Safety & Risk Management Policies and Procedures

Title: Emergency Eye Wash & Shower Policy
Date: August 2013, Rev1-28-2020

Rationale: The Occupational Safety and Health Administration (OSHA 29CFR 1910.151) requires that suitable means for flushing and quick drenching of the eyes and body must be provided near any area where corrosive materials are used.

Goals: To provide access to emergency eyewash stations for employees who have been exposed to corrosive or other injurious chemicals/materials in an effort to reduce serious or permanent damage to skin or eyes.

Policy: Department Heads (Chairs/Supervisors) that have areas where corrosive materials or other injurious chemicals/materials are used are responsible to review/understand and implement this policy and for ensuring that emergency eyewash stations and safety showers are installed and maintained before allowing work to be performed.

Procedure: The Emergency Eye Wash Policy includes information regarding:

- Roles and Responsibilities
- Proper training information
- Necessary inspections and testing
- Eye wash station locations
- Inspection checklist forms

Emergency Eye Wash Policy and Procedure

In most cases, the *initial first aid treatment for a chemical splash* is to rinse the affected area with water for at least 15 minutes prior to seeking any other medical treatment. It is often critical that the eyes be flushed during the first few seconds following a chemical splash with contaminant free water if injury is to be minimized. That's why it's important that eyewash stations and showers are kept in proper working order and inspected with a documented program.

Chemical burns can continue to burn and cause serious tissue damage without significant pain after exposure due to a delayed effect. Chemical exposure to corrosive materials should be flushed immediately – a lag time of 2 - 3 minutes can cause substantially more severe injuries. Ocular burns can result in cornea damage, cataracts, and/or complete loss of vision. *Flushing should be initiated within the first few seconds of exposure.*

Hydrofluoric acid is a particularly hazardous caustic agent. Exposure to hydrofluoric acid must be immediately flushed with water for 30 minutes, followed by an application of a topical ointment, such as a calcium gluconate solution. **Seek medical attention immediately**.

Proper eye protection (and an additional face shield as well for particularly strong/concentrated corrosive chemicals) should always be worn when working with hazardous chemicals.

Roles and Responsibilities

Department

- Dept. Head is responsible to implement and manage the process.
- Dept. Head - identify a department representative (coordinator) responsible for inspection/testing and provide their name and e-mail to the Safety Office.
- Ensure units are inspected and flushed per program requirements (periodic management).
- Ensure that inspections forms are completed & filed - (monthly eyewash and 1/4 – showers plus a separate annual flow rate test) for auditing purposes.
- Provide all affected employees/students with training on use and location of eyewash/shower units.
- Turn in work orders to Physical Plant immediately when repairs are needed.

Safety & Risk Management Office

- Develop and help coordinate emergency eyewash/shower program.
- Maintain a list of departmental representatives assigned to inspect units.
- Conduct periodic/annual audits of program compliance and report status.
- Provide inspection tags to departmental representatives.

Requirements

Training

- All employees/students who might be exposed to a chemical splash need to be trained by their department/supervisor or lab instructor on the following topics:

    1. The specific location of the units serving that area.
    2. How to properly activate & use the specific type of system.

3. Eyewash – eye injury - Individuals should be instructed to hold the eyelids "open" and roll the eyeballs continuously so fluid will flow on all surfaces of the eye and under the eyelid, and then seek medical attention. Bring a copy of the SDS to medical facility (print from CHIMERA chemical inventory system).
4. Shower – skin/body injury – Remove all contaminated clothing, flush body for a minimum of 15 minutes, then seek medical attention. Bring a copy of the SDS to medical facility (CHIMERA).

General

- Eyewash/shower stations should be available for immediate use and located within 10 seconds of the hazardous operations (approximately 50 feet), on the same level, and have a pathway that is always clear of obstructions and slip/trip hazards.
- Highly visible signs must be posted at/near the station and the area should be well lighted.
- The activating valves/levers should be highly visible and easy to use, requiring no more than a one-handed operation. Once the lever has been activated, no hands should be needed to maintain water flow.
- Nozzles must be protected with auto-opening dust covers.
- The eyewash/shower station should provide a "minimum" of a 15 minute uninterrupted flush of lukewarm water (80 – 90 deg is preferred) provided by a temperature-mixing valve.

Inspection and Testing Protocol

- **Eyewashes** should be activated **monthly** for a period long enough to verify operation and ensure that flushing fluid is available and clean. This flushing helps clean out any rust, scale deposits, or bacteria that may accumulate and cause additional eye injury.

  The **monthly** inspections should include the following:

  1. Ensure that access to the eyewash is unobstructed.
  2. Visually inspect the eyewash to ensure that there are no broken parts, leakage, etc.
  3. Verify that protective eyewash covers are properly positioned, clean, intact, and operate properly when activated.
  4. Activate eyewash unit - flush pipes: check that the spouts are clean and that the water flow is effective and continuous. Operate the eyewash for 1 minute.
  5. The unit must deliver low-pressure "soft" flow to both eyes so it does not injure the open eyes.
  6. Check that the unit's valve activator remains open without the use of the operator's hands.
  7. Ensure each station has a highly visible emergency sign.
  8. For portable (non-plumbed units), verify that the expiration date has not been exceeded and fluid levels are full. Follow manufacturer's instructions.
  9. Ensure that problems identified during the monthly inspection are turned in to Physical Plant immediately.

10. Maintain an inspection tag for this monthly testing. Tags are available free of charge from the Safety Office (ext. 1677).
11. Use and complete and file the written inspection checklist inspection form for all testing.

- **Annual Eyewash Test**
    1. **Verify flow rate of the device annually.** Let the water run for exactly one minute to verify collection of at least 1.5 liters (0.4 gallon) of water for eyewash alone or 11.4 liters (3.0 gallons) for an eye/face wash unit with a minimum water pressure of 30 PSI.
    2. Check for tepid water temperature (80 – 90 deg preferred)
    3. Maintain and file the annual inspection checklist for auditing.

- **Showers** should be activated on a **quarterly** basis.

  The **quarterly** inspections should include the following:

    1. Ensure that access to the shower is unobstructed.
    2. Visually inspect the shower to ensure that there are no broken parts, leakage, etc.
    3. Check that the flow is effective and continuous.
    4. Check that the unit remains activated without the use of the operator's hands.
    5. Maintain an inspection tag for this testing. Tags are available free of charge from the Safety Office (ext. 1677).
    6. Ensure that problems identified during the inspection are turned in to Physical Plant immediately.
    7. Maintain and file the quarterly inspection checklist for all testing.

- **Annual Shower Test**
    1. **Flow rate of the device should be conducted annually.** Verify collection of at least 75.7 liters (20 gallons) of water at a minimum water pressure of 30 PSI. Run for a 15 second increment to fill a five gallon bucket.
    2. Maintain an inspection tag for this testing. Tags are available free of charge from the Safety Office (ext. 1677).
    3. Ensure that problems identified during the inspection are turned in to Physical Plant immediately.
    4. Maintain and file the annual inspection checklist for auditing.

Inspection Information

For eyewash/showers that are not equipped with a proper drain, you can use a bucket to collect drain water and drain in nearby sink OR use the 5 gallon bucket with sump pump and hose connection, and drain into a nearby sink. For testing of shower units, you can use a shower tester tent and bucket OR use the special stainless steel hose adapter and hose and drain to a nearby sink. This is most effectively conducted by two people.

For the annual inspection, flow meters or buckets with known volumes (5 gallons for shower test, 1.5 liters for eyewash test) and a watch can be used to make sure the units are in proper

working order with the correct amount of flow. A thermometer should be used to determine tepid water temperature until the tester is confident of water temperature.

Departments are responsible to store & secure testing equipment and ensure they are maintained in good condition.

Inventory Summary

FJS:	32 eyewash stations + new wing
	26 combo eyewash/shower stations
	58 total stations + new wing
Fine Arts:	1 combo eyewash/shower
Studio Arts:	2 eyewash units
Physical Plant:	1 eyewash
Central Plant:	2 eyewash (1 is combo shower in chemical room)
Robertson Pool Pump Room:	1 combo eyewash/shower
Campus Total:	**64 stations + FJS new wing**

MASTER INVENTORY & PERSONNEL LIST

Facility	**Location of Units**	**Assigned to :**	**E-mail**
Alma Thomas Fine Arts	Print-Making Studio- ES01	Seth Daulton	daultons
Studio Arts	Studio 100- E01	Chung Moses Tsai	tsaim
Studio Arts	Studio 101- E01	Chung Moses Tsai	tsaim
Central Plant	Chiller Room – E01	Ed Trevino (James Garcia)	garcia24
Central Plant	Chemical Storage Rm	Ed Trevino (James Garcia)	garcia24
Robertson Pool	Basement Mech. Rm	Ed Trevino (James Garcia)	garcia24
Physical Plant	Men's Room – E01	Randy Schiller (Tom Williams)	williamt2
Fondren-Jones Science Hall	See emergency eyewash map	Lee Fellows (Willis Weigand)	fellowso, weigandw

Monthly Eyewash/Shower Inspection Checklist

Date: _____ Facility: _____ Room: _____

Eyewash Monthly	**Yes**	**No**
Eyewash activated & flushed of contaminants (1 minute)		
Activator lever remains open without holding it down (open & close lever 5 times)		
Eyewash covers are present, clean, open & close properly		
Water flow is soft/even and flowing properly from both eyepieces/nozzles		
Emergency sign is posted		
Area is well lighted		
Access is unobstructed		
Inspection tag is signed & dated		

Shower Quarterly	**Yes**	**No**
Shower activated & flow is effective & continuous		
Access is unobstructed		
Activator lever/chain remains open without holding it down		
Emergency sign is posted		
Area is well lighted		
Inspection tag is signed and dated		

Room: _____

Eyewash Monthly	**Yes**	**No**
Eyewash activated & flushed of contaminants (1 minute)		
Activator lever remains open without holding it down (open & close lever 5 times)		
Eyewash covers are present, clean, open & close properly		
Water flow is soft/even and flowing properly from both eyepieces/nozzles		
Emergency sign is posted		
Area is well lighted		
Access is unobstructed		
Inspection tag is signed & dated		

Shower Quarterly	**Yes**	**No**
Shower activated & flow is effective & continuous		
Access is unobstructed		
Activator lever/chain remains open without holding it down		
Emergency sign is posted		
Area is well lighted		
Inspection tag is signed and dated		

Annual Eyewash/Shower Inspection Checklist

Date: _____ Facility: _____ Room: _____

Eyewash Annual	**Yes**	**No**
Flow rate tested & exceeds 0.4 gpm or 1.5 lpm for eyewash only		
Flow rate tested & exceeds 3.0 gpm or 11.4 lpm for eyewash/face combo unit		
Tepid water temperature - Note SU does not have tempered water valves – all cold		x
Passed eyewash gauge test		
Inspection tag signed & dated – (mark annual test)		

Shower Annual	**Yes**	**No**
Flow rate tested & exceeds 20 gpm or 75.7 lpm		
Tepid water temperature - Note SU does not have tempered water valves – all cold		x
Inspection tag signed & dated		

Room: _____

Eyewash Annual	**Yes**	**No**
Flow rate tested & exceeds 0.4 gpm or 1.5 lpm for eyewash only		
Flow rate tested & exceeds 3.0 gpm or 11.4 lpm for eyewash/face combo unit		
Tepid water temperature - Note SU does not have tempered water valves – all cold		x
Passed eyewash gauge test		
Inspection tag signed & dated – (mark annual test)		

Shower Annual	**Yes**	**No**
Flow rate tested & exceeds 20 gpm or 75.7 lpm		
Tepid water temperature - Note SU does not have tempered water valves – all cold		x
Inspection tag signed & dated		

Date:

Approved (signature and date):

Supervisor _____

Director of Physical Plant _____

AVP for Facilities _____

Vice President for Fiscal Affairs If needed_____

Copy:

All supervisors _____

Related crafts _____

Department Heads _____ _____

VP's _____ _____

President _____