Emergency Eyewash and Shower Addendum to the Department Chemical Hygiene Plan

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1.0 Emergency Eyewash and Shower Addendum Purpose

The purpose of this Emergency Eyewash and Shower Addendum to the WWU Chemical Hygiene Plan (CHP) is to outline the requirements for the inspection, use and maintenance of the emergency eyewash and shower equipment

2.0 Scope

Western will provide emergency showers and/ or eyewash stations wherever mandated by rule or regulation, whenever a hazard assessment identifies areas where hazardous materials are present and where there is a reasonable probability of injury to the eyes or skin occurring as a result of exposure to corrosive materials or infectious agents.

3.0 Definitions

- **Emergency Shower:** A device designed to deliver flushing fluid in sufficient volume in order to enable the user to have water cascading over the entire body while the hands are free.
- **Emergency Eyewash:** A device used to provide fluid to irrigate and flush both eyes simultaneously.
- **Combination Unit:** An interconnected assembly of emergency equipment supplied by a single source of flushing fluid. The unit consists of both the emergency shower and an eye/face wash.
- **Drench Hose:** A supplemental device consisting of a flexible hose connected to a flushing fluid supply that is used to provide fluid to irrigate face and body areas.
- **Flow Pressure:** The pressure of the flushing fluid exerted in the wall of the pipe near the outlet while the faucet/outlet is fully open and flowing.
- **Flow Regulator:** A mechanical device intended to control the flow of flushing fluid through the pipe.
- **Tepid:** A flushing temperature conducive to promoting a minimum 15 minute irrigation period. A suitable range of 16˚-38˚C (60-100˚F).

4.0 Responsibilities

4.1 Laboratory Supervisor / Principal Investigator

- Ensure accessibility to the safety shower/eyewash equipment, keep the area around the equipment clear of obstructions.
- Ensure that all employees, students, and volunteers have received instruction in the proper use and operation of the emergency unit/equipment provided for the area.
- Ensure that emergency eyewash stations within the laboratory are activated weekly and a weekly activation log is up to date. Notify DSC/EHS if activation logs are not current.
- Ensure submission of a work order to Facilities Management when any unit is not functioning properly. Clearly tag the unit “Out of Service” when repairs are needed.
- Ensure safe and clear access for repair and maintenance of emergency shower and eyewash units for Facilities Management, as necessary.

4.2 Environmental Health and Safety

- Ensure that supervisors, employees, and students are notified of their responsibilities as outlined in this Addendum.
- Monitor that the provided emergency eyewash station weekly activation log is maintained by each laboratory.
- Assist with building plan review and selection from a list of recommended units during new construction or major renovation.
- Conduct hazard assessments to determine necessity of emergency eyewash or shower
- Conducting an annual review of all elements of the emergency eyewash activation program.
- Coordinate with Facilities Management for modification and installation of emergency shower and eyewash units, as necessary.

4.3 Facilities Management

- Perform immediate modifications, repair, maintenance, and installation of emergency eyewash and shower equipment as required.
- Maintain accurate record of locations of all emergency eyewash and shower stations.
- Provide equipment and protocols required to perform all inspections of eyewash, shower, and combination eyewash shower units.
- Conduct and document completion of monthly and annual inspections
- Maintain records of monthly and annual inspections.
- Coordinate modifications, maintenance, repair, and replacement of equipment as deemed necessary to meet current standards.
- Execute all work orders for the installation or repair of emergency eyewash and shower equipment on a high priority basis.

4.4 Department Safety Coordinator

- In partnership with laboratory supervisors, principal investigators, and department leadership, coordinates execution of emergency eyewash weekly activation, as appropriate.
- Assists in submitting work orders for any unit not functioning properly, as appropriate.
- Inform Environmental Health & Safety (EHS) before removing any emergency eyewash/shower equipment from the laboratory.

4.5 Employees, Students and Volunteers

- Understand the function and proper use of emergency eyewash and shower facilities

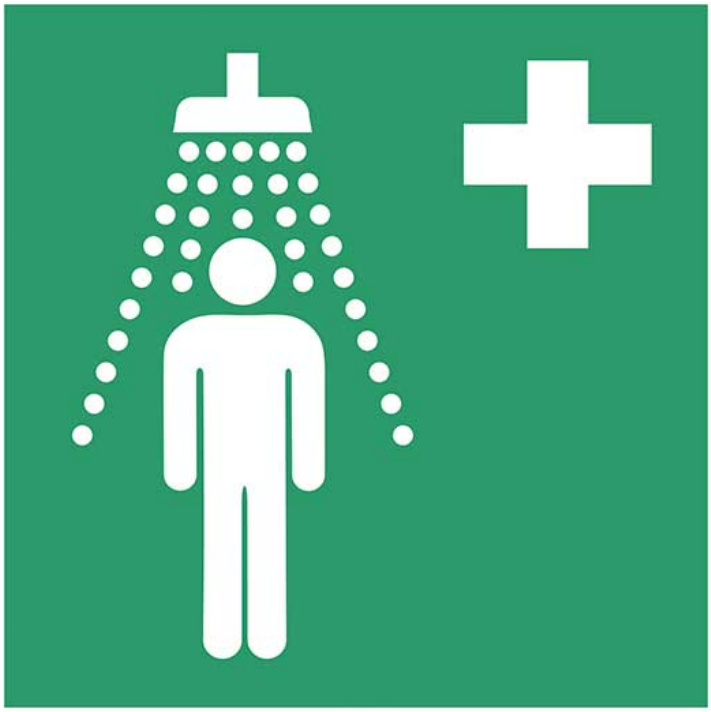
- Locate and be aware of the nearest emergency units/ equipment
- Keep routes clear to emergency units and equipment

5.0 Selection Criteria

According to WAC 296-800-15030, emergency washing equipment (EWE) need to be functional and readily accessible. EWE provide an immediate and local method of decontamination following an exposure to a hazardous chemical. Emergency showers can also be used to effectively extinguish clothing fires and flush contaminants off clothing. EWE is required where the following types of chemicals are used:

- Corrosives, including acids and caustics, with a pH less than 2.5 or greater than 11.
- Strong irritants that cause inflammatory effects at point of contact.
- Toxic chemicals that can be absorbed through the skin and cause ill health effects.

5.2 Safety Shower



A safety shower location is typically identified using the signage shown here or a similar version. A safety shower must be available when there is a potential for major portions of an individual's body to contact corrosives, strong irritants, or toxic chemicals. In general, this means if a container the size of one gallon or greater is handled as part of chemical transfer, mixing, or spraying takes place. Use of specific chemicals in any volume may also require safety shower installation, i.e. formaldehyde, Ethyleneimine or beta-Propiolactone. Personal protective equipment (PPE) such as lab coats, aprons, or gloves, though an important safeguard, are not a substitute for the shower requirement.

5.3 Emergency Eyewash

Emergency eyewash station locations are typically identified using the signage shown here or a similar version. Emergency eyewash equipment is required wherever eyes may be exposed to materials as noted above. Use of PPE such as safety glasses, goggles, or face shields, though an important safeguard, are not a substitute for the emergency eyewash.

5.4 Drench Hose

Drench hoses (shown above) are considered to be secondary to emergency eyewash and shower equipment. Monocular and dual-head drench hoses do not meet American National Standards Institute (ANSI) standards for emergency eyewash or safety shower because they are not hands free. Therefore, having a drench hose does not replace the need for an emergency eyewash/safety shower. Drench hoses may be used to "spot" rinse an area when a full shower is not required, to assist a victim when the victim is unable to stand or is unconscious, or to wash under a piece of clothing before the clothing is removed.

6.0 Inspection Procedures

6.1 Emergency Eyewash Equipment

Weekly flushing of emergency eyewash units in compliance with the ANSI Z358.1-2014 shall be conducted by the current faculty owner/occupant of the laboratory space or their designee.

6.1.1 Weekly Activation Method of Eyewash Stations

- Before activating the eyewash unit, check if the unit is connected to any types of drainage system. Use a bucket or other water collection method as necessary to collect the water when the unit if activated.
- Turn the valve on to full open position (activation of the unit). The eyewash nozzles shall have a dust protecting cover, which shall be automatically removed upon activation of the unit.
- Verify that the eyewash unit opens within one second of opening the valve and it remains open without operator's further assistance (stay-open valve) until intentionally closed.
- The emergency eyewash unit shall provide flushing fluid to both eyes simultaneously. The flushing streams shall rise to approximately equal heights on both sides.
- Record the test as pass or fail, initial and provide a date on the weekly inspection tag attached to the eyewash.
- Ensure any water cleanup on floor and areas around eyewash are completed immediately after activation.
- Report any issues with the eyewash and place an FM work order to have the issue resolved.

6.1.2 Monthly and Annual Inspection

Facilities Management will conduct monthly and annual inspections of emergency safety showers and eyewashes, as prescribed in the preventative maintenance schedule.

7.0 Maintenance, Repair, Training

7.1 Maintenance and Repair Requests

- If the test fails, contact your Department Safety Coordinator, Facilities Management at x3420, or Environmental Health and Safety at ehs@wwu.edu or x3064.

7.2 Training

- Individuals who may be exposed to hazardous materials shall be instructed in the location and proper use of emergency eyewash and safety shower equipment.

Individuals tasked with conducting emergency eyewash and shower activation shall be provided training in the appropriate procedures.

Appendix 7A – Weekly Eyewash Activation Standard Operating Procedure

	Visual inspection of the unit.
1	Look for corrosion, leaks, pipe damage, and make sure protective covers are in place. This should be done prior to activation in order to avoid risk of injury, damage to the unit, or creating a spill.
2	Ensure that the unit is easily accessible and free of any nearby obstructions.
	Activate eyewash and flush water through the eye pieces.
3	If eye wash alarm is alarmed, call UPD Dispatch x3555 prior to running water.
4	Install or attach equipment test kit to capture water, if needed.
5	Turn activator valve to open position. Valve activator must stay on unless manually turned off and must activate water flow in one second or less.
6	Ensure that the water flow is continuous and is not injurious to the user's eye or face.
7	If the eye wash station has protective caps, make sure they pop off automatically when the eye wash is turned on.
8	For eye and face wash units, controlled flow must be provided to both eyes simultaneously. Uneven flow to one eye or the other indicates a malfunction or simple blockage of the filters underneath the spray cap (remove and rinse filters or report malfunction for maintenance).
9	Activate or flush the unit for at least 30 seconds or until the water runs clear to discharge any debris.
10	Restore unit to ready condition: Turn activator valve to closed position. Return protective caps to proper position, and clean and dry any water on floor.
11	Call UPD to confirm eyewash activation is complete. This is required to reset the alarm.
	Documentation
11	Fill out the Eyewash Activation Log attached to the eyewash. Date and initial the eyewash tag to document the activation.
12	If any of issues are observed with the eyewash equipment, including persistent leaks, eyewash does not shut off, or if a large water spill occurs call FM Work Control x3420 for immediate assistance.
13	For repairs that do not need immediate attention submit a work order for repair with FM.

Appendix 7B Eyewash Activation Log Example