Emergency Eye Wash Station and Shower Weekly Flush Test

1.0 Objective & Intent

The objective of this SOP is to establish a standardized weekly flush test procedure for all emergency eyewash stations and safety showers located within the cabinet and millwork manufacturing facility. This procedure ensures that each unit delivers a consistent, tepid flow of water free from sediment, rust, or microbial contamination, and that all mechanical components function correctly.

This SOP is required to maintain compliance with WorkSafeBC Regulation Part 4 (General Conditions) and ANSI Z358.1-2014 standards, which mandate weekly activation of emergency eyewash and shower equipment to verify proper operation and to flush stagnant water from the supply lines. Failure to perform these tests can result in non-functional equipment during an emergency, leading to severe eye injuries or chemical burns, and potential regulatory fines.

The specific risk mitigated by this procedure is the presence of stagnant water that may harbor harmful bacteria (e.g., Pseudomonas aeruginosa) or contain particulate matter that could cause secondary injury to the eyes or skin during an emergency. Regular flushing also identifies leaks, valve failures, or blockages before an actual emergency occurs.

2.0 Operational Scope

This procedure applies to all emergency eyewash stations and combination safety shower/eyewash units installed in the cabinet and millwork manufacturing facility, including but not limited to the finishing/paint booth area, chemical storage room, CNC machining department, assembly line, and maintenance workshop.

All maintenance personnel, safety committee members, and designated floor supervisors are responsible for performing the weekly flush test. Contractors or temporary workers must not perform this test unless directly supervised by a qualified employee.

This SOP covers both plumbed (permanently connected to the building water supply) and self-contained (gravity-fed or pressurized tank) units. For self-contained units, refer to the manufacturer's specific instructions for flushing and testing.

3.0 Hazard Identification & Mandatory PPE

- Slip Hazard: Water on the floor during flushing can create a slip hazard. Ensure the area is clear and use wet floor signs.
- Chemical Exposure: Residual chemicals or splash from the eyewash basin may contain hazardous substances. Avoid direct contact.
- Water Temperature: Water that is too hot or too cold can cause thermal shock or scalding. Verify tepid water (60-100°F / 15-38°C).
- Pinch Points: Eyewash station activation handles and shower pull rods may have pinch points. Keep hands and fingers clear of moving parts.
- Bacterial Contamination: Stagnant water may contain harmful bacteria. Avoid splashing water into eyes or open wounds.
- CSA-Approved Safety Glasses with side shields (required during testing to protect eyes from splash).
- Chemical-Resistant Gloves (e.g., nitrile) to avoid skin contact with potentially contaminated water.
- CSA-Approved Steel Toed Boots (required in all production areas).
- High-Visibility Safety Vest (if testing in active production areas).

- Wet Floor Sign to warn others of slippery surfaces.

4.0 Required Safety Equipment & Tools

- Lockout/Tagout (LOTO) Kit (not required for this procedure, but must be available if any maintenance is needed).
- Digital Thermometer or temperature strip to verify tepid water temperature.
- Stopwatch or timer to measure flow duration (minimum 15 minutes for showers, 15 minutes for eyewash).
- Graduated container (e.g., 1-liter measuring cup) to verify flow rate (minimum 0.4 gallons per minute for eyewash, 20 gallons per minute for shower).
- Clean, lint-free cloth or paper towels for drying the basin and surrounding area.
- Wet Floor Sign.
- Inspection checklist or log sheet (paper or digital via SafeDesk).
- Flashlight for inspecting the basin and nozzle for debris.
- Adjustable wrench (if needed to tighten loose fittings).

5.0 Step-by-Step Safety Procedure

1. Notify all personnel in the immediate area that a weekly flush test is about to begin. Place wet floor signs around the eyewash/shower station to warn of potential water on the floor.
2. Don all required PPE: safety glasses, chemical-resistant gloves, steel-toed boots, and high-visibility vest. Ensure the area is clear of obstructions and that the drain (if present) is unobstructed.
3. For a combination unit, activate the eyewash station first by pushing the activation handle or pulling the lever. Verify that water flows immediately without delay. Use the stopwatch to time the flow. Allow the eyewash to run for a minimum of 15 minutes to flush the supply lines.
4. While the eyewash is running, visually inspect the water stream. Ensure it is clear, free of discoloration, sediment, or debris. Use the flashlight to check the nozzle and basin for any buildup or blockages. If the water appears dirty, continue flushing until clear.
5. Using the digital thermometer or temperature strip, measure the water temperature at the eyewash nozzle. Confirm it is within the tepid range of 60-100°F (15-38°C). If the temperature is outside this range, tag the unit out of service and report to maintenance immediately.
6. After the eyewash has run for 15 minutes, activate the safety shower by pulling the shower handle or chain. Allow the shower to run for a minimum of 15 minutes. Verify that the water flow is steady and covers a wide area (minimum 20 inches diameter at 60 inches above the floor). Use the graduated container to measure flow rate if needed.
7. During the shower flush, inspect the shower head for any blockages or corrosion. Ensure the pull rod or chain operates smoothly and that the valve closes fully when released. Check for any leaks at the valve or pipe connections.
8. After both the eyewash and shower have completed their 15-minute flush cycles, turn off the units. Use the clean cloth to dry the basin and any wet surfaces around the station. Remove the wet floor signs once the area is dry.
9. Record the test results on the inspection log or in the SafeDesk digital system. Include the date, time, unit location, water temperature, flow rate (if measured), and any observations (e.g., debris, leaks, temperature issues). If any deficiencies were found, tag the unit out of service and submit a maintenance work order immediately.
10. If the unit is a self-contained (gravity-fed) type, follow the manufacturer's instructions for flushing and testing. Typically, this involves draining the tank, cleaning the basin, refilling with fresh water, and activating the unit to verify flow. Record the test results as above.