Central Washington University

Hazard Communication Plan

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1 Introduction

1.1. The purpose of the Hazard Communication Program (HazCom) is to ensure employees are aware of hazardous chemicals in the workplace and are provided information regarding the potential hazards associated with exposure to these chemicals. Specifically, hazardous chemicals produced or imported into the workplace are to be evaluated for physical and health hazards; this information is to be provided to employees. The program also covers container labeling, material safety data sheets and/or safety data sheets, employee training, and emergency procedures. This program is designed to comply with Washington Industrial Safety & Health Act (WISHA) regulation (WAC 296-800-170) and the Occupational Safety and Health Administration (OSHA) Hazard Communication Program or "Employee Right-to-Know" Act (29 CFR 1910.1200).

2. Responsibilities

2.1. Departments / Supervisors

2.1.1. Shall appoint a departmental Hazard Communication (HazCom) coordinator.

2.1.2. Ensure their area of responsibility has a written hazard communication program including department specific details.

2.1.3. Ensure implementation of the written program.

2.1.4. Ensure all affected employees are provided HazCom training and training records are maintained in personnel files.

2.1.5. Develop and maintain an inventory of all hazardous chemicals stored or used in the workplace, ensure the inventory is available to affected employees.

2.1.6. Ensure Material Safety Data Sheets (MSDS) and/or Safety Data Sheets (SDS) are present for all hazardous chemicals in the workplace and are readily available to employees.

2.1.7. Ensure containers of hazard chemicals are properly labeled and legible.

2.1.8. Complete Job Hazard Analysis (JHA) for employees.

2.1.9. Assess chemical hazards, select and provide the appropriate Personal Protective Equipment (PPE) for employees; ensure training for PPE use and maintenance is completed.

2.1.10. Ensure standard operating procedures (SOP) are established (written) and available to employees performing "non-routine" tasks involving hazardous chemicals.

2.1.11. Provide training to employees regarding hazards in the workplace including precautions and equipment for safe use, signs and symptoms of overexposure, and when new chemicals are introduced in the workplace.

2.1.12. Develop job specific training including safe work practices and procedures to follow in an emergency.

2.1.13. Ensure training records are maintained in personnel records and are up to date.

2.1.14. Inform contractors of potential hazards which may be encountered during their work at the University including providing access to the written Hazard Communication Program, the hazardous chemical inventory, and the material safety data sheets and/or safety data sheets for these chemicals.

2.1.15. Complete an annual review of the plan with employees.

2.2. Employees

2.2.1. Comply with the guidelines set forth in this plan and be capable of recognizing workplace hazards and addressing them with their supervisor.

2.2.2. Attend required Hazard Communication training.

2.3. Environmental Health and Safety

2.3.1. Maintain the written Hazard Communication Program template for departments use and completion.

2.3.2. Assist departments in training, plan implementation, and PPE selection and use.

2.4. Contractors

2.4.1. Inform and provide CWU departments with a chemical inventory and material safety data sheets and/or safety data sheets for the materials that will be introduced into the work area in the course of their work at Central Washington University.

2.4.2. Provide information regarding where chemicals will be used and stored.

3. Scope

3.1. This program is applicable to all Central Washington University faculty, staff, student employees and contract employees. Laboratory employees who fall under the Laboratory Standard shall defer to the Chemical Hygiene Plan (CHP). Department-specific details can be added in the appendices of this document.

3.1.1. This program is applicable to areas where hazardous chemicals are used by employees for work-related activities.

3.1.2. “Hazardous Chemical” implies that exposure to a chemical could pose a physical or health hazard.

3.1.2.1. “Physical hazard” means a chemical for which there is scientifically valid evidence that it is a combustible liquid, a compressed gas, explosive, flammable, an organic peroxide, an oxidizer, pyrophoric, unstable (reactive) or water-reactive.

3.1.2.2. “Health hazard” means a chemical for which there is significant evidence that acute or chronic health effects may occur in exposed employees.

3.1.3. Certain chemicals are specifically exempted from this Hazard Communication Program including pesticides, fungicides, rodenticides, food, food additives, drugs, cosmetics and medical or veterinary products. A more complete list can be found in the OSHA standard or Labor & Industrials regulation WAC 296-800-17055.

3.2. Each department or college that uses chemicals in work areas on a regular basis shall appoint a department Hazard Communication (HazCom) coordinator. The coordinator shall establish the written program as well as:
   3.2.1. Reduce the likelihood of injury or illness to employees by informing and training employees of hazards.
   3.2.2. Ensure all employees at risk are aware of the use and storage of chemicals in their workplace.
   3.2.3. Review the program annually and make necessary changes.
   3.2.4. Provide assistance on the selection of personal protective equipment (PPE).

4. Chemical Inventory

4.1. The supervisor or designee is required to maintain a current inventory of hazardous chemicals used in the workplace. The inventory should be updated upon introduction of a new chemical into the workplace. The inventory should identify each hazardous chemical by the primary name on the label, the manufacturer or distributor of the chemical, the name listed on the MSDS/SDS, the location of the chemical and the quantity. This inventory should be posted in the work area and readily available to employees. See Appendix B for a chemical inventory template.

5. Labeling

5.1. Central Washington University relies upon labeling provided by the manufacturer or suppliers on newly purchased chemicals. The user department is responsible to assure that each chemical container in the workplace is labeled.

5.2. The supervisor or designee shall ensure primary and secondary hazardous chemical containers are properly labeled. All labels and warnings should be legible, written in English, and prominently displayed on the container.
   5.2.1. A secondary label or warning written in a different language may be included with the English version.

5.3. Labels should identify the product name, GHS pictograms, signal words, hazard statements, precautionary statements, supplier information, and supplementary information (definitions in Appendix H).
   5.3.1. Examples of the GHS pictograms can be seen in Appendix I.
   5.3.2. An example of a GHS can be seen in Appendix J.
   5.3.3. GHS Hazardous Industrial Chemicals – Precautionary Labeling uses a word hierarchy, or **signal word** to convey levels of hazard. The three signal words are DANGER, WARNING, and CAUTION the meaning of each are provided below.
      5.3.3.1. **DANGER**: If this product gets in or on you, immediate harm will be caused.
      5.3.3.2. **WARNING**: If this product gets in or on you, in sufficient quantity, you will suffer harm.
      5.3.3.3. **CAUTION**: If this product gets in or on you in large quantity over an extended time, you may be harmed.

5.4. GHS Labeling for Acute Toxicity consists of categories 1-5 (1=High, 5=Low) with a symbol, signal word and a hazard statement. The hazard statement is divided into three sections (oral, dermal, and inhalation). An example of a GHS Acute Toxicity can be seen in Appendix K.

5.5. Hazardous Material Identification System (HMIS) provides a 0-4 scale (0=Low, 4=High) for Health, Flammability, and Reactivity hazards. The "mode of entry" and "protective equipment" are depicted by a letter referring to a system of protective equipment. There are a number of variations to this type of labeling. An example of an HMIS label is found in Appendix L and the HMIS Personal Protection Index is found in Appendix M.

5.6. NFPA 704 – Standard System for the Identification of the Hazard of Materials for Emergency Responders provides the following hazard rating for the Health, Flammability, and Reactivity classification of chemicals. An explanation of the system and an example of the NFPA 704 Diamond label can be found in Appendix N.

5.7. Labels on incoming containers must not be defaced or removed until the container is empty. If the label becomes faded, illegible or destroyed, they should be replaced and be durable, legible, and must be firmly affixed to the container(s).

5.8. Labels are not required for portable containers if they are intended only for the immediate use by the employee who performs the transfer.

6. Material Safety Data Sheets (MSDS)

6.1. Material Safety Data Sheets provide employees with detailed information on hazardous chemicals. Information found on MSDS documents can include, but is not limited to the following information: product name, chemical abstract service numbers, ingredients, handling precautions, type of personal protective equipment recommended, physical and health hazards, storage requirements, emergency and first-aid procedures, the date the MSDS was prepared, name, address and telephone number of the chemical manufacturer or the importer.

6.2. A MSDS must be kept for each hazardous chemical used and must be readily available to employees. All employees should review MSDS documents prior to using hazardous chemicals.

6.3. The supervisor or designee is responsible for obtaining MSDS documents for the department when new chemicals are procured. This designee also reviews incoming MSDS documents for safety and health information to convey pertinent information and training to affected employees.

6.4. MSDS documents can be managed electronically if:

6.4.1. A back-up system is in place in case of emergency causing electronic documents to be unavailable.

6.4.2. The system is integrated within the overall HazCom Plan.

6.4.3. Employees have hard-copy access if requested.

7. Safety Data Sheets (SDS)

7.1. Safety Data Sheets under the Globally Harmonized System of Classification and Labeling of Chemicals (GHS) offer similar information that MSDSs provide. They provide a clear description of the data used to identify the hazards of a chemical. The major difference is that the SDS is in a globally standardized format (United Nations) for the purpose of easier training and notification of hazards.

7.2. Each SDS could contain sixteen (16) headings in the following order:

- 7.2.1. Identification of the substance or mixture and the supplier
- 7.2.2. Hazard(s) identification
- 7.2.3. Composition/information on ingredients
- 7.2.4. First aid measures
- 7.2.5. Firefighting measures
- 7.2.6. Accidental release measures
- 7.2.7. Handling and storage
- 7.2.8. Exposure controls/personal protection
- 7.2.9. Physical and chemical properties
- 7.2.10. Stability and reactivity
- 7.2.11. Toxicological information
- 7.2.12. Ecological information
- 7.2.13. Disposal considerations
- 7.2.14. Transport information
- 7.2.15. Regulatory information
- 7.2.16. Other information

7.3. A SDS must be kept for each hazardous chemical used and must be readily available to employees. All employees should review SDS documents prior to using hazardous chemicals.

7.4. The supervisor or designee is responsible for obtaining SDS documents for the department when new chemicals are procured. This designee also reviews incoming SDS documents for safety and health information to convey pertinent information and training to affected employees.

7.5. SDS documents can be managed electronically if:

- 7.5.1. A back-up system is in place in case of emergency causing electronic documents to be unavailable.
- 7.5.2. The system is integrated within the overall HazCom Plan.
- 7.5.3. Employees have hard-copy access if requested.

8. Employee Training

8.1. Employers must provide employees with effective information and training regarding hazardous chemicals in their work area prior to starting work, and whenever a new physical and/or health hazard is introduced into the work area. The following information must be covered:

8.1.1. The requirements of the Hazard Communication Standard (WAC 296-800-170).
8.1.2. The location and the availability of the written Hazard Communication Plan.
8.1.3. Physical and health hazards of chemicals in the work area, their locations, and the likely effects or symptoms of overexposure.
8.1.4. Location of the departmental hazardous chemicals inventory.
8.1.5. Location of MSDS/SDS documents for all hazardous chemicals in the work area.
8.1.6. The emergency procedures to follow in case of chemical spills, fires and other incidents.
8.1.7. Methods used to determine the presence or release of hazardous chemicals in the work area.
8.1.8. How to reduce or prevent exposure to hazardous chemicals through use of control/work practices and PPE (Appendix D).
8.1.9. Steps taken to reduce or prevent exposure to chemicals.
8.1.10. Emergency procedures to follow if an employee is exposed to chemicals.

8.2. A record of the date, location and facilitator of each training session as well as a list of attendees should be maintained (Appendix C). Individual training records should be maintained in departmental personnel files.

9. Hazardous Non-Routine Tasks

9.1. A non-routine task is one which the employee does not normally perform and for which the employee has not previously been trained.

9.2. Standard operating procedures (SOP) should be written and available to employees performing "non-routine" tasks involving hazardous chemicals. Prior to beginning non-routine tasks involving actual or potential exposures to hazardous chemicals, employees will be informed of the hazards present and be given appropriate work instructions, emergency procedures and personal protective equipment (PPE) to be used. Required PPE will be provided prior to starting the task. The employee's supervisor or the area supervisors are responsible for SOP development, supplying PPE and providing training.

10. Hazard Communication for General Office Staff

10.1. Employees in office environments work with a variety of products that may contain small amounts of hazardous chemicals. Safe exposure limits have been established for many hazardous chemical substances below which no adverse health effects are expected to occur. Since most office products are used intermittently and in small quantities, exposure to these products is not expected to exceed safe limits or produce adverse health effects. In addition, most of these products are consumer products and therefore meet the more stringent regulations for consumer product safety.

10.2. The following provides information for employees who work in offices by alerting them to potential hazardous substances that may be encountered (other sources of information include container labels and Material Safety Data Sheets/Safety Data Sheets). MSDS/SDS documents are provided by manufacturer and detail the potential

hazards and protection measures for a chemical or product. Similar products may vary from manufacturer to manufacturer.

10.2.1. Adhesives: some products like glues and rubber cement contain chemicals such as ethylene glycol and acetone that could present a hazard under certain conditions. Acute exposure to vapors may cause respiratory irritation. Keep away from heat, sparks, and open flame, prevent skin and eye contact, and use only in areas with normal air circulation.

10.2.2. Cleaners: office workers may have occasion to use cleaning products such as glass cleaner for copy machine glass or computer monitors, desktop cleaners, and keyboard or telephone cleaner, use as directed.

10.2.3. Copy/Duplication Products: dry and liquid toners for photocopy machines contain chemical such as carbon black and resins that are mildly toxic if acute exposure occurs, but present no health hazard under normal conditions of use. Any machine copy/duplication process should be conducted in ventilated areas.

10.2.4. Inks and Inking Materials: black mimeograph ink can be moderately toxic if swallowed but does not pose health hazards under normal conditions of use.

10.3. Protection: employees can be protected by reading container labels thoroughly before using unfamiliar products. Under normal conditions of use, these products are not expected to produce adverse health effects. Normal conditions include using products as directed in areas with normal room air circulation. For more detailed information on chemicals and chemical products, employees should consult material safety data sheets/safety data sheets.

Appendix A

EH&S Hazard Communication Inspection Checklist

Administration

1. **A written hazard communication plan is complete and up to date.**

Recommendation: Page one of the departmental written Hazard Communication Plan (HCP) should be filled out and dated annually. It is up to the departmental hazard communication coordinator to review and update the HCP.
Reference: WAC 296-800-170 and CFR 1910.1200 (e)

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2. **Personnel know where their written hazard communication plan is located, have access to it, and know who their departmental hazard communication coordinator is.**

Recommendation: Your departmental written hazard communication plan can be kept in a common location and should list all laboratories and buildings that fall under this plan. The hazard communication coordinator should be appointed by each department or college.
Reference: WAC 296-800-170 and CFR 1910.1200 (e) (4)

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3. **The written hazard communication plan includes an updated hazardous chemical inventory. Each laboratory group will use the ChIM system to maintain their chemical inventory. A hard copy will be printed for each laboratory.**

Recommendation: As per the Definition of Hazardous Chemicals in the OSHA Hazard Communication Standard, All hazardous chemicals will be part of a laboratory inventory and will be kept on the ChIM system. The inventory will be updated annually and a printed copy will be kept in the laboratory. To comply with the Department of Homeland Security (DHS) reporting requirements, DHS chemicals of interest will be updated in the ChIM system within 30 days.
Reference: WAC 296-800-17010 and CFR 1910.1200 (e) (i), 6 CFR 27.210

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4. **Personnel have completed hazard communication training and training has been documented.**

Recommendation: Laboratory personnel may fulfill this requirement by taking the Chemical Hygiene Plan Awareness training. A certificate should be printed and kept with the Department.
Reference: WAC 296-800-17030 and CFR1910.1200 (h)

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5. **Material Safety Data Sheets and/or Safety Data Sheets, for all hazardous chemicals, are readily available to all employees.**

Recommendation: All material safety data sheets (MSDS) and Safety Data Sheets (SDS) shipped with the chemicals must be kept in the laboratory. Some departments may require hard copies of all material safety data sheets. Check with your college or departmental safety officer.
Reference: WAC 296-800-17020 and CFR 1910.1200 (g)

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6. **Standard operating procedures are written and available to employees performing "non-routine" tasks for hazardous chemicals and procedures that pose potential physical hazards. These SOPs will be kept in the laboratory.**

Recommendation: The SOP should describe the associated health and physical hazards, and the measures employees can take to protect themselves from these hazards. This will include safe work practices, emergency procedures, and the personal protective equipment needed. The employee will be trained prior to performing the task. Resources for creating a SOP can be found on the EH&S website.
Reference: WAC 296-800-17030, 296-800-14005, 296-828-20005 and CFR 1910.1200 (e) (ii)

Hazardous Chemical Use

1. **Hazardous chemicals are stored safely and by proper hazard class.**

Recommendation: Incompatible materials shall be stored separately when containers have a capacity of more than 5 pounds / 2 kilograms or 0.5 gallons / 2 liters. They should be separated by no less than 20 feet or isolated by a noncombustible partition extending 18 inches above the materials.
Reference: WAC 296-62-40025, WAC 296-62-070 and CFR 1910.1450.

2. **Hazardous chemical containers and labels are in good condition.**

Recommendation: Chemical containers cannot be damaged and must have a secure cap. Labels cannot be defaced and must be legible and secured to the container.
Reference: WAC 296-800-17025, CFR 1910.1450 (h) (1) and CFR 1910.1200 (f) (g).

3. **Primary and secondary chemical containers are properly labeled. Primary container labels must include: chemical name, associated hazards, target organs, route of entry, company name, address and phone number, and required personal protective equipment. Secondary containers cannot be used in another facility / laboratory.**

Recommendation: Labels are not required for portable containers if they are intended only for the immediate use by the employee who performs the transfer.
Reference: WAC 296-800-17025.

4. **Hazardous chemicals are secured against unauthorized access.**

Recommendation: Unoccupied labs containing hazardous materials shall be secured (locked) at all times. This includes labs beyond hallway access doors controlled by key cards / touch pads / pin number access. Alternately, locked storage cabinets for all hazardous materials in the lab are acceptable. If storage equipment (storage cabinet, refrigerator, etc.) is in common areas or hallways, lock them when unattended.
Reference: WAC 296-62-40009, WAC 296-62-40025, and IFC

5. **Gas cylinders are secured, capped, labeled, and segregated by hazard class.**

Recommendation: Compressed gas cylinders shall be secured at all times. Use cylinder clamps or chains attached to stationary objects. Cylinder stands are also acceptable.
Reference: WAC 296-24-68203, CGA P-1-1965, NFPA 55, and CFR 1910.1450

6. **Designated areas are established for carcinogens, reproductive toxins and highly toxic chemicals. Other hazardous chemicals are used in a safe manner and location.**

Recommendation: Designated areas (signs) must be posted when working with select carcinogens, reproductive toxins or substances that have a high degree of acute toxicity. A designated area may be the entire laboratory, an area of a laboratory or a device such as a laboratory hood.
Reference: WAC 296-62-07306 and CFR 1910.1450 (e) (3) (viii).

7. **Fume hoods are used correctly.**

Recommendation: When operators are away from fume hoods the sash should be closed. Sash operation should be unhindered by cords, tubing or equipment. Fume hood baffles and slots shall be unobstructed. When operators are using a hood the sash should be positioned to shield operator. Fume hood needs to be repaired.
Reference: NFPA 45.8.8.3 Fire Protection for Laboratories Using Chemicals, ANSI/AIHA Z9.5 Laboratory Ventilation, and ASHARAE 110-1995

8. **Eyewashes and showers can be reached within 10 seconds from workstations**.

Recommendation: Safety showers and eyewashes shall be within 10 seconds of travel for immediate emergency use.
Reference: WAC 296-800-15030, CFR 1910.1450, ANSI Z358.1-2004

9. **Hazardous chemicals and waste are disposed of properly.**

Recommendation: All hazardous chemicals and waste are disposed of in accordance with Washington Department of Ecology (DOE) regulations. Hazardous chemicals and waste will also be disposed of in accordance with EH&S policies and procedures.
Reference: WAC 173-303 (DOE), WAC 296-62-40025, CFR 1910.120, Federal Environmental Protection Agency RCRA Regulations.

Housekeeping

1. **First aid supplies are available.**

Recommendation: First aid kits shall be available and maintained for treatment of minor injuries or for short-term emergency treatment before getting medical assistance. Kits must conform to University's First Aid Policy or be approved by a physician licensed in Occupational Medicine.
Reference: WAC 296-800-15020

2. **No-smoking and eating in lab policies are enforced.**

Recommendation: Eating, drinking, gum chewing and cosmetic application (i.e., hand cream) are not permitted in the laboratory. Food shall not be eaten in places where chemicals are being used or stored. Employee break or lunchrooms shall be identified within the department or located outside of the laboratory.
Reference: WAC 296-62-40025

3. Chemical spill supplies are available.
Recommendation: In the event of a chemical spill, supplies shall be available to control a spill of 1 gallon or less. Spill supplies needed are based on chemical hazards present in your laboratory.
Reference: WAC 296-62-40025 and CFR 1910.1450

4. Laboratories are clean and well maintained.
Recommendation: Spills are to be cleaned up immediately from work areas and floors. Any spills or accumulations of chemicals on work surfaces shall be removed daily, using techniques that minimize residual surface contamination.
Reference: WAC 296-828-200 and CFR 1910.1450

Machinery and Equipment

1. Refrigerators are labeled for designated use.
Recommendation: Laboratory refrigerators shall be labeled for designated use Example: "No Food – Chemical Storage Only".
Reference: NFPA 45 and NFPA 69

2. Electrical connections are appropriate.
Recommendation: Electrical outlets shall not be overloaded. Extension cords shall not be used as permanent wiring. Surge protectors shall not be used with high amperage devices. Remove any outdated electrical equipment or damaged electrical cords from service. Install additional circuits or outlets if necessary.
Reference: NFPA 70E National Electric Code.

3. Machinery and equipment are properly guarded.
Recommendation: Machine guards shall be provided and in use for mechanical equipment posing a potential hazard to those operating the equipment.
Reference: WAC 296-806-20042, WAC 296-806-20002, and CFR 1910.219.

Personal Protective Equipment and Life Safety Equipment

1. The appropriate PPE is provided and used by personnel, as per WISHA WAC 296-800-16020 & OSHA's 29 CFR 1910.132 General PPE requirements, WAC 296-817 & 29 CFR 1910.95 Hearing Conservation, and WAC 296-842 & 29 CFR 1910.134 Respirator protection standards.

2. Fire equipment/doors are not obstructed, blocked or inoperable. Electrical and utility panels are not blocked.
Recommendation: Access to exits, emergency equipment and utility controls shall never be blocked. The International Fire Code and National Fire Protection Associations (NFPA) require that fire extinguishers shall not be blocked so that they can be accessed quickly. If you fire extinguisher must be relocated contact the Facilities Management Service Desk at extension 3000. The International Fire Code requires that fire doors must not be locked or blocked open.

Fire doors are designed to isolate fire to give occupants the time necessary to evacuate the building.
Reference: NFPA 99 and IBC 1003

3. Laboratory Hazard Signs are posted on or near laboratory door.
Recommendation: Lab Hazard Signs are required by various codes and standards. Signs are provided by numerous departments or upon request from Environmental Health & Safety.
Reference: Fire Marshall – Kittitas Valley Fire & Rescue (KVFR); Labor & Industries, Occupational Safety and Health Administration (OSHA); Department of Ecology (DOE), and Environmental Protection Agency (EPA).

Appendix B

HAZARDOUS CHEMICAL INVENTORY

Chemical/ Product name	Manufacturer	# of Containers	Qty/ Container	Frequency of use	Emergency procedures required
NA	**NA**	**NA**	**NA**	**NA**	**NA**

Appendix C

RECORD OF REQUIRED TRAINING

Department/College:_____ Date: _____

Trainer (Name and Title): _____

Phone Extension:_____ Topic(s) Covered: _____

Name (printed)	Signature	Work Area or Shop	Work Phone Number

Appendix D

Personal Protective Equipment Worksheet

Central Washington University in compliance with the WISHA and OSHA's Personal Protective Equipment (PPE) Standard (WAC 296-800-160 and 29 CFR 1910.132) shall provide employees adequate PPE through a completed Job Hazard Analysis or a developed Standard Operating Procedure (SOP). Adequate PPE shall be provided to employees at no cost, including replacement from regular use. Departments shall ensure employees are trained and PPE is worn when hazards are present.

EYE and FACE Protection
(WAC 296-800-16050 & 29 CFR 1910.133)
Appropriate eye and face protection shall be provided to all employees when exposed to eye or face hazards from flying particles, molten metal, liquid chemicals, acids or caustic liquids, chemical gases or vapors or potential injurious radiation and glare. All eye and face protection must be approved by the American National Standards Institute, ANSI.

- Safety Glasses: Required when there is a potential of being struck by flying objects such as grinding, chiseling, use of a power saw and tools or any machining. For most situations safety glasses with side shields are adequate.
- Safety Goggles: Required in chemical handling and laboratory operations where there is a potential for chemical fumes, splashes, mists, sprays, or dust exposure to the eyes.
- Face Shields: Required when there is a potential face exposure to projectiles, chemicals or radiant energy; they cannot be used as substitute for eye protection.
- Prescription Lenses: Employees who wear prescription glasses must either wear approved safety glasses over the prescription glasses or wear prescription approved safety glasses.
- Contact Lenses: Contact Lenses do not provide eye protection and therefore must be worn with appropriate protective eyewear.
- Filtered Lenses: For use when there is a potential of being exposed to light radiation.

HAND Protection
(WAC 296-800-16065 & 29 CFR 1910.138)
Appropriate hand protection shall be provided to all employees when exposed to hazards of the hand, such as skin absorption of harmful substances, severe cuts or lacerations, severe abrasions, punctures, chemical burns, thermal burns, and harmful temperature extremes. Selection of appropriate hand protection shall be based on the hazards identified, level of protection needed, duration of use, dexterity required and fit, and the limitations the gloves provide.

HEAD Protection
(WAC 296-800-16055 & 29 CFR 1910.135)
Appropriate head protection shall be provided to all employees when working in areas where head injuries could occur from falling or flying objects or bumping the head against with stationary objects, or electrical shock hazards. All protective helmets must be approved by the American National Standards Institute, ANSI. Each type of head protection is made to guard against certain specific hazardous situations. The following will help you decide the right protection according to the type and class.

- Type 1-helmets with full brim, not less than 1 and ¼ inches wide, and
- Type 2-brimless helmets with a peak extending forward from the crown.

For industrial purposes there are three classes of head protection:

- Class A-general service that are intended again impact hazards, such as construction, mining and manufacturing.
- Class B- utility service, high voltage helmets that protect from impact and penetration of falling objects, they are used extensively by electrical workers.
- Class C-special service helmets with NO voltage protection they are made for lightweight and comfort and usually made with aluminum.

Helmets should be maintained and replaced if worn or cracked.

FOOT Protection
(WAC 296-800-16060 & 29 CFR 1910.136)
Appropriate footwear should be provided to employees when there is danger of injuring the foot from falling or rolling objects, objects piercing the sole of the shoe or where feet will be exposed to electrical or chemical hazards. Protective footwear must meet applicable ANSI standards and performance measurements for protection for the toes, metatarsal area (top of foot), puncture protection and electrical hazards, the use of add-on type of devices (i.e. metatarsal guards) is only suitable for temporary use. The suitability of shoes in any workplace should be determined by supervisory personnel and if it is appropriate to wear sandals, clogs etc.

HEARING Protection
(WAC 296-817 & 29 CFR 1910.95)
Excessive noise exposures to workers may require implementation of a hearing conservation program. Additional information on the CWU Hearing Conservation Program can be found at www.ehs.ohio-state.edu.

RESPIRATORY Protection
(WAC 296-841 & 29 CFR 1910.134)
Inhalation hazards such as harmful dusts, fogs, chemical fume/mist/gas, smoke, spray and/or vapor may require implementation of a respiratory protection program. Additional information on the CWU Respiratory Protection Program can be found on the CWU EH&S website.

Appendix E

Emergency Procedures for Chemicals Spills/Releases

If there is a hazardous materials release/chemical spill inside a building:

- Isolate and secure the spill area
- Warn others in the immediate area
- Based upon the hazard, attempt clean-up if trained, have appropriate spill clean-up materials, and if you have appropriate personal protective equipment
- If assistance is needed, call 911 and give the location and type of material spilled
- Evacuate the building if there is potential hazard to building occupants (use of public address system preferred or use of building fire alarm system)
- Meet with and assist emergency response personnel

If there is a hazardous materials release/chemical spill outside the building:

- Isolate and secure the spill area
- Warn others in the immediate area
- If assistance is needed, call 911 and give the location and type of material spilled
- Do not wash spilled material into storm drain
- Meet with or allow to assist emergency response personnel

If there is a personnel injury involving chemical contamination:

- Assist with emergency eyewash / shower use, as appropriate
- Provide first aid immediately for serious injuries
- Call 911 and give the location and type of material involved
- Notify Environmental Health & Safety at (509) 963-2252.
- As possible, without doing harm to the victim, remove and bag contaminated clothing and gross personal contamination
- Obtain a MSDS/SDS for the material involved, which will provide you with a manufacturer or distributor of a chemical that provides information about the contents, characteristics, physical hazards, and health hazards associated with the chemical

Appendix F

GLOSSARY

- **Exposure or Exposed:** That an employee is subjected in the course of employment to a chemical that is a physical or health hazard, and includes potential (e.g., accidental or possible) exposure. "Subjected" in terms of health hazards includes any routes of entry (e.g., inhalation, ingestion, skin contact or absorption.).
- **Exposure Limit:** The time-weighted average concentration for a normal 8-hour workday and a 40-hour workweek, to which nearly all workers may be repeatedly exposed, day after day, without adverse effect.
- **Hazardous Chemical:** Any chemical whose presence or use is a health hazard or a physical hazard. See below.
- **Hazard Warning:** Any words, pictures, symbols, or combination thereof appearing on a label or other appropriate form of warning which convey the specific physical or health hazard(s), including target organ effects, of the chemical(s) in the container(s). (See definitions for "physical hazard" and "health hazard" to determine the hazard which must be covered.)
- **Health Hazard:** A chemical for which there is significant evidence, based on at least one study conducted in accordance with established scientific principles that acute or chronic health effects may occur in exposed employees. The term "health hazard" includes chemicals that are carcinogens, toxic or highly toxic agents, reproductive toxins, irritants, corrosives, sensitizers, or produce targeted organ effects e.g., kidneys, liver, nervous system, blood, and agents that damage the lungs, skin, eyes, or mucous membranes.
    - **Acute Effect:** Adverse effect that has severe symptoms developing rapidly and coming quickly to a crisis, usually within minutes but up to twenty-four hours.
    - **Chronic Effect:** An adverse effect with symptoms that develop slowly over a long period of time or that occur frequently.
    - **Carcinogen:** A substance or agent capable of causing or producing cancer in mammals, including humans.
    - **Corrosive:** A chemical that causes visible destruction of, or irreversible alterations in, living tissue by chemical action at the site of contact, e.g., battery acid.
    - **Irritant: C**hemical, which is not corrosive, that causes a reversible inflammatory effect on living tissue, e.g., skin, eyes, respiratory system, by chemical action at the site of contact, e.g., onion odor, skunk spray, acetic acid.
- **Material Safety Data Sheet (MSDS) / Safety Data Sheet (SDS):** Written or printed material concerning a hazardous chemical which is prepared in accordance with WAC 296-839-300 and 29 CFR 1910.1200(g)
- **Physical Hazard:** A chemical for which there is scientifically valid evidence that it is a combustible liquid, compressed gas, explosive, flammable, organic peroxide, oxidizer, pyrophoric, unstable (reactive) or water-reactive.
    - **Flammable Liquid:** Any liquid that ignites at room temperature, e.g., gasoline, alcohol.

- **Combustible Liquid:** Any liquid that must be heated sprayed or requires a wick to ignite, e.g., kerosene, oil.

Appendix G

Hazard Communications Program Sign-off Sheet

Central Washington University is required by law to provide training on the Hazard Communications Standard to all employees. Documentation of the training must be maintained by each administrative department. Your signature below acknowledges that you:

1. Have received a copy of Hazard Communication Written Program.
2. Have read the document that pertains to your individual units/departments.
3. Understand information within the document and received answers to any/all questions of the document.

Department: _____

Name (please print): _____

Signature: _____

Date: _____

Supervisor: _____

Appendix H

GHS Definitions

- **GHS –** means "The Globally Harmonized System of Classification and Labelling of Chemicals."
- **Hazard Statement –** a statement assigned to a hazard class and category that describes the nature of the hazards of a hazardous product, including, where appropriate, the degree of hazard.
- **Pictogram –** a graphical 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.
- **Precautionary Statement –** a phrase that describes recommended measures that should be taken to minimize or prevent adverse effects resulting from exposure to a hazardous product, or improper storage or handling of a hazardous product.
- **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 GHS uses "Danger" and "Warning" as signal words.
- **Supplemental Label Element –** any additional non-harmonized type of information supplied on the container of a hazardous product that is not required or specified under the GHS.

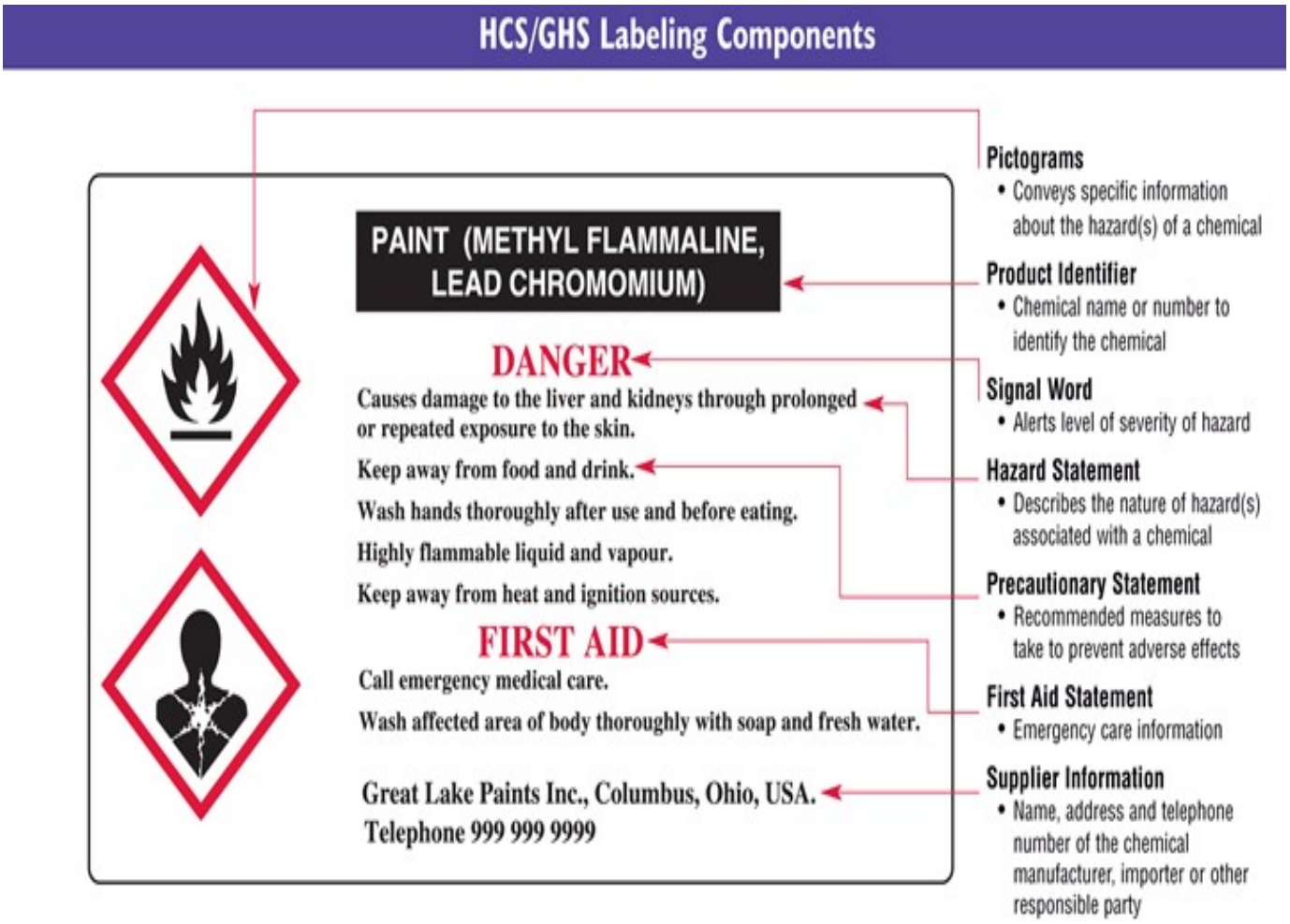
Appendix I

GHS Pictogram Reference Chart

		
Explosives **Self Reactives** **Organic Peroxides**	**Flammables** **Self Reactives** **Pyrophorics** **Self-Heating** **Emits Flammable Gas** **Organic Peroxides**	**Oxidizers**
		
Gases Under Pressure	**Corrosives**	**Acute Toxicity (severe)**
		
Irritant **Dermal Sensitizer** **Acute Toxicity (harmful)** **Narcotic Effects** **Respiratory Tract Irritation**	**Carcinogen** **Respiratory Sensitizer** **Reproductive Toxicity** **Target Organ Toxicity** **Mutagenicity** **Aspiration Toxicity**	**Environmental Toxicity**

Appendix J

Example of GHS Label



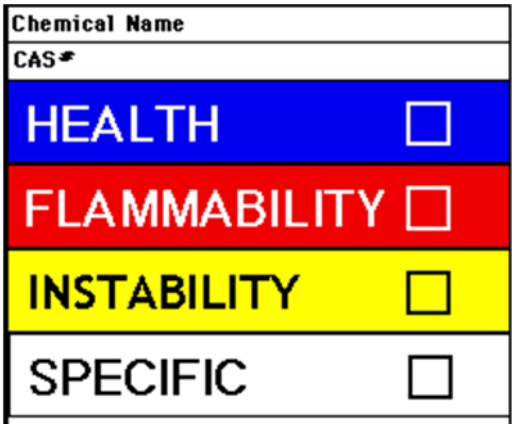
Appendix K

Example of GHS Acute Toxicity Chart

	Category 1	Category 2	Category 3	Category 4	Category 5
Symbol					No Symbol
Signal Word	Danger	Danger	Danger	Warning	Warning
Hazard Statement: Oral	Fatal if swallowed	Fatal if swallowed	Toxic if swallowed	Harmful if swallowed	May be harmful if swallowed
Dermal	Fatal if contact with skin	Fatal if contact with skin	Toxic in contact with skin	Harmful in contact with skin	May be harmful in contact with skin
Inhalation	Fatal if inhaled	Fatal if inhaled	Toxic if inhaled	Harmful if inhaled	May be harmful if inhaled

Appendix L

Example of HMIS Hazard Rating Label



4= DEADLY HAZARD

3= SEVERE HAZARD

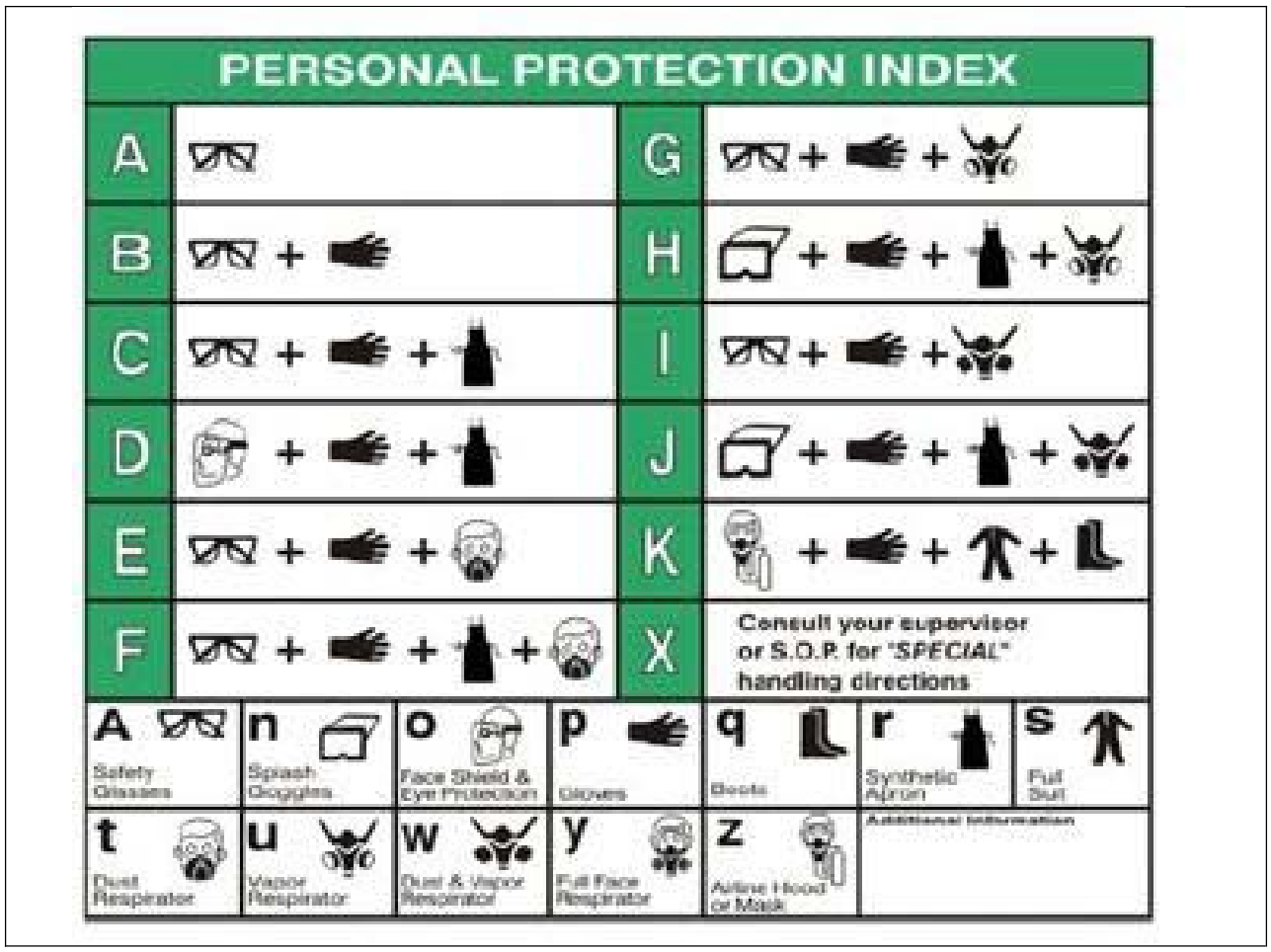
2= MODERATE HAZARD

1= SLIGHT HAZARD

0= NO HAZARD

Appendix M

Example of HMIS Personal Protection Index



Appendix N

Explanation and Example of NFPA 704 Diamond Label

Health Hazard Rating (BLUE on label, left side of diamond)
4 – Lethal
3 – Serious or permanent injury
2 – Temporary incapacitation or residual injury
1 – Significant irritation
0 – No Hazard

Flammability Hazard Rating (RED on label, upper diamond)
4 – Flash point below 73^0 F
3 – Flash point 73^0 F to 100^0 F
2 – Flash point 101^0 F to 200^0 F
1 – Flash point greater than 200^0 F
0 – Will not burn

Reactivity Hazard Rating (YELLOW on label, right side diamond)
4 – Capable of Detonation or Explosion
3 – Shock and heat may detonate
2 – Violent chemical change under increased heat or pressure
1 – Unstable under increased heat or pressure
0 – Stable

Special Hazard Symbols (WHITE on label, lower diamond)

- **W** - reacts with Water in an unusual or dangerous manner (e.g. cesium, sodium)
- **OX** or **OXY** - Oxidizer (e.g. potassium perchlorate, ammonium nitrate)
- **COR** - Corrosive; strong acid or base (e.g. sulfuric acid, potassium hydroxide)
- **ACID** and **ALK** to be more specific.
- **BIO** - Biological hazard (e.g. smallpox virus)
- **POI** - Poisonous (e.g. Spider Venom)
- The Radioactive trefoil ☢) - is radioactive (e.g. plutonium, uranium)
- **CRY** or **CRYO** - Cryogenic