



# Office of Environmental Health and Safety

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## Emergency Eyewash and Safety Shower Inspection and Testing

### *Standard Operating Procedure*

|                 |                |
|-----------------|----------------|
| SOP Number:     | L -02-02       |
| Effective Date: | April 21, 2023 |
| Next Review:    | April 23, 2026 |

#### 1. PURPOSE

To outline the requirements for the annual inspection of emergency eyewash and safety shower units. All units should comply with ANSI Z358.1-2014.

#### 2. SCOPE

This procedure applies to all emergency eyewash and shower units at UMass Boston.

#### 3. PRECAUTIONS AND HAZARDS

##### 3.1 PRECAUTIONS:

Care should be taken to ensure that water from units are contained and any spillage is cleaned up. In cases where there are not ball-valves, Facilities staff should accompany OEHS in case there are issues with the unit that need immediate attention.

### 3.2 HAZARDS:

Normal testing of eyewash and safety showers poses no unusual hazards. The primary hazards are physical related to collecting and disposing of the water flushed from the shower units.

## 4. PROCEDURE

Notify lab PI's/lab supervisors of inspections dates at least two (2) days in advance. Before activating emergency eyewash and safety shower units for inspection services:

1. Visually inspect the units for any irregularities and make note of them.
2. Verify that there are no obstructions around the unit.
3. Check signage. All information noted on the tag must be clear and legible.
4. Examine the units to determine whether they are connected to wastewater drain piping or located above a floor drain.

### 4.1 Emergency Eyewash (EW):

Inspect emergency eyewash stations annually or more frequently.

1. Place a container beneath the drain of the EW station if necessary.
2. Activate the EW either by using push-lever or pulling EW away from the unit.
3. Ensure controlled flow of flushing fluid at a velocity low enough to be non-injurious to the user.
4. Allow water to run through the EW until the water runs clear and then deactivate the unit.
5. Record the temperature of the water (should be between 60-90 degrees F)
6. Record date and check off "OK" If inspection criteria are met, if not check "NG" and record initials in "BY" column.



The image shows a 'SAFETY EQUIPMENT INSPECTION RECORD' tag. It has a header with the title in green. Below the title, it lists 'Equipment ID\_060-1500-EW-SU' and 'Location\_060-1-1500'. There is a table with four columns: DATE, OK, NG, and BY. The first row has the date '7/1/19', 'X' in the OK column, '-' in the NG column, and 'ABC' in the BY column. Below the table are several blank rows for additional entries. At the bottom, there is a note: 'IF "NG", INSPECTOR MUST FILL OUT A REPAIR TAG' and 'GRADY #8643 GRADYID.COM'.

| DATE   | OK | NG | BY  |
|--------|----|----|-----|
| 7/1/19 | X  | -  | ABC |
|        |    |    |     |
|        |    |    |     |
|        |    |    |     |
|        |    |    |     |

7. Record results on OEHS Inspection log
8. Immediately report to deficiency to OEHS office, Can send through email [umbehs@umb.edu](mailto:umbehs@umb.edu). Include pictures of the tag and provide reason why unit is NG in the email.

9. If "NG" is checked off on eyewash or drench hose unit tag "OUT OF SERVICE" yellow tag should be attached to the handle.

- i. Fill remarks section on the tag why unit is out of service for use.

- ii. Sign and date the tag



- iii. OEHS will notify Facilities to generate work order to resolve the deficiency. OEHS will copy applicable PI.
5. Clean up any spillage on the floor.
6. Document the results of the inspection in OEHS log and upload spreadsheet data weekly.
7. Dispose of any water collected in an appropriate sink or drain.

*Note: Lab personnel should flush eyewash fixtures on a weekly basis as instructed in the Lab Safety Manual.*

## 7.2 Safety Shower (SS):

1. Inspect safety shower annually or more frequently.
2. Identify the closest sink to the shower and clear the access for disposal of water from shower inspection collection bucket before testing the shower.
3. The top opening of the shower test sleeve is placed around shower head.
4. Place the bottom opening of the shower test sleeve into the collection bucket or use green gobbler cart testing device.
5. Activate the shower by pulling the handle down firmly.
6. Ensure controlled flow of flushing fluid at a velocity low enough to be non-injurious to the user.
7. Allow water to run through the shower until water runs clear\*, and then deactivate the shower. If inspector can't confirm water is clear, they have to fill a jar with shower water and compare the color with water from drinking water fountain or distilled water.



8. Record the temperature of the water (should be between 60-90 degrees F)

| SAFETY EQUIPMENT INSPECTION RECORD            |    |    |     |
|---|----|----|-----|
| Equipment ID_060-1500-EW-SU                   |    |    |     |
| Location_060-1-1500                           |    |    |     |
| DATE  | OK | NG | BY  |
| 7/1/19  | X  | -  | ABC |
|   |    |    |     |
|   |    |    |     |
|   |    |    |     |
|   |    |    |     |
| IF "NG", INSPECTOR MUST FILL OUT A REPAIR TAG |    |    |     |
| GRADY #8843 SRADYID.COM                       |    |    |     |

9. Record date and check off "OK" If inspection criteria are met, if not check off "NG" and record initials in "BY" column. If "NG" is checked off, inspector needs to fill out repair tag.

**\*NOTE: If water is slightly discolored DO NOT tag the unit "OUT OF SERVICE". Note in inspection log**

10. Immediately report deficiency to OEHS office preferably through email [umbeks@umb.edu](mailto:umbeks@umb.edu). Include pictures of the tag and provide reason why unit is NG in the email.

11. If “NG” is checked off on shower unit tag for mechanical issues like a broken handle, “OUT OF SERVICE” yellow tag should be attached to the handle.

- i. Fill remarks section on the tag as to why unit is out of service for use.
- ii. Sign and date the tag



- iii. OEHS will notify Facilities to generate work order to resolve the deficiency. OEHS will copy PI.
- iv. The OEHS Inspector will be provided work order number issued by Facilities in 24-48 hours, which should be recorded in the inspection log maintained on the shared online drive.
- v. OEHS inspector needs to keep track of open work orders issued and do weekly follow up until deficiency is corrected.
- vi. Remove caution tag and update inspection tag once inspection meets OEHS criteria.
  - a. Clean up any spillage on the floor.
  - b. Document the results of the inspection in OEHS log and upload data weekly to shared drive.
  - c. Dispose of water collected in an appropriate laboratory sink.

## **ROLES AND RESPONSIBILITIES**

**5.1 The Director of the Office of Environmental Health and Safety** – is responsible for approving and ensuring compliance with this procedure.

### **5.2 Office of Environmental Health and Safety:**

1. Ensure each PI or Lab Supervisor is aware of their responsibilities under this SOP.
2. Review the SOP periodically and update as necessary.
3. Test all emergency showers and eyewash units at a minimum annually and submit work orders if deficiencies cannot be immediately corrected. Notify Facilities and tag the unit “DO NOT USE” if units are deficient.
4. Follow up with Facilities to ensure any deficiencies are corrected in a timely manner and re-test once deficiencies are corrected.
5. Document all annual testing and inspections.
6. Assist with plan review and placement of new equipment during major renovation or new construction.
7. Provide guidance concerning the operation and testing of eyewash units to principal investigators (PIs) and lab supervisors as requested.

### **5.3 Principal Investigators (PI's) and Lab Supervisors:**

1. Ensure that emergency eyewashes and showers installed in their areas are tested and inspected as specified in the Lab Safety Manual.
2. Provide instruction to visitors, students, staff and volunteers in their labs on the proper use and operation of the emergency units/equipment in their lab to protect their health and safety and to minimize any form of chemical, biological and radioactive exposure.
3. Ensure all emergency units are provided in the workplace and are accessible; and operable.
4. Keep routes to the emergency unit stations and the area around the equipment clear.
5. Notify OEHS if there are any issues.

### **5.4 Laboratory Workers:**

1. Know the location of the nearest emergency units.
2. Ensure the routes to the emergency units/equipment and the area around them are kept clear of obstructions at all times.

3. Notify the PI or lab supervisor immediately when emergency unit is not functioning correctly, and post the tag on the unit – “DO NOT USE” – OUT OF SERVICE’.
4. Understand how to operate the emergency units/equipment.

**5.5 Facilities Department:**

1. Oversee any contractors who may install emergency equipment.
2. Coordinate immediate modifications, repair, maintenance and replacement of equipment as required to meet the regulatory standards.
3. Inform the OEHS of any new installations and current repair status of existing equipment.
4. Provide assistance as deemed required to perform testing and flushing of eyewash and safety shower units.
5. Ensure that all shut-off valves between the sanitary water supply and eyewash and/or safety shower are secured in the open position.
6. Provide periodic update on work orders issued to fix deficiencies during OEHS inspections.

**6. REFERENCES**

**6.1** Occupational Safety and Health Administration (OSHA) – 29 CFR 1910.151 (C).

**6.2** Commonwealth of Massachusetts – Board of Fire Prevention Regulations – 527 CMR 10.00 – Fire Prevention, Section 10.02, Fire Extinguishers – Section (2).

**6.3** American National Standard for Emergency Eyewash and Shower Equipment – ANSI Standard, Z358.1 – 2014.

**6.4** 248 CMR 10.13 (1) Uniform State Building Code.

**7. EQUIPMENT AND SUPPLY MATERIALS**

The following is a list of equipment and supplies that must be available prior to inspecting the eyewash and safety showers:

- |  |                                    |
|--|------------------------------------|
| • Lab Coat, gloves and safety glasses      | • bucket and/or barrel             |
| • Shower test sleeve (if no Green Gobbler) | • Green Gobbler Cart               |
| • 2-Step Utility Ladder                    | • Testing record tags              |
| • Absorbent pads                           | • Out of Service Tags              |
| • Eye wash gauge                           | • Extension cord                   |
| • Thermometer                              | • Hot water garden style hose      |
|  | • Water pump (if no green gobbler) |

**8. TRAINING**

**8.1** OEHS personnel who carry out inspections and testing will be trained prior to starting.

**9. DEFINITIONS**

**9.1** American National Standards Institute (ANSI): Is a non-profit organization that systematizes the standardization and conformity assessment systems in the U.S.

**9.2** Clear: Transparent and nearly or wholly colorless.

**9.3** Emergency Shower: A device particularly designed and intended to deliver flushing fluid in sufficient volume to cause that fluid to cascade over the entire body.

**9.4** Eyewash: A device used to provide flushing fluid water to irrigate and flush the eyes.

**9.5** Hazardous Material: Is any substance or compound that has the capability of producing adverse effects on the health and safety of humans, i.e., corrosion, severe irritation, or permanent tissue damage or is toxic by absorption.

**9.6** Tepid: Moderately warm and lukewarm conducive to promoting a minimum 15-minute irrigation period.

**9.7** O.S.H.A.: Occupational Safety and Health Administration.


**9.8** CMR: Code of Massachusetts Regulations.

**9.9** Corrosive Chemical: A chemical that causes visible destruction of, or irreversible alterations in, living tissue by chemical action at the site of contact.

**10. RECORDKEEPING**

**10.1** OEHS will maintain eyewash and safety shower testing records on file.

**11. Approval Signature**

|   |   |                 |
|---|---|-----------------|
|  | Zehra Schneider Graham<br>OEHS Director |                 |
| Approved by signature   | Name, Title<br>Director, OEHS           | Date<br>4/14/23 |