Criteria Document:

SELECTION, INSTALLATION, and MAINTENANCE of
EYE-FACE WASH/DRENCH HOSE and SAFETY SHOWERS

EYE-FACE WASH/DRENCH HOSE COMBINATION UNITS

Definition: A combination unit is a device that provides water to the eyes and face upon activation without the need to be held in the user’s hand while operating and with the capability of serving as a drench hose when held.

Provision: (Existing Laboratories)
- Plumbed eye-face washes shall be provided to laboratories where there is a risk of eye irritation or damage from chemical or biological exposure where no such safety devices exist.
- Plumbed units shall be manufactured and installed to comply with the most current edition of the ANSI Standard Z358.1 for eye-face wash units.
- A faucet-mount eye-face wash* device which is compliant with the most current edition of the ANSI standard can be installed in existing laboratories where plumbed eyewashes do not currently exist.

Provision: (New or Renovated Laboratories)
- EH&S shall be consulted for a determination as to the need, the number required, and the location of units.
- Plumbed units shall be manufactured* and installed to comply with the most current edition of the ANSI Standard Z358.1 for combination eye-face wash/drench hose units. A mixing valve shall be used to provide tepid water (70-80 degrees Fahrenheit).

Performance:
- Units must be capable of providing water to both eyes and the face simultaneously at a velocity low enough to be non-injurious to the user.
- Nozzles shall be protected from airborne contaminants; the removal of any such protective covers shall not require a separate motion by the operator when activating the unit.
- Units shall be plumbed and capable of delivering water at a minimum rate of 3 gallons per minute (gpm) at an inlet pressure of 30-lbs./sq. in. for 15 minutes.
- Units shall be designed to provide enough room to allow the eyelids to be held open with the hands while the eyes are in the flushing fluid stream.
- The flow of flushing fluid shall remain ‘on’ without requiring the use of the operator’s hands and remain ‘on’ until intentionally shut off. The valve shall go to ‘off’ from ‘on’ in one second. The valve actuator shall be large enough to be easily located and operated by the user.

* See attached description of preferred models.
Manufacturer’ Performance & Testing Procedures
Manufacturers shall certify the following:
- The flow rate is at least 3 gpm at an inlet pressure of 30lbs./sq. in.
- The flushing streams rise to approximately equal heights.
- The flushing fluid will wash both eyes simultaneously at a velocity low enough to be non-injurious to the user.
- Manufacturers shall provide operation, inspection, and maintenance instructions with equipment, which shall be accessible to maintenance and inspection personnel.
- The unit is compliant with ANSI requirements for both eye-face washes and drench hoses.

Installation
- Units shall be positioned between 33 and 45 inches from the level on which the user stands and 6 inches from the nearest wall or other obstruction.
- When the unit is installed, the valve shall be operated to determine that both eyes will be washed simultaneously at a velocity low enough to be non-injurious to the user.
- Units shall be in an accessible location no farther than 25 feet from the farthest point at which hazardous materials are used.
- Access shall not require passing into any space that is separated from the site of hazardous materials by a door, even if the door is routinely left open.
- If a unit swivels, testing and use should be performed over a sink; when not in use the unit can be positioned in a manner that does not obstruct the sink.
- Units installed in new or renovated facilities shall provide tepid water at a minimum of 3 gpm for 15 minutes.
- When installation involves penetration of suspected asbestos-containing counter top material, Facilities must contact EH&S before the initiation of work.
- At the end of the installation process, units shall be flushed for one minute to determine proper water delivery and temperature and to remove any metal shavings or other debris.

Maintenance
- As per ANSI 358.1, units shall be activated weekly by laboratory personnel to verify proper operation; testing shall be documented on cards or tags maintained in the area of the unit.
- All laboratory personnel who may be exposed to hazardous materials shall be instructed on the location, operation, and weekly verification procedures.
- Eyewashes that do not appear to be operating properly shall be reported to Facilities.

OVERHEAD SAFETY SHOWERS

Definition: A plumbed device capable of providing water to the entire body upon activation that remains ‘open’ until intentionally shut off.
- Safety showers shall be manufactured and installed to comply with ANSI 358.1.
- Safety showers shall be installed based on a risk assessment by EH&S or for purposes of statutory compliance.
- Risk assessment shall take into account the volume, toxicity, and intended uses of specific materials. EH&S, Facilities, and Design and Construction shall collaborate on the siting of safety showers.
- Safety showers shall be in an accessible location, in the corridor, no farther than 25 feet from the laboratory(s) requiring access to a safety shower.
- Safety showerheads shall be located at the approximate midpoint between corridor walls. They shall be activated by a ‘delta’ or circular ring attached to a rigid (not chain link) metal bar located near (within 12 inches) one of the walls.
- Safety showers shall provide water at a minimum flow of 20 gpm; newly installed units shall provide tepid (70-80 degrees Fahrenheit) water.
- Safety showers should be activated as per ANSI 358.1 to verify proper operation; testing shall be documented on cards or tags maintained in the area of the unit.
- Floor drains are not to be installed.
- Safety showers shall be inspected and tested annually by Facilities.
- Safety showers shall comply with other provisions of ANSI 358.1 or other requirements of the local authority having jurisdiction as per discussion with EH&S.

**SIGNAGE: OVERHEAD SAFETY SHOWER and EYE-FACE WASH/DRENCH HOSE COMBINATION UNITS**

- All locations must be identified with a highly visible sign positioned so that it is visible within the area served by the unit.
- For Safety Showers located in the corridor, a tent sign shall be used.
- Signage recommendations will be made by EH&S.

EW1022
EYE WASH/DRENCH HOSE UNIT, DECK MOUNTED

NOTES:
1. EACH GS–PLUS SPRAY HEAD HAS A “FLIP–TOP” DUST COVER, INTERNAL FLOW CONTROL AND FILTER TO REMOVE IMPURITIES FROM THE WATER FLOW.
2. HOSE SHOULD NOT BE USED IN APPLICATIONS WHERE WATER PRESSURE EXCEEDS 90 PSI. HOSE SHOULD BE INSPECTED PERIODICALLY FOR DETERIORATION.

MEASUREMENTS MAY VARY ±1/4".

Drawing Number: ____________________________ Revision Number: 040703–TPS