INTRODUCTION

This program applies to Eastern Washington University (EWU) personnel who work with chemicals in performance of their job duties. Chemicals may pose a threat to human health or the environment if not used properly and employees have the right to know and understand the hazardous chemicals they use and how to work with them safely. It is the intent of the EWU that all chemicals are recognized, stored, and safely used.

The Environmental Health and Safety (EH&S) Department assists departments on campus with the safe management of chemicals that are used during department operations.

This procedure is supported by information provided in the Hazardous Waste Management Procedure, Hazardous Waste/Hazardous Materials Contingency Plan Guidance, Responsibilities of Satellite Accumulation Managers Guidance, Disposal of Laboratory Chemical Containers Guidance and the Universal Waste Guidance. The EH&S forms to assist with documentation of chemical management are the Workshop Inspection Form and the Lab Inspection Form.

PURPOSE

The purpose of this program is to implement the requirements of Washington Administrative Code (WAC) 296-800-170, and to ensure that employees are informed regarding the potential hazards of chemicals or materials by means of training, chemical labeling, and Material Safety Data Sheets (MSDS) now referred to as Safety Data Sheets (SDS). This procedure document will be reviewed annually to ensure compliance with state and federal regulatory updates and modifications.

EXEMPTIONS

- Hazardous waste, as such term is defined by the Solid Waste Disposal Act, the Resource Conservation and Recovery Act (RCRA) and the Environmental Protection Agency (EPA) are covered under the Hazardous Waste Management Procedure and associated guidance documents.

- Tobacco or tobacco products; wood or wood products; articles; and foods, drugs, intended for personal consumption by employees while in the workplace, or cosmetics are not covered in this procedure.

- Specific hazardous building materials that may be encountered are covered under the Asbestos Management Procedure and are on file in the EH&S Department.

- Any hazardous chemical or substance, while being transported, is subject to regulations issued by the United States Department of Transportation or the Washington Utilities and Transportation Commission.
RESPONSIBILITY

The EH&S department is responsible for the development and implementation of this program. The program is based on the following objectives:

1. Comply with all federal and state government regulations regarding chemical hazard communication.
2. Provide training to the University personnel regarding the potential hazards of chemicals or materials.
3. Ensure the labeling system is consistent with the new Globally Harmonized System of Classification and Labeling of Chemicals (GHS).
4. Implement the MSDS/SDS Program to ensure departments have current hazard information for the chemicals they utilize on the job.
5. Maintain records on chemical inventories for departments around campus.

Individual departments are responsible for ensuring that the department personnel follow the University guidelines for this program by:

1. Assigning a chemical hygiene officer to maintain specific department requirements for the program.
2. Maintaining a current chemical inventory and proper storage of chemicals utilized by department employees.
3. Ensuring that employees are trained in safe chemical handling and usage.

Employees are responsible for participating in the program by:

1. Attending training as required by regulatory standards.
2. Know and practice safe work procedures.

PROGRAM ELEMENTS

The main elements of this program are as follows:

- Departmental chemical hygiene officers will coordinate with EH&S on chemical safe handling and storage procedures.
- Annual update of chemical inventories for each department.
- Current MSDS/SDS’s readily available for every employee to utilize. Historical MSDS/SDS’s will be managed by EH&S.
- Consistent labeling utilizing the new GHS system.
- Training and documentation for the Chemical Hazard Communication Program.

CHEMICAL HYGIENE OFFICER

Each department will assign a chemical hygiene officer who will:

- Update the department chemical hygiene plan.
• Confirm MSDS/SDS for all products stored or used by that department are available.
• Provide orientation training to all new faculty and staff (to include a review of the chemical hygiene plan and other pertinent departmental information).
• Conduct safety and laboratory inspections.
• Ensure that incoming shipments of hazardous chemicals are labeled with:
  o The name of the materials as used on the MSDS/SDS,
  o The appropriate hazard warnings, and
  o The name and address of the manufacturer.
• Maintain applicable records (inventory, MSDS/SDSs, specific department training conducted by the chemical hygiene officer or their designate).
• Act as a liaison for department chemical information to EH&S.

CHEMICAL INVENTORY

Each department is responsible for maintaining an inventory of department hazardous chemical products and the locations of the chemical products. A master inventory will be maintained with EH&S and updated annually.

The date that the chemical arrives on campus must be put on the containers. Those chemicals that become unstable over time (ex. peroxide forming chemicals) must have an arrival date, an opening date and an expiration date. See Table 1 for timely disposal of potentially unstable hazardous chemicals.

<table>
<thead>
<tr>
<th>Table 1 Peroxide Compounds</th>
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</thead>
<tbody>
<tr>
<td>List A</td>
</tr>
<tr>
<td>Includes compounds that form explosive peroxides even without concentration.</td>
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<tr>
<td>Peroxide Hazard on Storage</td>
</tr>
<tr>
<td>Isopropyl ether</td>
</tr>
<tr>
<td>Divinyl acetylene</td>
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<tr>
<td>Vinylidene chloride</td>
</tr>
<tr>
<td>Sodium amide</td>
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<tr>
<td>Potassium metal</td>
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<tr>
<td><strong>Store no longer than three months.</strong></td>
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## Table 1 Peroxide Compounds

<table>
<thead>
<tr>
<th>List A</th>
<th>List B</th>
<th>List C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cyclohexane</td>
<td></td>
<td>Vinyl pyridine</td>
</tr>
<tr>
<td>Diethylene glycol dimethyl ether (diglyme)</td>
<td>Chloroprene</td>
<td><strong>Store no longer than 12 months</strong></td>
</tr>
<tr>
<td><strong>Store no longer than 12 months.</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Material Safety Data Sheets

The MSDS/SDS is the primary vehicle for transmitting the detailed hazard information to employees. All employees must have easy access to an MSDS/SDS for each chemical they use. It is the departments’ responsibility to ensure the MSDS/SDS’s are current for the chemicals used and they must be available to employees during work hours. If an SDS is not available, contact the chemical hygiene officer of the department.

The department chemical hygiene officer should conduct training for employees on how to use a MSDS/SDS and location of the MSDS/SDS’s of the chemicals used for their job duties.

All purchases of hazardous chemical products must be accompanied by a MSDS/SDS. All departments receiving new chemicals (not used on campus before) **must forward a copy** of the MSDS/SDS to EH&S and must include where the chemical will be stored and used.

### Contingency Plan / Chemical Hygiene Plan

Each department will have a contingency plan that outlines what personnel should do in the event of a disaster, fire or other hazardous environmental problem occurs. In addition, if the department stores and utilizes a large quantity of chemicals or hazardous materials, then a chemical hygiene plan is needed for the chemicals utilized by the employees in performance of their job duties. The department chemical hygiene officer should maintain these documents and review and update annually. For chemicals that are highly toxic, highly flammable or highly reactive (based on GHS, HMIS, NFPA or Saf-T-Data) a safe use plan or a standard operating procedure must be prepared.

### Labeling

The University is implementing the new GHS system of labeling which will provide consistency in the classification and labeling of chemicals. This system provides the employees better information on the safe handling and use of chemicals minimizing injuries and illnesses related to exposures to potentially hazardous chemicals. Table 2 illustrates the hazard pictograms and related hazard class.
Table 2 GHS Hazard Pictograms and Hazard Classes

<table>
<thead>
<tr>
<th>Exploding Bomb</th>
<th>Corrosive</th>
<th>Flame Over Circle</th>
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</thead>
<tbody>
<tr>
<td>Explosives</td>
<td>Skin Corrosion/ burns</td>
<td>Oxidizing gases</td>
</tr>
<tr>
<td>Self-reactive</td>
<td>Eye Damage</td>
<td>Oxidizing liquids</td>
</tr>
<tr>
<td>Organic Peroxides</td>
<td>Corrosive to metals</td>
<td>Oxidizing solids</td>
</tr>
<tr>
<td>Gases under pressure</td>
<td>Aquatic Toxicity</td>
<td>Acute Toxicity(fatal or toxic)</td>
</tr>
<tr>
<td>Irritant (eye &amp; skin)</td>
<td>Carcinogen</td>
<td>Flammables</td>
</tr>
<tr>
<td>Skin Sensitizer</td>
<td>Mutagenicity</td>
<td>Pyrophoric</td>
</tr>
<tr>
<td>Acute Toxicity</td>
<td>Reproductive toxicity</td>
<td>Self-heating</td>
</tr>
<tr>
<td>Narcotic effects</td>
<td>Respiratory sensitizer</td>
<td></td>
</tr>
<tr>
<td>Respiratory tract irritant</td>
<td>Target organ toxicity</td>
<td>Self-reactive</td>
</tr>
<tr>
<td>Hazardous to ozone layer (non-mandatory)</td>
<td>Aspiration toxicity</td>
<td>Organic peroxides</td>
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</table>

Refer to the Hazardous Waste Management Procedure for additional information on labeling.

Chemical Containers

Chemical containers will not have labels removed or defaced. When a chemical is transferred from its original container to another container, the container it is transferred into is called a "secondary container". Secondary containers must be labeled with the name of the material as on the MSDS/SDS and with the appropriate hazard warning. Secondary containers must be of the same
material as the original product containers. **Food or drink containers are not allowed for secondary containers of chemical storage.**

Metal or plastic chemical containers, will overtime and depending on storage conditions, degrade. Watch for brittleness of plastic, and corrosion of metal. If the chemical is still usable, it must be transferred to a similar container and properly labeled. Observe the integrity of the cap to insure that off gassing of the chemical is not occurring. If the cap is damaged, replace immediately otherwise transfer the chemical to a secondary container and label. The old container must be handled as described in the Disposal of Laboratory Chemical Containers Guidance. If the chemical cannot be transferred or is not needed, it is considered hazardous waste. Contact EH&S for a chemical pickup.

**EMPLOYEE INFORMATION & TRAINING**

Each department chemical hygiene officer is responsible for ensuring that employees are trained and records are kept on chemical hazards which may be encountered in the specific work area. The EH&S department can provide training assistance.

Each new employee of EWU will attend a health and safety orientation. This will include:

- An overview of WAC 296-800-170,
- A description of physical and health effects of hazardous chemicals,
- A review of the chemical inventory for their work place operations,
- How to reduce/eliminate exposure to these chemicals,
- Emergency procedures,
- How to read LABELS and MSDS/SDS’,
- Location of MSDS/SDS for review,
- Location and availability of the written program.

(Remember faculty, full or part time staff and student employees are all considered employees).

After attending training, the employee will sign a Statement of Acknowledgement to verify that he/she received training, received written materials, and understands EWU chemical hazard program.

**Records**

Each employees department and EH&S will keep records on employee hazardous chemical training. Training conducted by departments or outside contractors must be maintained by the department and a copy sent to the EH&S Department.
Updates

The EH&S department will inform the department chemical hygiene officer of new hazardous chemical information, as it becomes known (via manufacturers' updated MSDS/SDS). The chemical hygiene officer is responsible for the dissemination of information to the department personnel. The supervisors/instructors are responsible for providing specific training to employees/students on the hazardous material prior to introducing it into the work area.

CONTRACTORS

The Construction and Planning Department will contact EH&S regarding contractor work and request in email or by the EH&S Service Request Form, any hazardous chemicals/materials information needed to inform the contractor of potential hazards that may be encountered. A minimum three week lead time is requested.

It is the responsibility of the Construction and Planning Department to provide contractors information on:

1) EWU hazardous chemicals/materials to which they may be exposed to while on the job site,
2) Precautions to take, to lessen the possibility of exposure.

Departments whose chemicals/materials will be in the contractor work zone are responsible for safely removing and storing the chemicals/materials at another approved location outside the work zone. EH&S can provide assistance if necessary.

Contractors are responsible for their own hazardous chemical program. All chemicals brought onto any EWU premises by the contractor must have an MSDS/SDS, and a copy must be provided to Construction and Planning. The Construction and Planning department will maintain those records as per the regular retention schedule.

NON-Routine Tasks

If employees are required to perform hazardous non-routine tasks, prior to starting work on such projects, each affected employee will be given information by the supervisor about hazardous chemicals to which they may be exposed during such activity. This information will include:

1) Specific chemical hazards,
2) Protective/safety measures the employee can take,
3) Measures the department has taken to lessen the hazards including provisions for ventilation, respirators, presence of another employee, and emergency procedures.
EMERGENCY

Each supervisor or department chemical hygiene officer is responsible for establishing emergency cleanup procedures for chemicals used in their department. EH&S is available for assistance. CALL 911 for emergency assistance.

LABORATORY SAFETY PLAN

Safe work practices are essential in laboratories. Each department must assign a CHO and develop a Chemical Hygiene Plan (CHP). EH&S will provide a plan template to each department required to prepare a CHP. The term "laboratories" as used in this document includes shops, clinics, studios and other "hands-on" classrooms that use chemicals.

All employees and students are responsible for observing safety rules pertaining to their work and for insuring that these rules are also observed by others. Additional guidance documents have been written for specific shop safety hazards such as Chlorine Gas and Sodium Hydroxide for Water Treatment guidance documents. Specific information for academic laboratories can be found under WAC 296-828 Hazardous Chemicals in Laboratories. (http://www.lni.wa.gov/WISHA/Rules/labs/default.htm) Additional EH&S guidance documents have been written for specific laboratory chemical hazards, such as Using Hydrofluoric Acid Safety.

Faculty members or their designate must give a safety briefing during the first week of class covering general safety procedures to be observed while in class and in the laboratory. These briefings will be documented by obtaining signatures of those briefed/trained and attach the sign in sheet to a copy of the training materials or briefing notes presented. A specific briefing covering experiments or operations should be given to students before they engage in those experiments and/or operations.

Faculty and staff members are expected to bring safety problems that cannot be solved by individual action to the attention of their laboratory supervisor, CHO or department chairman. EH&S should be contacted, if assistance is needed.

INSPECTIONS

Monthly inspections will be conducted by the designated person for each lab and storage area. See the EH&S Form Lab or Workshop Inspection Forms. The completed forms will be retained for three years and must be available to inspectors. EH&S will also conduct inspections on a regular basis.

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