

Environment, Safety, Health and Quality Section Procedure		
Procedure Name Annual Inspection of the Plumbed Eyewash/Shower		Total Pages 3
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OBJECTIVE

Describe procedures for annual inspection of plumbed eyewash/showers.

EQUIPMENT

Tape measure, flow meter, bucket, and thermometer.

PROCEDURES

All emergency showers shall be inspected annually to assure conformance with ANSI/ISEA Z358.1-2009 Section 4.5.

Plumbed Emergency Showers

The emergency shower inspection shall assure the following:

1. That the unit is assembled and installed in accordance with the manufacturer's instructions, including flushing fluid delivery requirements.
2. That the unit is in accessible locations that require no more than 10 seconds to reach or approximately 55 feet. The emergency shower shall be located on the same level as the hazard and the path of travel shall be free of obstructions that may inhibit its immediate use.
3. That the unit is located in an area identified with a highly visible sign positioned so the sign shall be visible in an area served by the emergency shower. The area around the emergency shower shall be well-lit.
4. That the unit is positioned so that the shower pattern is dispersed such that the top of the flushing fluid column is at least 208.3cm (82 in.) and not more than 243.8 cm (96 in.) from the surface on which the user stands. The center of the spray shall be at least 40.6 cm (16 in.) from any obstruction.

5. That the unit is connected to a supply of flushing fluid per the manufacture's installation instructions to produce the required spray pattern for a minimum period of 15 minutes. Where the possibility of freezing conditions exists, the emergency shower shall be protected from freezing or freeze-protected equipment shall be installed. If shut off valves are installed in the shower line for maintenance purposes, provisions shall be made to prevent unauthorized shut off.
6. Deliver tepid (between 60 and 100 degrees) flushing fluid. In circumstances where chemical reaction is accelerated by flushing fluid temperature, a facilities safety/health advisor should be consulted for the optimum temperature for each application.
7. When the plumbed emergency shower is installed, its performance shall be verified in accordance with the following:
 - a. With the unit correctly connected to the flushing fluid source and the valve(s) closed, visually check the piping connections for leaks.
 - b. Open the valve to the full open position. The valve should remain open without requiring further use of the operator's hands.
 - c. With the valve in the fully open position, measure the diameter of the spray pattern. It shall be a minimum of 50.8 cm (20 in.) at 152.4 cm (60 in.) above the standing surface. The flushing fluid shall be substantially dispersed throughout the pattern.
 - d. Using a flowmeter or other means, determine that the rate of flow is at least 75.7 liters per minute (20 gpm).
 - e. Using a temperature gauge or other means, determine that the flushing fluid is tepid (between 60 and 100 degrees).

Maintenance

Plumbed emergency showers shall be activated weekly for a period long enough to verify operation and ensure that flushing fluid is available. Make sure there are no obstructions and the unit is in good condition. This shall be documented.

Plumbed Eyewashes

The eyewash inspection shall assure the following:

1. That the unit is assembled and installed in accordance with the manufacturer's instructions, including flushing fluid delivery requirements.
2. That the unit is in accessible locations that require no more than 10 seconds or approximately 55 feet to reach. The emergency eyewash shall be located on the same level as the hazard and the path of travel shall be free of obstructions that may inhibit its immediate use. For a strong acid or strong caustic, the eyewash should be immediately adjacent to the hazard.

3. That the unit is located in an area identified with a highly visible sign positioned so the sign shall be visible in an area served by the emergency eyewash. The area around the emergency eyewash shall be well-lit.
4. That the unit is positioned with the flushing fluid nozzles not less than 83.8 cm (33 in.) and no greater than 114.3 cm (45 in.) from the surface on which the user stands and 15.3 cm (6 in.) minimum from the wall or the nearest obstruction.
5. That the unit is connected to a supply of flushing fluid per the manufacture's installation instructions to produce the required spray pattern for a minimum period of 15 minutes. Where the possibility of freezing conditions exists, the emergency eyewash shall be protected from freezing or freeze-protected equipment shall be installed. If shut off valves are installed in the supply line for maintenance purposes, provisions shall be made to prevent unauthorized shut off.
6. Deliver tepid (between 60 and 100 degrees) flushing fluid. In circumstances where chemical reaction is accelerated by flushing fluid temperature, a facilities safety/health advisor should be consulted for the optimum temperature for each application.
7. When the plumbed eyewash is installed, its performance shall be verified in accordance with the following:
 - a. With the unit correctly connected to the flushing fluid source and the valve(s) closed, visually check the piping connections for leaks.
 - b. Open the valve to the full open position. The valve should remain open without requiring further use of the operator's hands.
 - c. With the valve in the fully open position, make sure that both eyes will be washed simultaneously at a velocity low enough to be non-injurious to the user.
 - d. Using a flowmeter or other means, determine that the rate of flow is at least 1.5 liters per minute (0.4 gpm). A test gauge can be used to verify minimum flow characteristics.
 - e. Using a temperature gauge or other means, determine that the flushing fluid is tepid (between 60 and 100 degrees).