

## Emergency Eyewash & Shower Testing Program

Responsible Administrator: EHS Safety Specialist

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**Summary:** The purpose of this program is to ensure that safety eyewashes and showers supply clean, potable water and are in proper working order. This program applies to all emergency eyewash and shower units in university buildings. Annual flow rate testing and monthly sanitation testing of the emergency equipment will be documented.

1. Program Description .....	1
2. Scope.....	1
3. Definitions .....	1
4. Responsibilities .....	2
5. Program Components.....	2
6. Reporting Requirements .....	5
7. References .....	5

### 1. Program Description

The purpose of this program is to ensure that safety eyewashes and showers supply clean, potable water and are in proper working order. This program defines guidelines for inspection, testing and maintenance of emergency eyewash and shower equipment.

### 2. Scope

This program applies to all emergency eyewash and shower units in university buildings. Annual flow rate testing and monthly sanitation testing of the emergency equipment will be documented.

### 3. Definitions

**American National Standards Institute (ANSI):** is a non-profit organization that coordinates the standardization and conformity assessment systems in the United States.

**Emergency Shower:** a unit that cascades water over the whole body.

**Emergency Units or Equipment:** general term for emergency eyewash, eye/face wash, shower, drench hose and combination units.

**Eyewash:** a unit that flushes water specifically to the eyes.

**Eye/Face Wash:** device that flushes both eyes and face.

**Combination Units:** or Safety Stations, units that consist of both the emergency shower and an eye/face wash.

**Drench Hose Units:** are hand-held units that reach to areas of the face and body that are inaccessible to fixed emergency units.

**Stay-Open Valve:** a valve that manually opens and closes the emergency units.

## 4. Responsibilities

### 4.1 FACILITIES MANAGEMENT (FM)

- Provide program support for FM maintained facilities and assist EHS in identifying units in non-FM support buildings.
- Perform monthly flush and verify proper operation of emergency eyewash and shower units throughout the university.
- Conduct annual flow rate testing and compliance assessment for each emergency unit on campus.
- Strive to ensure that each unit is appropriately tagged for documentation of location and testing requirements.
- Documentation of all testing will be maintained by Facilities Management.
- Work with EHS to maintain an accurate inventory of these units.

### 4.2 ENVIRONMENTAL HEALTH AND SAFETY

- Provide general oversight of this program.
- Work with Facilities Management to maintain an accurate inventory of these units.

### 4.3 USERS

- Know the location of the emergency units in the building and ensure that the emergency units are clear of obstructions.
- Check that emergency units are being flushed monthly by reviewing the unit tag. Contact Facilities Management if monthly flush tests are not documented on the tags.

## 5. Program Components

### 5.2 General Requirements

- 5.2.1 Application: Emergency eyewash and shower units must be installed in work areas where there is high potential for accidents involving corrosive, irritant or toxic substance absorption through skin and eyes.
- 5.2.2 Location and Placement: The emergency eyewash and shower unit must be placed in a location no more than a maximum of 10 seconds travel time for an injured person through an unobstructed pathway. Specific placement requirements are listed below:
- **Eyewash and eye/face wash units:** Nozzles must be positioned between 33-45 inches from the floor. Also, a minimum distance of 6 inches from the nearest obstruction is required.
  - **Drench hose units:** The head of the hose must be placed 33-45 inches from the floor with a clearance of 6 inches from the wall.
  - **Emergency Showers:** The distance of showerhead to the floor must be between 82-96 inches. Actuator height must be no higher than 69 inches from the floor. Also showers must have a clearance of 48 inches along the side and 30 inches across (creating a surface area of 10 square feet around the shower unit).
  - **Combination Units or Safety Stations:** Refer to the dimensions above for distance and clearance of the eye/face wash and shower units.

5.1.3 Correction of Deficiencies. If the emergency unit is not operating to specifications, employees in the area must initiate appropriate action. Notify your supervisor to implement appropriate tagging of unit as "DO NOT USE", if applicable. The supervisor must notify Facilities Management for repair or replacement.

## 5.2 Inventory and Equipment Identification:

- A tag with identification must be placed on or near the emergency unit at all times. Facilities Management testers must sign their initials and date on tags (indicate monthly testing dates with a black marker and annual testing date with a red marker). These tags will inform users of the most recent inspection and testing of the emergency units. Also, the tags will assure the user that the unit is safe and ready to use. Facilities Management should replace missing tags as soon as possible.
- Location of units will be identified with a highly visible sign.
- Failed tests will be corrected immediately. Immediate corrective action must be performed when deficiencies are noted. If deficiencies cannot be immediately corrected, FM must tag the unit "DO NOT USE," if applicable.

## 5.3 Testing by Facilities Management

### 5.3.1 Eyewash and Eye/Face wash units

#### Monthly Flush Test

- Visual inspection of the unit. Look for leaks or pipe damage and proper placement of protective covers. This should be done prior to testing in order to avoid further damage to the unit and risk of injury to users. Ensure that the unit is free of any obstructions.
- Activate unit. Ensure that the water flow is continuous, evaluate that the unit can maintain flow for 15 minutes, and is not injurious to the user's eye or face. Valve actuator must activate water flow in one second or less.
  - Valve actuator must stay on unless manually turned off and must activate water flow in one second or less.
  - Controlled flow of flushing fluid must be provided to both eyes simultaneously.
  - The unit must be capable of delivering not less than 0.4 gallons per minute of flushing fluid for 15 minutes
- Sanitize water supply through monthly flushing. In order to relieve the unit of any rust and other pipe build- up, flush the unit until the water runs clear.
- Document test with dates and initials on unit tag. Facilities Management is responsible to ensure an appropriate tag is on all units.

#### Annual Flow Test

- Flow rate of the device will be conducted annually. Following established procedures let the water run for one minute to collect at least 1.5 liters (0.4 gallon) of water for eyewash alone and 11.4 liters (3.0 gallons) for an eye/face wash unit.
- Document test with dates and initials on unit tag. Facilities Management is responsible to ensure an appropriate tag is on all units.

### 5.3.2 Drench Hose Units

#### Monthly Flush Test

- **Visual inspection of the unit.** Look for leaks, hose damage, and proper placement of protective covers. Ensure that the unit is free of any obstructions.
- **Activate unit.** Ensure that the water flow is continuous, evaluate that the unit can maintain flow for 15 minutes, and is not injurious to the user's eye or face. Valve actuator must activate water flow in one second or less.

- Valve actuator must stay on unless manually turned off and must activate water flow in one second or less.
- Controlled flow of flushing fluid must be provided to both eyes simultaneously.
- The unit must be capable of delivering not less than 0.4 gallons per minute of flushing fluid for 15 minutes.
- Sanitize water supply through monthly flushing. In order to relieve the unit of any rust and other pipe build-up, flush the unit until the water runs clear.
- Document test with dates and initials on unit tag. Facilities Management is responsible to ensure an appropriate tag is on all units.

#### Annual Flow Test

Flow rate of the device will be conducted annually. Following established procedures let the water run for one minute to collect at least 1.5 liters (0.4 gallon) of water for eyewash alone and 11.4 liters (3.0 gallons) for an eye/face wash unit.

Document test with dates and initials on unit tag. Facilities Management is responsible to ensure an appropriate tag is on all units.

#### 5.3.3 Emergency Showers

##### Monthly Flush Test

- **Visual inspection of the unit.** Look for leaks, pipe damage, and proper placement of protective covers. This should be done prior to testing in order to avoid further damage to the unit and risk of injury to users and yourself. Also inspect each shower if they are in compliance with the ANSI Z358.1 1981 requirements at a minimum. Ensure that the unit is free of any obstructions.
- **Activate unit.** Ensure that the water flow is continuous, evaluate that the unit can maintain flow for 15 minutes.
  - Valve actuator must stay on unless manually turned off and must activate water flow in one second or less.
  - Controlled flow of flushing fluid must be provided to both eyes simultaneously.
  - The unit must be capable of delivering not less than 20 gallons per minute of flushing fluid.
- **Sanitize water supply through monthly flushing.** In order to relieve the unit of any rust and other pipe build-up, flush the unit until the water runs clear.
- **Document test with dates and initials on unit tag.** Facilities Management is responsible to ensure an appropriate tag is on all units.

##### Annual Flow Test

- **Flow rate of the device will be conducted *annually*.** Let the water run for one minute to collect at least 75.7 liters (20 gallons) of water.
- **Document test with dates and initials on unit tag.** Facilities Management is responsible to ensure an appropriate tag is on all units.

#### 5.3.4 Combination Units (Safety Stations)

- Conduct a separate inspection of the emergency shower and the eye/face wash units.

- Apply procedures for each unit in testing safety stations (Sections 5.2.1 and 5.2.3).
- Single documentation will apply to the eyewash and shower combination units.

## **6. Reporting Requirements**

Emergency eyewash and shower testing log must be maintained by Facilities Management and kept at a central location, i.e. Facilities Management Administration, for a period of three years.

## **7. References**

- The California Code of Regulations (CCR) Title 8, Section 5162: <https://www.dir.ca.gov/title8/5162.html>
- ANSI Standards Z358.1-1981 (specified in CCR Title 8 Section 5162)
- ANSI Standards Z358.1-1998 (ANSI standard year adopted for this program)