CHEMICAL HAZARD COMMUNICATION PROGRAM

_____

[Department or Unit Name]

I. General Policy

In accordance with the Washington Administrative Code (WAC) 296-901, Hazard Communication Standard, this program has been developed and implemented by: _____

[Department or Unit Name]

The program's purpose is ensuring and documenting each employee is informed and trained on the Hazard Communication Standard, the location(s) and hazardous properties of the chemicals used in the workplace, and the protective controls, practices, and equipment required.

This program applies to all locations where employees might be exposed to hazardous chemicals during normal working conditions or an emergency situation. The department administrator and/or designee, _____ has overall responsibility for the program.

[Position or person]

A copy of this program and the Safety Data Sheets (SDS) will be readily available in _____ for employee review.

[Location]

II. Chemical Inventory List

_____ will maintain a list of the hazardous

[Position or person]

chemicals used or known to be present by the department or unit, and update the list as necessary. The list may be compiled for the workplace as a whole or for individual work areas. The list will be updated immediately upon receiving any chemical. The identity of each chemical on the list must match the product identifier on the container label and on the SDS. The chemical inventory list is at the end of this program.

III. Container Labeling

_____ is to ensure all primary and secondary

[Position or person]

containers of hazardous chemicals in their area are properly labeled. Labels on containers from the manufacturer or distributor are to list the following six items:

1) Product identifier (Identity of the hazardous chemical(s) on a label or SDS);
2) Signal word (Danger or Warning);
3) Hazard statements;
4) Pictograms (see Appendix 2);
5) Precautionary statements; and
6) Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party.

All secondary containers are to be labeled, tagged or marked with, at minimum:

- The product identifier; and
- Hazard information from the manufacturer's label and/or SDS.

Additional information from the six items listed above may be used as necessary on the secondary label to enhance hazard communication. Information not on the label must be conveyed to the employee(s) through information and training.

For labeling assistance see _____.
[Position or person]

IV. Safety Data Sheets (SDS)

A SDS (formerly referred to as MSDS and now structured differently for compliance with the Globally Harmonized System of Classifying and Labeling, or GHS) is any printed or written document obtained or developed by the chemical manufacturer or importer for use by the end user of the product. SDSs state important information about the product including:

- Identification of the chemical name(s) and common name(s);
- Chemical composition/ingredient information;
- Physical, health, or other known hazards;
- Exposure controls and personal protection;
- Entry route(s);
- Physical and chemical properties;
- Permissible exposure limit(s); and
- Precautions or controls for safe handling and storage.

The document also includes emergency first aid procedures, the date the SDS was prepared or last revised, and the name, address, and telephone number of the chemical manufacturer, importer, or other responsible party.

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_____ is responsible for obtaining
[Position or person]

safety data sheets for the department or unit. SDSs are required when new chemicals are procured. SDSs may be obtained by contacting the manufacturer or supplier, searching the internet, visiting the Environmental Health and Safety website (https://ehs.wsu.edu) or by following the procedures in the Safety Policies and Procedures Manual (SPPM 5.10). The supervisor or designee reviews incoming SDSs for safety and health information and conveys any new information and training to affected employees.

SDSs are located _____ and are available
[Location]

to all employees for review during each work shift. If SDSs are not available, immediately contact your supervisor. Refer to the section entitled "Employee Exposure Records" for additional information.

V. Employee Information And Training

_____ is responsible for conducting
[Position or person]

employee training. Prior to starting work, employees using, or potentially exposed to, hazardous chemicals receive initial training on the Hazard Communication Standard and the safe use of those chemicals. Additional training shall be conducted when a new chemical hazard is introduced into the workplace. Training will be conducted before any chemical is used. Employee training is to be documented by recording the employee names, and the date and content of the training.

The following training and information shall be provided to each employee covered by this program:

- A summary of the standard and the purpose, location and availability of the written program, the list of hazardous chemicals, and associated SDSs (a summary of the standard is at the end of this program).
- Information identifying any operations in employee work areas where hazardous chemicals are present.
- Information and training on reading chemical labels and reviewing SDSs to obtain appropriate hazard information. The glossary at the end of this program lists some common SDSs terms.

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- Information and training on the physical and health hazards and/or other hazards of the chemicals in the work area, including the likely symptoms or effects of overexposure. The glossary at the end of this program lists some common physical, health and other hazard terms.
- Training on the methods and observation techniques used to determine the presence of a hazardous chemical release. Detection methods may include monitoring devices, visual appearances or odors.
- Training on the measures the department has implemented to minimize employee exposure to hazardous chemicals. These measures may include engineering controls, specific work practices employees must follow and the use of personal protective equipment to minimize chemical exposure.
- Training on the emergency procedures to initiate in the event an employee is exposed to a hazardous chemical.

If an employee has been exposed to a hazardous chemical refer to the "Chemical Exposure Incident Procedure" section of this program for instruction.

VI. Chemical Spills

Employees can clean-up 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.
- The chemical does not have a Ceiling Limit listed in WAC 296-841 or will not create an Immediate Danger to Life and Health (IDLH) atmosphere. IDLH information can be found in the NIOSH Pocket Guide to Chemical Hazards.

If any of the above conditions cannot be met, then immediately call 911 and qualified emergency response personnel will respond to clean-up the spill.

Clean-up materials shall be disposed of per SPPM 5.66.

Employees cannot clean-up mercury spills; call EH&S at 335-3041 for assistance.

VII. Personal Protective Equipment (PPE)

Supervisors or designees are to perform hazard assessments for each work task to determine if hazards, including *chemical hazards,* are present, or are likely to

be present, requiring the use of engineering controls, administrative controls, and/or PPE (see SPPM 3.10)

Supervisors evaluate chemical hazards and select suitable PPE using information from the SDSs, container labeling, EH&S (335-3041) and other resources as necessary. Personal Protective Equipment Hazard Assessment and Certification Guidelines are available from EH&S which can be used to perform and document hazard assessments. Employees will be trained to use properly fitted PPE. Employee PPE training can be documented using the form provided in the guidelines.

VIII. On-Site Contractors/Other WSU Departments

Contractors and other WSU departments or units may work within and around this department's facilities.

_____ will inform contractor(s) and other
[Position or person]

WSU departments or units of any hazardous chemicals present in the workplace, the availability of the department or unit's SDSs, information on the department's and any required precautionary and protective measures.

Contractors and other WSU departments or units in the course of their work may expose this department's employees to hazardous chemicals.

_____ will request SDSs for chemicals used
[Position or person]

by contractors or other WSU departments or units by contacting Environmental Health and Safety (335-3041).

IX. Hazardous Non-Routine Tasks

Periodically, employees may be required to perform non-routine tasks involving hazardous chemicals. Prior to starting work on any non-routine task the supervisor or designee will conduct a hazard assessment and provide affected employees with the following information and training:

- The specific hazards related to the non-routine tasks
- PPE and other protective measures required
- Steps the department is taking to reduce chemical hazards
- Emergency procedures

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X. Hazardous Substances in Unlabeled Pipes and Process Equipment

Employees required to work on or near unlabeled pipes and/or process equipment will be informed of the substances in the pipes and/or process equipment (or substances that can be reasonably expected to be present), any potential hazards and protective measures. Contact your supervisor if you encounter equipment or piping and are not sure of the contents.

XI. Chemical Exposure Incident Procedure

In the event an employee may have been potentially overexposed (inhalation, ingestion, injection, or skin contact) either accidentally or possibly to a hazardous chemical, after the necessary medical care has been provided, the supervisor must complete an "Incident Report" form (see SPPM 2.24). The following information should be included on the form: the specific chemical(s), the duration of the exposure, the type of exposure (inhalation, ingestion, injection, or skin contact), and personal protective equipment used. Environmental Health and Safety retains this form for 30 years as an employee exposure record.

XII. Employee Exposure Records

The Washington Administrative Code 296-800-180 defines SDSs as employee exposure records, which must be preserved for at least 30 years post employment.

The SDSs for chemicals no longer used by the department/unit or chemicals which are used but no longer produced shall be retained and maintained for 30 years, including MSDSs for chemicals ceased being used or produced before the June 1, 2015 transition to the SDS format compliant with WAC 296-901.*

*Remember, it is the responsibility of each department or unit to **maintain their own SDSs (and any applicable MSDSs)**.

Each department or unit supervisor or designee will provide to their employees, at the time of initial employment and annually thereafter, the following information:

- The existence, location and availability of the inactive SDSs and/or MSDSs.
- The supervisor or designee is responsible for maintaining and providing access to the SDSs and/or MSDSs.
- The employee has the right to access the SDSs and/or MSDSs.

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XIII. Chemical Inventory List

Trade/Chemical Name	Department/Location of Chemical	SDS On File?
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Chemical Inventory List (continued)

Trade/Chemical Name	Department/Location of Chemical	SDS On File?
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XIV. Chemical Hazard Communication Standard Summary

The Hazard Communication Standard is based on a simple concept - that employees have both the need and right to know the identities and hazards of the chemicals they are potentially exposed to when working. They also need to know what protective measures are required. This knowledge should reduce work-related injuries and illnesses caused by chemical exposure.

The Hazard Communication Standard establishes uniform requirements incorporating GHS to assure that the hazards of all chemicals imported, produced or used in U.S. workplaces are evaluated. The hazard information and associated protective measures are to be transmitted to affected employers and potentially exposed employees.

Chemical manufacturers and importers must convey the hazard information they learn from the evaluations to employers by labels on containers and SDSs. All covered employers must have a hazard communication program to convey this information to their employees through container labeling, SDSs, information and training.

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APPENDIX 1: Glossary

Acute Toxicity: Refers to those adverse effects occurring following oral or dermal administration of a single dose of a substance, or multiple doses given within 24 hours, or an inhalation exposure of 4 hours.

Carcinogen: A substance or mixture of substances which induce cancer or increase its incidence.

Chemical: Any substance, or mixture of substances.

Combustible Liquid: A liquid having a flashpoint above 140° F and less than or equal to 199.4° F.

Common Name: Any designation or identification such as code name, code number, trade name, brand name or generic name used to identify a chemical other than by its chemical name

Container: Any bag, barrel, bottle, box, can, cylinder, drum, reaction vessel, storage tank, or the like that contains a hazardous chemical. For purposes of this section, pipes or piping systems, and engines, fuel tanks, or other operating systems in a vehicle, are not considered to be containers.

Corrosive: A chemical that causes visible destruction of, or irreversible alterations in, living tissue by chemical action at the site of contact.

Flammable Liquid: A liquid having a flashpoint of not more than 140^0 F.

Flashpoint: The minimum temperature at which a material ignites when exposed to a source such as flame or spark.

Hazard Category: means the division of criteria within each hazard class, e.g., oral acute toxicity and flammable liquids include four hazard categories. These categories compare hazard severity within a hazard class and should not be taken as a comparison of hazard categories more generally.

Hazard Not Otherwise Classified (HNOC): An adverse physical or health effect identified through evaluation of scientific evidence during the classification process that does not meet the specified criteria for the physical and health hazard classes addressed in this section. This does not extend coverage to adverse physical and health effects for which there is a hazard class addressed in this section, but the effect either falls below the cut-off value/concentration limit of the hazard class or is under a GHS hazard category that has not been adopted by OSHA (e.g., acute toxicity Category 5).

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Hazard Statement: A statement assigned to a hazard class and category that describes the nature of the hazard(s) of a chemical including, where appropriate, the degree of hazard.

Hazardous Chemical: Any chemical which is classified as a physical or a health hazard, a simple asphyxiant, combustible dust, pyrophoric gas, or hazard not otherwise classified.

Health Hazard: A chemical which is classified as posing one of the following hazardous effects:

- Acute toxicity (any route of exposure);
- Skin corrosion or irritation;
- Serious eye damage or eye irritation;
- Respiratory or skin sensitization;
- Germ cell mutagenicity;
- Carcinogenicity;
- Reproductive toxicity;
- Specific target organ toxicity (single or repeated exposure); or
- Aspiration hazard.

The criteria for determining whether a chemical is classified as a health hazard are detailed in WAC 296-901-14022, Appendix A--Health hazard criteria.

Immediate Use: Means that the hazardous chemical will be under the control of and used only by the person who transfers it from a labeled container and only within the work shift in which it is transferred.

Irritant: A chemical, which is not corrosive, that causes a reversible inflammatory effect on living tissue by a chemical action at the site of contact.

LEL, or LFL: Lower Explosive Limit, or Lower Flammable Limit, of a vapor or gas; the lowest concentration that will produce a flash of fire when an ignition source is present.

Mutagen: A substance or agent capable of altering the genetic material in a living cell.

Oxidizer: A chemical that initiates or promotes combustion in other materials, causing fire either by itself or through the release of oxygen or other gases.

PEL: Permissible Exposure Limit.

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Physical Hazard: a chemical that is classified as posing one of the following hazardous effects:

- Explosive;
- Flammable (gases, aerosols, liquids, or solids);
- Oxidizer (liquid, solid or gas);
- Self-reactive;
- Pyrophoric (liquid or solid);
- Self-heating;
- Organic peroxide;
- Corrosive to metal;
- Gas under pressure; or
- In contact with water emits flammable gas.

See WAC 296-901-1424, Appendix B-Physical hazard criteria.

Pictogram: A composition that may include a symbol plus other graphic elements, such as a border, background pattern, or color, that is intended to convey specific information about the hazards of a chemical. Eight pictograms are designated under this standard for application to a hazard category.

ppm: Parts per million is the concentration of a gas or vapor in air - parts (by volume) of the gas or vapor in a million parts of air.

Precautionary Statement: A phrase that describes recommended measures that must be taken to minimize or prevent adverse effects resulting from exposure to a hazardous chemical, or improper storage or handling.

Product Identifier: The name or number used for a hazardous chemical on a label or in the SDS. It provides a unique means by which the user can identify the chemical. The product identifier used must permit cross-references to be made among the list of hazardous chemicals required in the written hazard communication program, the label and the SDS.

Pyrophoric Gas: A chemical in a gaseous state that will ignite spontaneously in air at a temperature of 130°F (54.4°C) or below.

Pyrophoric Liquid or Solid: A liquid or solid which, even in small quantities, is liable to ignite within five minutes after coming into contact with air.

Reproductive Toxicity: Includes adverse effects on sexual function and fertility in adult males and females, as well as adverse effects on development of the offspring.

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Safety Data Sheet (SDS): Written or printed material concerning a hazardous chemical that is prepared in accordance with WAC 296-901-14014.

Sensitizer: A chemical that causes a substantial proportion of exposed people or animals to develop an allergic reaction in normal tissue after repeated exposure to the chemical.

Signal Word: A word used to indicate the relative level of severity of hazard and alert the reader to a potential hazard on the label. The signal words used in this section are “danger” and “warning.” “Danger” is used for the more severe hazards, while “warning” is used for the less severe.

Simple Asphyxiant: A substance or mixture that displaces oxygen in the ambient atmosphere, and can thus cause oxygen deprivation in those who are exposed, leading to unconsciousness and death.

Specific Gravity: A chemical that is weighed against the weight of an equal volume of water. If a material cannot be dissolved and floats on water it has a specific gravity less than one. If the number is greater than one it will sink.

STEL: Short Term Exposure Limit

Teratogen: A substance or agent which can cause malformations in the fetus.

TLV: Threshold Limit Value

TWA: Time Weighted Average

UEL, or UFL: Upper Explosive Limit, or Upper Flammable Limit of a vapor or gas; the highest concentration that will produce a flash fire when an ignition source is present.

Vapor Density: The weight of a vapor or gas compared to the weight of an equal volume of air. Materials lighter than air have vapor densities less than 1.0. Materials heavier than air have vapor densities greater than 1.0.

Water-Reactive: A chemical that will react with water to release a gas that is either flammable or presents a health hazard.

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APPENDIX 2: Pictograms

HCS Pictograms and Hazards

Health Hazard  • Carcinogen • Mutagenicity • Reproductive Toxicity • Respiratory Sensitizer • Target Organ Toxicity • Aspiration Toxicity	**Flame**  • Flammables • Pyrophorics • Self-Heating • Emits Flammable Gas • Self-Reactives • Organic Peroxides	**Exclamation Mark**  • Irritant (skin and eye) • Skin Sensitizer • Acute Toxicity (harmful) • Narcotic Effects • Respiratory Tract Irritant • Hazardous to Ozone Layer (Non-Mandatory)
Gas Cylinder  • Gases Under Pressure	**Corrosion**  • Skin Corrosion/ Burns • Eye Damage • Corrosive to Metals	**Exploding Bomb**  • Explosives • Self-Reactives • Organic Peroxides
Flame Over Circle  • Oxidizers	**Environment** **(Non-Mandatory)**  • Aquatic Toxicity	**Skull and Crossbones**  • Acute Toxicity (fatal or toxic)