EHS immediately of any injury or hospitalization in order to fulfill OR-OSHA requirements.

Chemical Exposures
- Remove victim from source of exposure.
- If the injury is serious or it is not safe to remove the victim, call 911.
- Remove contaminated clothing from the victim.
- Follow other emergency procedures as spelled out in the Safety Data Sheet (SDS).
- If there has been skin or eye contact, immediately flush skin or eyes with water using an emergency shower or eyewash if available. Continue flushing for 15 minutes or until medical help arrives.
- Notify Human Resources and EHS immediately of any injury or hospitalization in order to fulfill OR-OSHA notification requirements.

Fire
- Activate the fire alarm and alert people in the area to evacuate.
- Exit the building using the stairs and closing doors behind you.
- Call CPSO at 5-4404 and give your name, location, and extent of the fire.
- Remain outside the building at a safe distance. Meet emergency personnel upon arrival and direct them to the fire.

Hazardous Materials Spills
- Isolate the area of the spill.
- Alert people in the immediate area.
- If spilled material is an imminent hazard, call 5-4404.
- If spilled material is flammable, turn off ignition or heat sources.
- If spilled material is volatile or an airborne powder, leave the area.
- If safe to do so, confine the area of the spill with absorbent materials and prevent the spilled material from going down drains.
- Clean spills only if they are minor and you have training and protective equipment.
- Close doors to affected areas.
- Post danger or warning signs.
- Keep people from entering spill area.
- During off-hours or weekends, call the Campus Public Safety dispatch at 5-4404.
- If spilled chemicals enter a sink or drain, notify EHS or Campus Public Safety.

Radioactive Materials Spill and Exposure
- If a spill is life threatening, in a public space, or beyond your ability to easily control and cleanup, report the spill to CPSO and the Radiation Safety Officer (RSO) at extension 5-4404.
- Minimize your exposure.
- Stop the spill if possible without risk of personnel contamination.
- Warn others in the area and notify the RSO.
- Isolate the affected areas by closing doors, establishing barriers, etc.

Biological Spills and Exposures
- Clean-ups must follow the guidance for the relevant biological safety level assigned to wild-type microorganisms and those containing recombinant DNA.
- Follow the procedures in your lab’s biosafety protocols for cleaning up spills and responding to exposures.
- Spills involving recombinant DNA must be reported to the biosafety officer.
Everyone has the responsibility to stop work that they believe presents an imminent hazard to anyone.

Laboratory Employee(s)
Read and understand this CHP and Online Supplement. Follow the procedures in this CHP, and report safety concerns to the PI or CHO.

Laboratory Safety Contact (LSC)
The PI may designate an LSC(s) to help ensure requirements of the CHP are met and that hazardous chemicals are handled, stored, and disposed of properly.

After-hours Laboratory Contact(s)
After-hours contacts are necessary should an emergency occur during non-business hours (before 8 a.m., after 5 p.m., or on weekends). The contact(s) should be familiar with the operations and hazards present in this laboratory.

The Principal Investigator (PI)
The PI is responsible for safety in their laboratory and has the following responsibilities:
• Ensure completion of their lab’s CHP.
• Ensure the CHP is reviewed and updated annually.
• Ensure that all laboratory personnel read the CHP and Online CHP Component information.
• Ensure training is documented and up-to-date in the “Training” section of this CHP.
• Ensure that emergency eyewash stations are checked monthly.
• Establish and maintain written Standard Operating Procedures for work involving hazardous chemicals or hazardous operations; ensure training is provided and documented on all SOPs.
• Ensure appropriate Personal Protective Equipment is available.
• Contact EHS if there will be new research with regulated materials (e.g. toxic gases, controlled substances, explosives and extremely toxic substances).

Campus Chemical Hygiene Officer (CHO)
Located in Environmental Health & Safety (EHS), the CHO serves as the primary authority on OR-OSHA’s Chemical Hygiene regulation and is available for consultation on completing and implementing this plan and lab safety issues. To contact the Campus CHO call 5-4312 or e-mail CHO@pdx.edu.

Chemical Hygiene Committee
The Chemical Hygiene Committee serves in an advisory capacity for the implementation of the University’s CHP.

PSU Administration
Support PSU laboratory safety by providing adequate resources and timely response to Chemical Hygiene Committee recommendations.

Campus Chemical Hygiene Officer: CHO@pdx.edu 503-725-4312

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<tr>
<th>Roles</th>
<th>Name</th>
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<tr>
<td>Principal Investigator*</td>
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<td>After Hours Emergency Contact*</td>
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<tr>
<td>Alternate After Hours Emergency Contact</td>
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<tr>
<td>Lab Safety Contact / Lab Manager</td>
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<tr>
<td>Alternative Lab Safety Contact</td>
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</table>

Other:

Roles & Contacts
The appropriate PPE should be documented in Standard Operating Procedures (SOPs). The following general guidance applies to all operations where hazardous chemicals are used. See the Online CHP Component for PPE selection details:

www.pdx.edu/environmental-health-safety/chp

Generally when working with hazardous materials including biological agents you should wear a lab coat, gloves and eye protection.

Additional PPE selection guidance is available by contacting EHS. Care should be taken to not wear gloves outside of laboratories. Contaminated containers requiring the use of gloves to transport outside of laboratories should be decontaminated or transported in a clean secondary container without the use of gloves.

Proper use of laboratory fume hoods provides protection from inhalation of airborne hazards. If you feel additional respiratory protection is needed, contact EHS for an evaluation (5-4312). Respirators may not be worn without documented training from EHS and a medical evaluation.

A variety of laboratory personal protective equipment is commercially available and commonly used in laboratories. However, for the equipment to perform the desired function, it must be used and managed properly. Laboratory supervisors shall determine a need for such equipment, monitor its effectiveness, train the employees, and monitor and enforce the proper use of such equipment.

PPE Requirements for this Lab:

**Laboratory coats are required.**
- Always applies
- Applies when: ____________________________
- Never Applies

**Shorts and skirts are not allowed.**
- Always applies
- Applies when: ____________________________
- Never Applies

**Disposable impermeable gloves are required.**
- Always applies
- Applies when: ____________________________
- Never Applies

**Safety glasses are required.**
- Always applies
- Applies when: ____________________________
- Never Applies

**Closed-toe shoes are required.**
- Always applies
- Applies when: ____________________________
- Never Applies

**Other:**
- Always applies
- Applies when: ____________________________
- Never Applies
CONTROLLING CHEMICAL EXPOSURES

Controlling chemical and physical hazards in the lab is necessary to prevent injury and illness. Identify and assess the risks and apply the hierarchy of controls described below to address them. Contact the Chemical Hygiene Officer for additional options for controlling chemical exposures in this lab.

**Good:** Wear Personal Protective Equipment such as but not limited to safety glasses, gloves and lab coats.

**Better:** Apply Administrative Controls such as development and use of Standard Operating Procedures or policies.

**Even Better:** Use Engineering Controls such as fume hoods, glove boxes, installing guards on machinery.

**Best:** Eliminate the hazard like working with a different, less hazardous chemicals

Food and drink are prohibited in labs except in certain limited conditions. The policy for this lab is:

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**Safety Data Sheets (SDS's)**

SDS's provide information regarding hazardous chemicals including exposure limits, signs and symptoms of exposures, and decontamination procedures in the event of a chemical exposure.

SDS's are available online at: [www.pdx.edu/environmental-health-safety/chp](http://www.pdx.edu/environmental-health-safety/chp)

MSDS Online will provide phone access to SDS information in the event of a power failure at 1-888-362-2007.


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**Labeling**

All chemical containers are required to be clearly labeled. Labels on incoming containers must be maintained and readable. Small containers and vials may be maintained in labeled racks, boxes or other appropriate containers.

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**Consulting, Monitoring, and Inspections by EHS**

EHS provides chemical exposure monitoring, laboratory safety consulting and regulatory compliance inspections for all laboratories on campus. To schedule these services contact EHS at 5-4312.

See the Online CHP Component for additional information and guidance on controlling your exposure. [www.pdx.edu/environmental-health-safety/chp](http://www.pdx.edu/environmental-health-safety/chp)

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**Chemical Spills & Waste**

Uncontrolled releases of hazardous chemicals can cause health effects, injury, or property damage. Some chemical spills are obvious; others less so. Researchers should be alert to such indications of a release as unusual odors, eye irritation, other exposure symptoms, or monitoring device alarms. Contact EHS for safe removal of contaminated waste should a spill occur.

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**Medical Consultation and Examinations**

Laboratory employees will be provided the opportunity to receive medical attention if they develop signs or symptoms and/or if exposure monitoring reveals an exposure level above the action level for a hazardous chemical. Contact your PI or Chemical Hygiene Officer for assistance.

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**Fume Hoods**

Fume hoods are certified annually by EHS. Laboratories should contact the CHO when concerned about fume hood performance.

Chemicals and volatile materials should not be used in Biosafety Cabinets unless hard ducted. Please consult with the CHO before engaging in using any chemical in a Biosafety Cabinet.

**Certain extremely hazardous operations should not be performed if the PI or Lab Safety Contact(s) are not present. Never work alone with extremely hazardous materials/operations. See the Standard Operating Procedures section for details.**

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CONTROLLING CHEMICAL EXPOSURES
STANDARD OPERATING PROCEDURES

General SOPs
General use health and safety SOPs for the major classes of hazardous chemicals are available for you to incorporate into your lab specific plan. Check all that apply below, then read the applicable SOPs on the Online CHP Component before working with these chemicals:

- [ ] Carcinogens
- [ ] Compressed Gases
- [ ] Corrosive Materials
- [ ] Cryogenics
- [ ] Flammable & Combustible Liquids
- [ ] Acutely Toxic Materials
- [ ] Highly Reactive/Unstable Materials
- [ ] Irritants
- [ ] Reproductive Toxins
- [ ] Sensitizers
- [ ] Nanomaterials
- [ ] Select Agents/Toxins

Creating Standard Operating Procedures
For work involving particularly hazardous chemicals or processes (e.g., working with pyrophorics, explosives, toxic gasses), your lab must create a specific SOP to address all the hazards associated with the material. A template is available here:

www.pdx.edu/environmental-health-safety/chp/template

Paper copies of SOP's specific to this lab are kept in the following location:

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PPE Requirements for this Lab:

Restrictions on Working Alone:
Identify below any laboratory operations that require the presence of two people to be present while the operation is ongoing. Each of these activities needs to be addressed in a written SOP.
The following laboratory activities are covered by specialized compliance programs and require prior approval from the corresponding campus committee or office. Please review the list and make sure you are fulfilling the requirements of the appropriate campus organization. Non-compliance can result in the revocation of approvals and the requirement to stop work.

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<tr>
<th>Research Involving</th>
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<th>Contact Information</th>
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<tbody>
<tr>
<td>Animals</td>
<td>Animal Care and Use Committee</td>
<td>5-3086 Randy Zelick</td>
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<td><a href="mailto:iacucchair@lists.pdx.edu">iacucchair@lists.pdx.edu</a></td>
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<td>Biohazards</td>
<td>Biosafety Committee</td>
<td>5-4312 Chuck Cooper</td>
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<td><a href="mailto:bso@pdx.edu">bso@pdx.edu</a></td>
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<td>Human Subjects</td>
<td>Committee for Protection of Human Subjects</td>
<td>5-4288 Cathleen Gal</td>
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<td><a href="mailto:irb@lists.pdx.edu">irb@lists.pdx.edu</a></td>
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<td>Radioactive Materials and</td>
<td>Radiation Safety Committee</td>
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<td>Radiation Producing Machines</td>
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<td><a href="mailto:rso@pdx.edu">rso@pdx.edu</a></td>
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Campus Departments and research groups may establish additional requirements for prior approval of certain lab activities. List here (if any):

Unique Hazards in this lab include:
By law, laboratory personnel must receive documented training on the contents of the CHP before beginning work in the laboratory. This initial training is accomplished by reading this CHP Flipchart and Online CHP Component, and signing below.

Whenever significant changes are made to this CHP, additional training must be documented below.

I verify that I have read this Chemical Hygiene Plan and its online component, that I understand its contents, and I agree to comply with its requirements:

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