Safety Shower and Eyewash Testing

Purpose: This procedure provides instructions on performing routine testing of safety showers and eyewash stations.

Principle: The American National Standards Institute (ANSI) establishes recommendations for the minimum requirements for the performance, use, installation, test procedures, maintenance and training for eyewash and shower equipment. All safety shower and eyewash stations must be tested regularly to ensure that they are operational and clean. Employees who may be exposed to hazardous materials shall be instructed in the location and proper use of emergency safety showers and eyewash stations.

1. Safety Precautions

1.1. Slip Hazard

1.1.1. Excess water spilled during this process should be mopped up immediately and appropriate signs placed around affected area to alert staff of potential hazard.

2. Materials

2.1. Supplies

2.1.1. Shower tester (Fisher Scientific, part no 18-563)
2.1.2. Large tub to collect water
2.1.3. Mop and bucket
2.1.4. Wet floor signs

2.2. Equipment

2.2.1. Recessed Safety Station (Guardian, part no GBF2100)
2.2.2. Eye Wash/Drench Hose Unit, Deck Mounted (Water Saver Faucet Co, part no EW1022)
2.2.3. Infrared Thermometer (Fluke, model no 62)

3. Procedure

3.1. Routine Flushing/Inspection

3.1.1. Recessed Safety Stations (Figure 1)

Figure 1

3.1.1.1. Recessed safety stations have both a safety shower component and an eyewash component. Each unit is tested monthly to flush stagnant water from the system and ensure proper function. Stations are also flushed after any interruption of water service.

3.1.1.1.1. Internal strainer is not user-maintained. Notify Laboratory Safety Officer if flow rate decreases significantly.

3.1.1.2. Obtain the shower tester, large tub, wet floor signs, mop and bucket. Supplies are located in either the Building 4 or Building 22 janitorial closets, otherwise see the custodial staff.

3.1.1.3. Refer to **Recessed Safety Station Locations** (Appendix C) for the location of all stations.

3.1.1.4. Shower

3.1.1.4.1. Place the top of the shower tester around the shower head and the bottom of the shower tester sleeve in the tub. Hold the sleeve near the bottom to avoid it flipping out of the tub when the water is turned on.

3.1.1.4.2. Pull the lever at least halfway until water is liberally flowing. Let water flow for at least 10 seconds, check for proper operation and then push the lever back up to stop flow.

3.1.1.4.2.1. Refer to **Section 3.3** for operational guidelines.

3.1.1.4.3. Keep the sleeve around the shower head until dripping stops. Gently tap the shower head to remove excess water droplets.

3.1.1.4.4. Roll up the end of the sleeve before removing it from the tub to prevent excess water dripping on the floor.

3.1.1.4.5. Mop up any water that spilled on the floor.

3.1.1.5. Eyewash

3.1.1.5.1. Position tub against the wall directly underneath the eyewash station.

3.1.1.5.2. Pull the eyewash unit down and away from the wall to activate it.

3.1.1.5.3. Let the water flow for at least 10 seconds, check for proper operation and then slowly push the unit back up until it locks into place to shut it off.

3.1.1.5.3.1. Refer to **Section 3.3** for operational guidelines.

3.1.1.5.3.2. If any of the recessed safety stations are not functioning properly, mark in the "comments" section of the **Recessed Safety Station Test Record** (Appendix A). Notify any staff working in the area, the supervisor of the affected area and the Laboratory Safety Officer.

3.1.1.5.4. Mop up any water that has spilled on the floor and/or wall.

3.1.1.6. Place a wet floor sign in front of the unit.

3.1.1.7. Empty water from the collection tub in one of four places:

3.1.1.7.1. East exit of the microbiology laboratory. Turn right and roll tub down the ramp. At the end of the ramp on the left side, there is a storm drain. Dump the water into the drain. Avoid dumping water into the mulch.

3.1.1.7.2. The employee entrance. Continue out into the parking lot and dump the water in the storm drain. Note: **Do not** dump the water here if the outside temperatures are at or below freezing to avoid ice formation.

3.1.1.7.3. West exit of the building by the rabies lab. Dump the water into the grass, avoiding spill onto the sidewalk.

3.1.1.7.4. Loading dock. Dump the water off the edge of the loading dock.

3.1.1.8. Once any residual water has dried around the units, remove the wet floor signs and return all supplies to where they were originally obtained.

3.1.1.9. Documentation

3.1.1.9.1. The **Recessed Safety Station Test Record** (Appendix A) is stored in a binder in the Building 4 janitorial closet.

3.1.1.9.2. Mark the appropriate columns with either a checkmark if the unit passed or "F" if the unit failed, along with any comments as applicable.

3.1.1.9.3. Document participants in the "initials" column.

3.1.2. Sink-Mounted Units (Figure 2)

Figure 2

3.1.2.1. Sink-mounted units are tested weekly to flush stagnant water from the system and ensure proper function. Units are also flushed after any interruption of water service.

3.1.2.2. Weekly performance tests

3.1.2.2.1. Remove eyewash from the stand and hold over the sink.

3.1.2.2.2. Turn on the unit by squeezing the trigger and securing the fastener. The covers are on a hinge and will be displaced once the water is flowing. They do not need to be removed before use.

3.1.2.2.3. Allow water to flow for approximately 2 minutes and check for proper operation.

3.1.2.2.3.1. Refer to **Section 3.3** for operational guidelines.

3.1.2.2.3.2. If the unit is not functioning properly, notify any staff working in the area, the supervisor of the affected area and the Laboratory Safety Officer.

3.1.2.2.4. Turn off the unit by squeezing the trigger to release the fastener.

3.1.2.2.5. Place the unit back on the stand and ensure the covers are in place.

3.1.2.2.6. Document date service was performed on the **Eyewash Test Record** (Appendix B) for the unit.

3.2. Flushing/Inspection after Interruption of Service

3.2.1. Recessed safety stations and sink units must be flushed after any interruption of water service to remove any potential contamination from the system and ensure proper operation.

3.2.2. Follow routine flushing procedures described in **Section 3.1.**

3.2.3. Allow water to flow from the units for a minimum of 10 seconds beyond the disappearance of any discoloration or visible contamination.

3.3. Operational Guidelines

3.3.1. Safety Showers

3.3.1.1. Per ANSI Z7358.1, units shall be capable of delivering tepid (60-100°F) flushing fluid at a minimum of 75.7 liters per minute for a minimum of 15 minutes.

3.3.1.2. For routine inspections, verify that water is flowing liberally at a steady pressure.

3.3.2. Eyewash Stations

3.3.2.1. Per ANSI Z7358.1, units shall be capable of delivering tepid (60-100°F) flushing fluid to the eyes at a minimum of 1.5 liters per minute for 15 minutes.

3.3.2.2. For routine inspections, verify that water is flowing liberally at a steady pressure.

3.3.3. If there is any question as to the function of any safety shower or eyewash unit, notify the Laboratory Safety Officer.

3.3.4. All units were certified upon installation to verify performance standards. Annual inspections are conducted by maintenance staff.

3.4. Annual Temperature Check

3.4.1. Per ANSI Z7358.1, water temperature for all safety shower and eyewash units should be tepid (60-100°F).

3.4.2. During the first monthly service of the year, measure the temperature of the water using an infrared thermometer.

3.4.2.1. Obtain the infrared thermometer from the Laboratory Safety Officer.

3.4.2.2. While flushing the unit, point the thermometer at the center of the water flow to obtain the most accurate reading. For safety showers, carefully hold the end of the testing sleeve up to allow access to the water stream for measurement.

3.4.2.3. Record the reading on the **Recessed Safety Station Test Record** (Appendix A) or **Eyewash Test Record** (Appendix B) as applicable.

3.4.2.4. It may initially take a few seconds for the water temperature to come to the acceptable temperature. If the temperature persists outside of the acceptable range (60-100°F), notify the Laboratory Safety Officer.

4. Compliance

4.1. Per ANSI Z7358.1, employees who may be exposed to hazardous materials shall be instructed in the location and proper use of emergency showers and eyewashes. For the purposes of this document, this includes all laboratory and support staff that routinely enters any laboratory area.

4.2. The Laboratory Safety Officer is responsible for monitoring completion of all required training and routine maintenance for the safety showers and eyewash stations.

4.3. All pertinent staff must be trained on the operation and maintenance of the safety shower and eyewash units upon employment. Annual refresher training is required thereafter.

4.3.1. To complete annual refresher training on recessed safety stations, staff is assigned to a monthly rotation on a random basis each calendar year.

4.3.1.1. A member of the Safety Committee serves as a coordinator for each month to schedule specific testing times for the group.

4.3.1.2. If a member of the group cannot complete the testing as scheduled, they must make arrangements with the Laboratory Safety Officer for reassignment.

4.3.1.3. Participation is documented by recording the initials of those who completed monthly testing in the appropriate column on the **Recessed Safety Station Test Record** (Appendix A).

4.3.2. Time requirements are 30 minutes or less when all group members participate.

4.3.3. It is the monthly rotation staffs' responsibility to service the safety shower and eyewash units after any interruption of service. The Laboratory Safety Officer will notify staff when extra service is required.

4.4. Each section of the lab is responsible for testing the sink mounted eyewash units in their area. Supervisors shall ensure that weekly testing is being completed in their section.

5. Records and Archiving

5.1. **Eyewash Test Records** (Appendix B) are collected from each section at the end of the year by Quality Assurance Office staff.

5.2. The **Recessed Safety Station Test Record** (Appendix A) is collected at the end of the year by Quality Assurance Office staff.

5.3. All service records are retained onsite for a minimum of two years by Quality Assurance Office staff.

6. References

6.1. American National Standards Institute (ANSI) Z358.1-2009 for Emergency Eyewash and Shower Equipment

7. Appendices

7.1. Appendix A - Recessed Safety Station Test Record
7.2. Appendix B - Eyewash Test Record
7.3. Appendix C – Recessed Safety Station Locations

Signature Approvals

Heather Lilly / 11-26-13
Originator / Date

Steve York / 12/4/2013
Reviewer / Date

Laboratory Director / 12/4/2013
Laboratory Director / Date

Recessed Safety Station Test Record

Year:_____

√ = Pass **F = Fail**

Date	(1) North of 122	(2) South of 117	(3) South of 143	(4) Between South 143 and 140	(5) South of 140	(6) North of 140	(7) North of 143	(8) South of 106	(9) North of 114	(10) North of 106	(11) Bldg 4 Rm 125B	Comments	Initials

Annual Temperature Check (eyewash/shower)

Eyewash Test Record

Year:_____

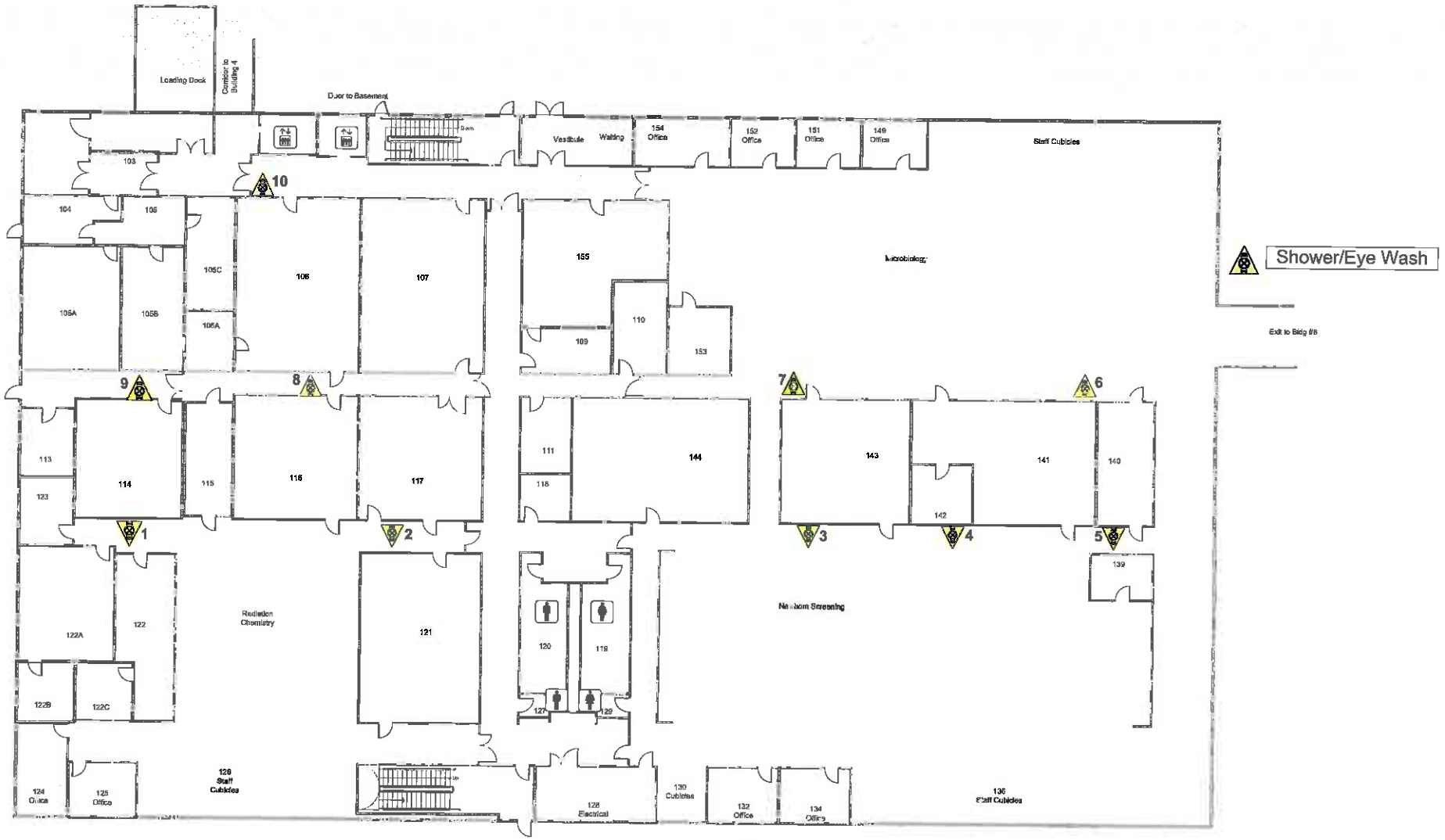
Month	Weekly Flush - Date Performed					Initials
January						
February						
March						
April						
May						
June						
July						
August						
September						
October						
November						
December						

Annual Temperature Check

Date:_____

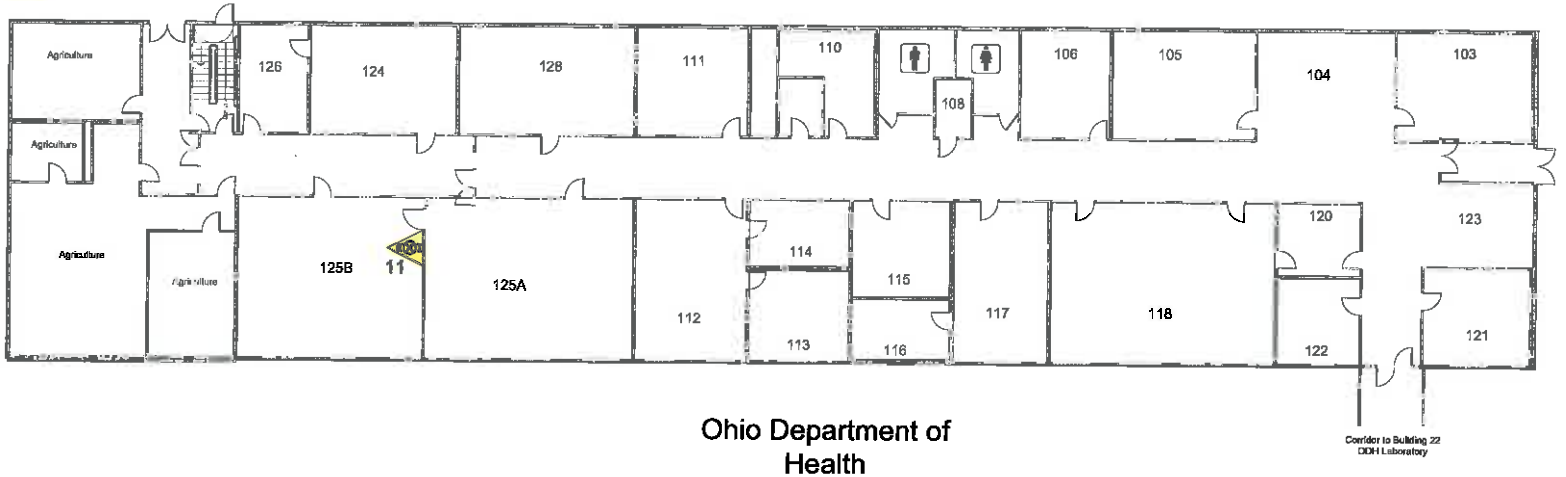
Temperature:_____

Performed By:_____



Ohio Department of
Health Laboratory
Building 22

Shower/Eye Wash



Ohio Department of
Health
Building 4