

RAGAGEP: BUT IT'S NOT POSSIBLE!

by Lee Pyle, SCS Engineers

We are all trying to wrap our heads around how to implement and document Recognized And Generally Accepted Good Engineering Practices (RAGAGEP). There are so many elements to review when codes and standards are released it is difficult to know where to start.

One place to start is with the industry improvements associated with life safety. International Institute of Ammonia Refrigeration (IIAR) ANSI Standard 2, *Safe Design of Closed-Circuit Ammonia Refrigeration Systems*, includes specifications for new construction and can be a tool to ensure your engine room is keeping up with industry standards especially when it concerns life safety.

One change from previous versions of the IIAR Standard 2 is the number and location of eyewash/safety showers. IIAR 2 (2014) is now more in line with OSHA expectations.

Section 6.7.1 of IIAR Standard 2 (2014) states *“Each machinery room shall have access to a minimum of two eyewash / safety shower units, one located inside the machinery room and one located outside of the machinery room, each meeting the requirements in Section 6.7.3. Additional eyewash / safety shower units shall be*

installed such that the path of travel in the machinery room is no more than 55 ft to an eyewash / safety shower unit.” In addition, Section 6.7.2 states “The path of travel within the machinery room to at least one eyewash / safety shower unit shall be unobstructed and shall not include intervening doors.”

EXCUSES:

- But my plant is in Minnesota, North Dakota, Wisconsin, New York, Pennsylvania, Indiana, Ohio, etc. where it snows and freezes in the winter. It is impossible to put an eyewash/safety shower outside the engine room in these locations.
- But my plant is in an area prone to vandalism. It is impossible to keep an eyewash/safety shower operational outside the engine room.

Well, where there is a will (or the threat of a RAGAGEP citation), there is a way. There are many other industries outside of the ammonia refrigeration world that require eyewash/safety shower stations be located outside where there is the potential to freeze/snow. Manufacturers are familiar with the requirements and the needs of these other industries in these situations. Freeze-resistant eyewash/safety showers are available for purchase. These units include



thermostatically controlled electric heat traced cable/tape as well as an insulation jacket to protect the cable/tape. Some models are rating to prevent freezing down to an ambient temperature of -30°F.

These units are also equipped with automatic thermal actuator bleed valve that opens when internal water temperature drops below 35°F and will not close until the temperature reaches 45°F so the unit is protected against freezing.

But OSHA requires that the eyewash/safety shower provide tepid water (60-100°F). Temperature control for some of these outdoor units is regulated by 120 volt thermostatically controlled heat traced cable that provides the energy needed to keep the unit at optimal temperature.

In addition to purchasing a unit that is designed to handle the low winter temperatures experienced at many locations, the unit needs to be protected.



One facility has installed a secured fencing/gate system to protect the unit. The bonus to this design is that there is another secured barrier to the engine room. This also protects the emergency stop and ventilation switches from vandalism. Still accessible as one is exiting the room (through a door equipped with a push-bar) but not prone to vandalism. The facility pictured used to keep the emergency stop and ventilation switches in a locked box. Now the box can be left unlocked.

Also note that the gate exiting the secured-eyewash area swings outward

and is equipped with panic hardware for compliance with IAR-2 (2014).

There are many resources when researching a low-temperature eyewash/safety shower station. See diagram on page 9.

Guardian: www.eyewash.com/?_kk=haws%20safety&_kt=e939c1eb-2733-4792-bc78-6416a6ef0212&gclid=CjwKCAiAksvTBRBFEiwADSBZfHWa8jo0FdrRAOo96ecp1K_5seadiogatsRPqMsDMVxbQNpLUNa8JhoC52YQAvD_BwE

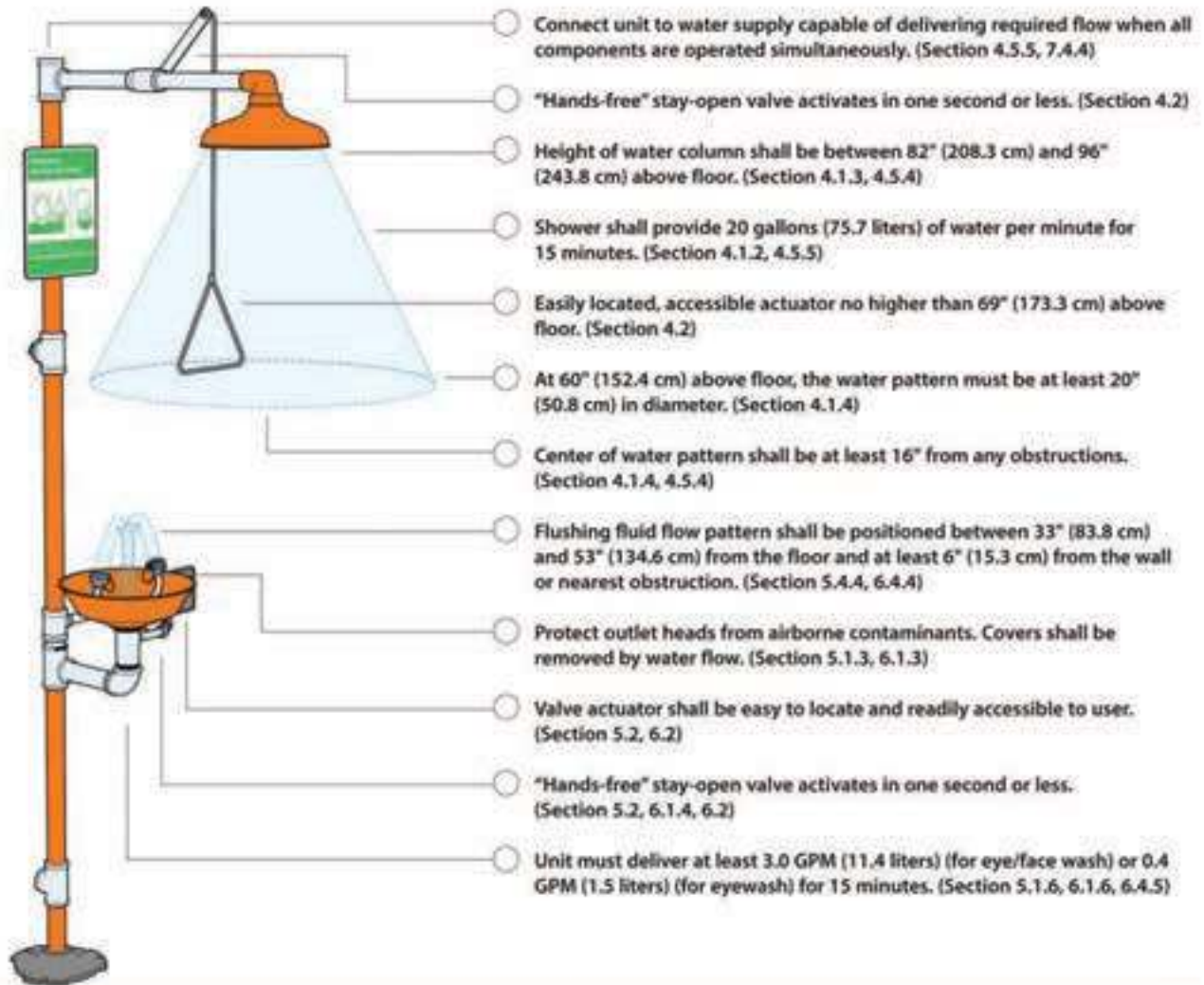
Global Industrial: www.globalindustrial.com

ANSI Z358 Highlights

This checklist is a summary of the provisions of ANSI Z358.1-2014 relating to eye or eye/face wash and shower combination stations. For a complete listing of these provisions, please refer to our ANSI Compliance Checklist, available online at gesafety.com or call

for your free copy. Please refer to the standard for a complete listing of these provisions.

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



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| location | Install safety station within 10 seconds (approximately 55 feet) of hazard, on the same level as hazard and with unobstructed travel path. (Section 7.4.2; B5) |
| identification | Identify safety station with highly visible sign. Area around safety station shall be well-lit. (Section 7.4.3) |
| water temperature | Water delivered by safety station shall be tepid (80-100°F). (Section 7.4.5) |
| training | Instruct all employees in the location and proper use of safety station. (Section 7.5.4) |
| maintenance/inspection | Activate safety station at least weekly. (Section 7.5.2) Inspect annually for compliance with standard. (Section 7.5.5) |