

 CITY OF TUCSON	City of Tucson Central Safety Services Number: SD-008 Subject:	Page 1 of 8
	Emergency Eyewash and Shower Stations	Effective Date: 1 January 2010
		Reviewed/ Revised: January 1, 2011

SAFETY DIRECTIVE

1.0 SCOPE

This directive will provide information and guidance to departments and divisions for the location, installation, inspection and maintenance of emergency eyewash and shower stations.

This directive will reference:

- Emergency Eyewash and Shower Stations
- Emergency Eyewash Stations
- Self-contained Eyewash Stations
- Portable (Personal) Eyewash Bottles
- Pressurized Self-contained Eye Wash Units

Typical illustrations of Emergency Eyewash and Shower Stations are referenced in Appendix A.

The policies and procedures contained in this directive are intended to assist in identifying and complying with American National Standards Institute (ANSI) and Occupational Safety and Association (OSHA) Standards. In all cases where there is a difference between specific standards, the specific policies set forth in this directive shall apply.

2.0 PURPOSE OF SAFETY DIRECTIVE

This Directive will establish policy on the requirements for the location, installation and maintenance of emergency eyewash and shower equipment for the City of Tucson in accordance with ANSI Z358.1-1998 or current.

3.0 DEFINITION

Emergency Shower: A plumbed assembly consisting of a shower head controlled by a stay-open valve and operated by an approved control valve actuator.

Eye Wash: A plumbed device used to irrigate and flush the eyes.

GPM: Gallons per minute

Hand-held Drench Hose: A flexible hose connected to a flushing fluid supply used to irrigate and flush face and body areas, activated by an approved control valve.

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Hazardous Material: Any substance or compound that has the capability of producing adverse effects on the health and safety of employees.

Mechanical Room: A dedicated and secure room within an occupied facility that contains emergency eye wash and/or shower stations but is not occupied by employees unless repair or maintenance work is being performed.

Occupied Facility: Facilities that contains emergency eyewash and/or shower stations that is normally staffed on a daily basis by employees performing a work process involving hazardous substances.

Personal Protective Equipment: Equipment such as safety glasses that will provide the last line of protection for an employee while working with hazardous materials.

Portable (Personal) Eyewash Bottles: Supplementary eyewash that supports plumbed and/or self-contained stations by delivering immediate flushing fluid to the eyes while the employee is in route to a permanent eyewash station, or to provide immediate flushing relief for nuisance dirt or debris.

Potable Water: Water that is suitable for drinking.

Plumbed Eyewash/Shower Station: Equipment that is permanently mounted and connected by plumbing, to a potable water source.

Pressurized Self-contained Eyewash Station: A self-contained unit with an eye piece nozzle attachment that is filled with potable water and is pressurized for dispensing by either air or by manual pump.

Remote Site: A site that contains and emergency eyewash and/or shower station, but is not staffed with employee(s) unless scheduled maintenance or emergency repairs are being performed.

Self-contained Eyewash and/or Station: An eyewash and/or shower station that contains its own flushing fluid fed by gravity flow and must be refilled or replaced after use and may require periodic (scheduled) maintenance to preserve potable water.

Stay-open valve: A valve that once opened remains on in the “hands-free” position allowing the employee to manipulate the eyelids or remove clothing with both hands and must be manually closed after use.

Tepid: Moderately warm, lukewarm.

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4.0 DIRECTIVE

- A.** Per OSHA 1910.151 (c), where the eyes or body of any employee may be exposed to injurious corrosive materials, suitable facilities for quick drenching or flushing of the eyes and body *shall* be provided within the work area for immediate emergency use.
- B.** Where the eyes or body of any employee may be exposed to non-hazardous materials, debris from work material or irritating dust, suitable facilities for quick drenching or flushing of the eyes and body may be provided in the work area for immediate emergency use at the discretion of the department.
- C.** Where exposure of non-hazardous material; debris from work practices or irritating dust is limited primarily to the employee's eyes, a plumbed or self-contained eyewash station may be suitable for installation.
- D.** Portable (personal) Eyewash Bottles may be supplied directly adjacent to a work location or process where corrosive and/or hazardous materials are utilized, but the portable (personal) eyewash bottles are not a substitute for the installation of a plumbed or self-contained emergency eyewash and shower station. A portable (personal) eyewash bottles are provided to allow employees immediate infusion of potable water to an injured area while in route to the emergency eyewash and/or shower station.
 - 1. Portable (personal) eyewash bottles may be installed in areas where nuisance dust or debris from a non-hazardous work process is performed.
 - 2. Portable (personal) eyewash bottles shall be discarded after opening and immediately replaced with a new bottle. Portable (personal) eyewash bottles shall be immediately replaced upon exceeding the expiration date stamped on the bottle.
- E.** Where required by OSHA Standard or selected for installation by the Department or Division, emergency eyewash and shower stations shall be installed according to ANSI Standard Z358.1-1998 (or current) and shall be within immediate employee access to the work area.
 - 1. Immediate access to the eyewash shower shall require no more than ten (10) seconds to reach, shall be located on the same level (no stair travel) as the hazard and the path of travel shall be free from obstructions (doors) that may inhibit the immediate use of equipment.
 - 2. Emergency eyewash nozzles attached to wash sinks shall be kept free from equipment or other obstructions.
- F.** Emergency shower stations either plumbed or self-contained units shall be capable of delivering potable water at twenty (20) GPM for a period of fifteen (15) minutes.

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- G.** Emergency eyewash stations either plumbed or self-contained units shall be capable of delivering potable water to the eyes at 0.4 GPM for fifteen (15) minutes.
- H.** Emergency eyewash and shower stations shall be capable of delivering potable water in where the temperature of the water is tepid. Self-contained eyewash and shower stations shall not be installed outdoors. Plumbed outdoor eyewash and shower stations shall not be installed in direct sunlight and in certain applications, shall be freeze-protected.
- I.** Emergency eyewash and shower stations, including facilities for hand-held drenching shall be operated by a stay-open valve with push paddle or other manufacturer design operation feature meeting ANSI standard.
- J.** Emergency eyewash stations shall have the nozzles covered at all times when the eyewash feature is not activated.
- K.** Emergency eyewash and shower units shall be tested according to the manufacturer's instruction. Emergency eyewash and shower stations that fail an inspection (flow test) shall be immediately repaired. Until repairs are made the work area shall be supplemented with portable emergency eyewash/drench equipment prior to the initiation of any work process, scheduled maintenance or facility repair involving hazardous materials.
- L.** Inspection (flow testing) of plumbed emergency eyewash and/or shower stations shall be performed and documented according to the following schedule:
1. Emergency eyewash and/or shower stations in an occupied facility shall be conducted **weekly**.
 2. Emergency eyewash and/or shower stations in a mechanical room shall be conducted at least **monthly**.
 3. Emergency eyewash and/or shower stations in remote sites shall be conducted and documented **prior to the initiation of any work process, scheduled maintenance or facility repair** involving hazardous materials. In the event the emergency eyewash and/or shower station at a remote site does not operate correctly as defined below, the emergency eyewash and or shower station shall be repaired or supplemented with portable emergency eyewash/drench equipment prior to the initiation of any work process, scheduled maintenance or facility repair involving hazardous materials.
- M.** The inspection of emergency eyewash and/or shower stations shall be documented. Documentation is to be noted by date and initials on an inspection card directly attached to the emergency eye wash and/or shower unit, or may be documented by date and initials in a master or computerized

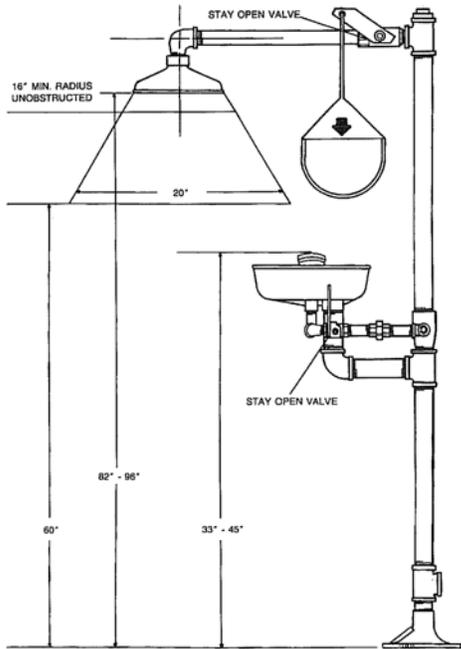
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log readily available within the facility. Typical Emergency Eyewash and/or Shower Inspection Tags are referenced in Appendix B.

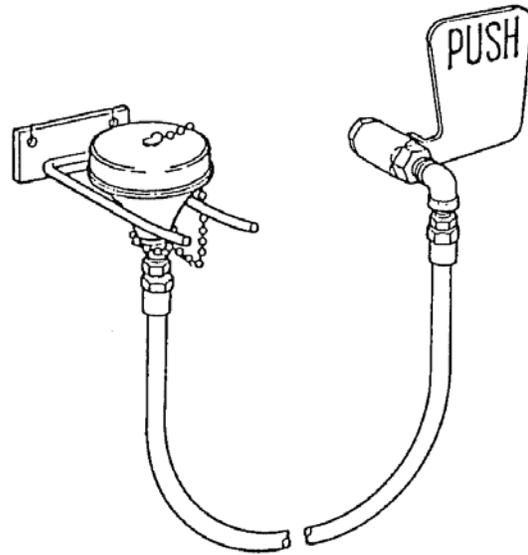
1. Inspection of the eyewash station shall require:
 - a. Activation of the “stay-open” valve paddle;
 - b. The covers of both eyewash nozzles shall be dislodged completely by the flow of water and shall not require a separate motion to remove the covers when the unit is activated;
 - c. The flow of water from the eyewash nozzles shall not be injurious to the eyes of the user and the flow of water shall be approximately equal from both outlets.
 2. Self-contained emergency eyewash stations do not require activation testing, but may require addition of a bacteria inhibitor in a “non-sealed cell”. All self-contained emergency eyewash stations shall require verification that the self-contained water cell is completely full.
 3. Self-contained emergency eyewash stations shall be scheduled for maintenance and inspected monthly.
 4. Pressurized self-contained portable eyewash units shall be tested by activation prior to the initiation of any work process or at least monthly. Potable water shall be changed and the unit disinfected according to manufacturer’s instruction.
- N.** Whenever possible, emergency eyewash station should be installed allowing drainage into the sanitary sewer system. Emergency shower stations should have a floor drain to limit water pooling on the floor. Testing of units where not plumbed into a drain shall be conducted in such manner as to avoid water pooling on the floor.
- O.** Emergency eyewash and shower locations and eyewash station locations shall be identified with a highly visibly sign positioned within the work area serviced by the device. Typical notification signs are referenced in Appendix B. The area around any emergency eyewash and/or shower stations shall be well lighted.

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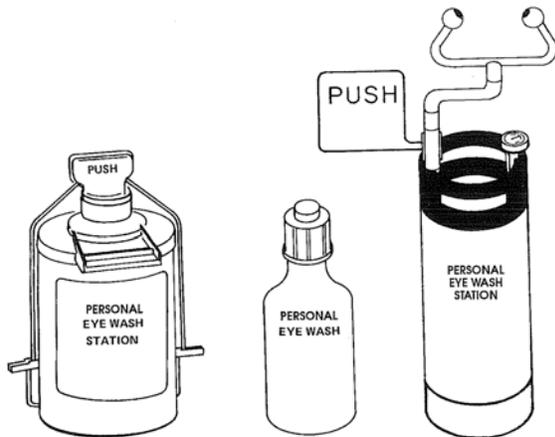
Appendix A



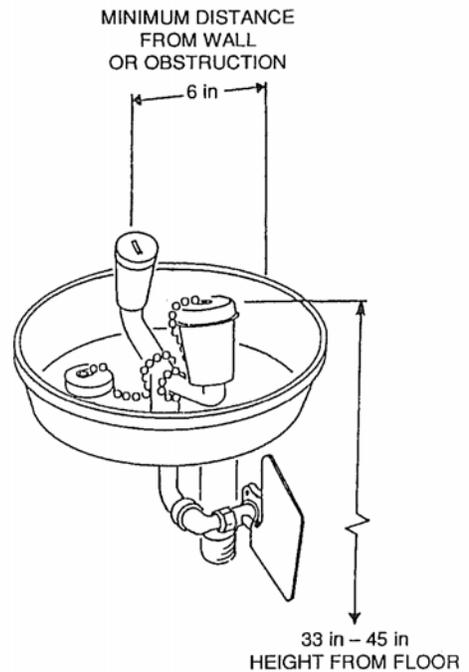
Typical Eye Plumbed Emergency Eyewash and Shower Station



Typical Plumbed Drench Hose

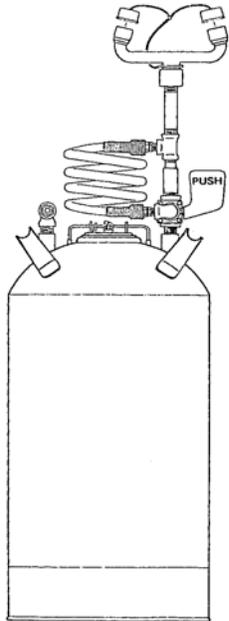


Typical Portable Eyewash Units

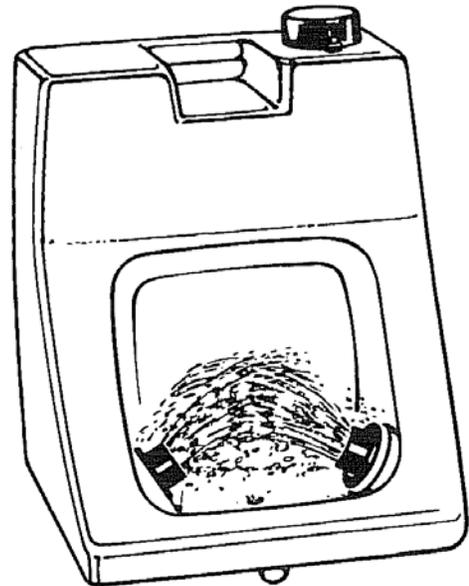


Typical Plumbed Eyewash Station

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Typical Pressurized Portable
Self-contained Eyewash Unit



Typical Self-contained Gravity-
fed Eye Wash Unit

