



Emergency Shower and Eyewash Performance Certification

Standard Operating Procedure (SOP)

Version 1. 10/18/2023

PURPOSE:

This SOP aims to establish the standard workflow for conducting EH&S performance certifications of emergency showers and eyewash stations. EH&S performance checks are performed in accordance with the American National Standards Institute (ANSI) Z358.1-2014: Emergency Eyewash & Shower Standard. If any issues are noted, this SOP also details the necessary steps for addressing concerns.

RESPONSIBILITIES:

- ☐ EH&S minimally conducts emergency shower and eyewash performance checks on a yearly basis.
 - ☐ EH&S is responsible for recording, documenting, and posting results of the performance checks.
 - ☐ If issues are noted, EH&S is responsible for posting appropriate notifications.
 - ☐ EH&S is accountable for submitting safety work orders to address any noted concerns that require repairs.
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PERFORMANCE TESTING:

I. Emergency Showers:

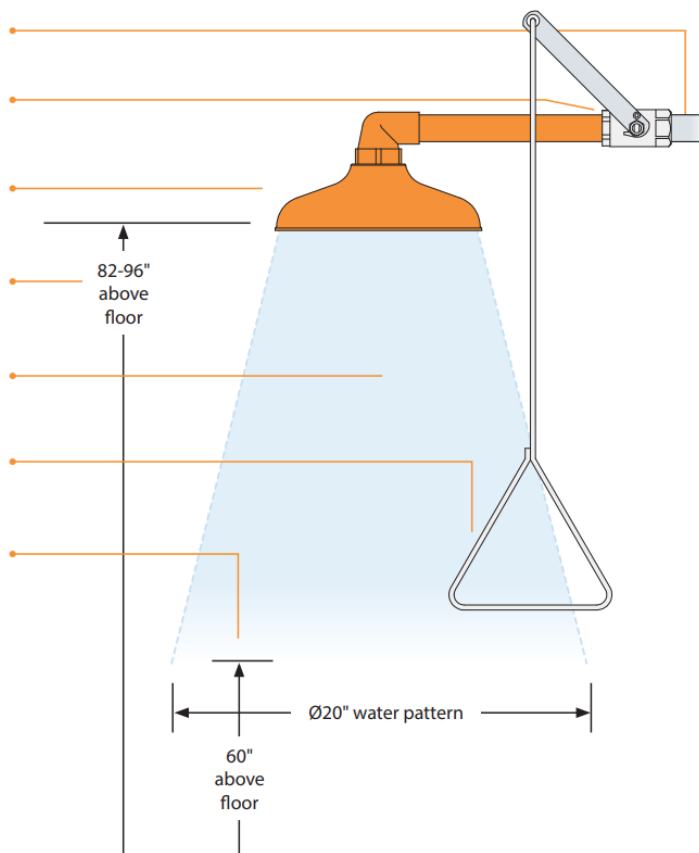
1. Visual inspection:
 - a. Confirm the safety shower is accessible and a 3x3 ft. area directly underneath the showerhead is free of any obstructions and clutter.
 - b. Visually inspect the pipes and connections for any signs of leaks.
 - c. Ensure the spray head is clean and free of contamination.
2. Using a Green Gobbler Safety Shower Test Cart or alternative means, ensure the following key parameters:
 - a. 20 gallons per minute flow rate
 - b. Temperature between 60-100°F

Emergency Showers

This checklist is a summary of the provisions of ANSI Z358.1-2014 relating to emergency showers. Please refer to the standard for a complete listing of these provisions.

All Guardian emergency showers are third-party certified to meet or exceed the provisions of ANSI Z358.1-2014.

- ☐ Water supply is sufficient to provide at least 20 GPM for 15 minutes. (Section 4.1.2, 4.5.5)
- ☐ Hands-free valve activates in one second or less and remains open until manually closed. (Section 4.2, 4.1.5)
- ☐ Shower delivers 20 gallons (75.7 liters) of water per minute for 15 minutes in the required pattern. (Section 4.1.2, 4.5.5)
- ☐ Height of water column is between 82" (208.3 cm) and 96" (243.8 cm) above the floor. (Section 4.1.3, 4.5.4)
- ☐ Center of the water pattern is at least 16" (40.6 cm) from any obstruction. (Section 4.1.4, 4.5.4)
- ☐ Easily located, accessible actuator is no more than 69" (173.3 cm) above floor. (Section 4.2)
- ☐ At 60" (152.4 cm) above the floor, the water pattern is at least 20" (50.8 cm) in diameter. (Section 4.1.4)
- ☐ If provided, shower enclosure has a minimum diameter of 34" (86.4 cm). (Section 4.3)



- ☐ **Location:** Install shower within 10 seconds (approximately 55 feet) of hazard, on the same level as hazard and with unobstructed travel path. Where strong acids or caustics are being handled, emergency showers should be located adjacent to the hazard, and an appropriate professional should be consulted for advice on the proper distance. (Section 4.5.2; B5)
- ☐ **Identification:** Identify shower location with highly visible sign. Area around shower shall be well-lit. (Section 4.5.3)
- ☐ **Water Temperature:** Water delivered by shower shall be tepid (60-100°F). (Section 4.5.6; B6)
- ☐ **Training:** Instruct all employees in the location and proper use of emergency showers. (Section 4.6.4)
- ☐ **Maintenance/Inspection:** Activate plumbed shower at least weekly. (Section 4.6.2) Inspect all emergency showers annually for compliance with standard. (Section 4.6.5)

II. Eyewash Stations:

1. Visual inspection:
 - a. Confirm the emergency eyewash is accessible and unobstructed.
 - b. Visually inspect the pipes and connections for any signs of leaks.
 - c. Ensure the spray heads are capped, clean, and free of contamination.
2. Ensure the following key parameters:
 - a. 0.4 gallons per minute flow rate
 - b. Temperature between 60-100°F

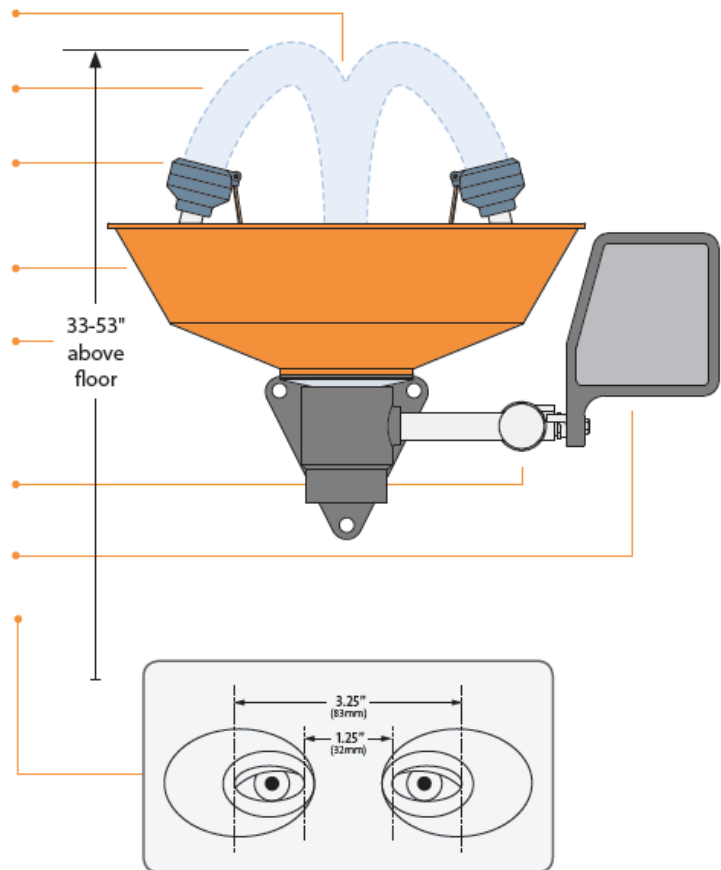


Eyewashes

This checklist is a summary of the provisions of ANSI Z358.1-2014 relating to emergency eyewashes. Please refer to the standard for a complete listing of these provisions.

All Guardian eyewash units are third-party certified to meet or exceed the provisions of ANSI Z358.1-2014.

- ☐ Controlled, low velocity flow rinses both eyes and is not injurious to user. (Section 5.1.1)
- ☐ Water flow is sufficiently high to allow user to hold eyes open while rinsing. (Section 5.1.7)
- ☐ Spray heads are protected from airborne contaminants. Covers are removed by water flow. (Section 5.1.3)
- ☐ Unit delivers at least 0.4 gallons (1.5 liters) of water per minute for 15 minutes. (Section 5.1.6, 5.4.5)
- ☐ Water flow pattern is positioned between 33" (83.8 cm) and 53" (134.6 cm) from the floor and at least 6" (15.3 cm) from the wall or nearest obstruction. (Section 5.4.4)
- ☐ Hands-free stay-open valve activates in one second or less. (Section 5.1.4, 5.2)
- ☐ Valve actuator is easy to locate and readily accessible to user. (Section 5.2)
- ☐ Unit washes both eyes simultaneously. Water flow covers area indicated on Guardian test gauge at no more than 8" above spray heads. (Section 5.1.8)



- ☐ **Location:** Install eyewash unit within 10 seconds (approximately 55 feet) of hazard, on the same level as hazard and with unobstructed travel path. Where strong acids or caustics are being handled, emergency eyewash unit should be located adjacent to the hazard, and an appropriate professional should be consulted for advice on the proper distance. (Section 5.4.2; B5)
- ☐ **Identification:** Identify eyewash location with highly visible sign. Area around eyewash unit shall be well-lit. (Section 5.4.3)
- ☐ **Water Temperature:** Water delivered by eyewash shall be tepid (60-100°F). (Section 5.4.6; B6)
- ☐ **Training:** Instruct all employees in the location and proper use of eyewash units. (Section 5.5.4)
- ☐ **Maintenance/Inspection:** Activate plumbed eyewash units at least weekly. (Section 5.5.2) Inspect all eyewash units annually for compliance with standard. (Section 5.5.5)

DOCUMENTATION

- ☐ Record the date and your initials on the written unit testing log.



- Document results in the linked [Smartsheet log](#).

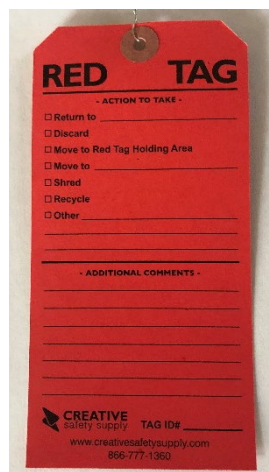
SAFETY WORK ORDERS

- ❑ Units that test outside of the following parameters must be tagged as “DO NOT USE”:

- Water temperature $\geq 120^{\circ}\text{F}$.
- Safety shower flow rate ≤ 5 gallons per minute.
- Emergency eyewash flow rate ≤ 0.1 gallons per minute.
- High velocity emergency eyewash units
- Completely non-functional units.



- Aside from the aforementioned benchmarks, all other nonconformances that are noted during the performance testing warrants posting of a standard 'red tag' to indicate repairs are needed to meet ANSI parameters.



- Facilities Management safety work orders need to be submitted for any unit that does not meet desired performance testing parameters.
 - Prepare a spreadsheet(s) that detail the specific concerns:
 - Create a separate spreadsheet for each building.
 - Parse out high priority issues (“DO NOT USE”) that warrant suspended use of the unit versus relatively other concerns (standard red tag) that do not warrant urgency.
 - Safety work order requests are to be submitted on a regular basis to the EH&S Facilities Management coordinator(s).
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WORK ORDER FOLLOW-UP

- Upon completion of a work order, the repaired unit must be re-tested.
 - If optimal parameters are met, update the Smartsheet log and remove the warning label.
 - If optimal parameters are not achieved, please adhere to previously-detailed SAFETY WORK ORDERS guidance and re-submit the work order.