TEXAS STATE TECHNICAL COLLEGE

STATEWIDE OPERATING STANDARD

No. GA 1.6.9	**Page 1 of 7**	**Effective Date: 03/04/16**
DIVISION:	**General Administration**	
SUBJECT:	**Eyewash and Shower Stations**	
AUTHORITY:	**29 CFR 1910.151(c), ANSI/ISEA Z358.1-2009**	
PROPOSED BY:	**Tom Hooker**	
TITLE:	**Executive Director, Governance, Risk, and Compliance**	**Date: 03/04/16**
RECOMMENDED BY:	***Original Signed by Ray Rushing***	
TITLE:	**Vice Chancellor & Chief Legal Officer/General Counsel**	**Date: 03/04/16**
APPROVED BY:	***Original Signed by Mike Reeser***	
TITLE:	**Chancellor**	**Date: 03/04/16**

STATUS: Approved by VCs 03/04/16

HISTORICAL STATUS: New/Proposed 10/2015

COMPLIANCE

In accordance with ANSI/ISEA Z358.1-2009, the College will provide suitable quick drenching or flushing stations in areas where employees and students are exposed to potentially injurious materials.

DEFINITIONS.

Combination unit - A unit that has any combination of the following equipment: emergency shower, eyewash, eye/face wash or drench hose.

Drench hose - A supplemental device consisting of a flexible hose connected to a flushing fluid supply and used to irrigate and flush face and body areas. Areas that require eyewashes can only utilize drench hoses, if a plumbed or self-contained eyewash is also available in that area, or if the drench hose is designed to meet the definition of a plumbed or self-contained eyewash.

Emergency shower - A device specifically designed and intended to deliver flushing fluid in sufficient volume to cause that fluid to cascade over the entire body.

Personal eyewash bottle - A supplemental device to plumbed or self-contained eyewashes, which can deliver immediate flushing fluid to the eyes or body.

Plumbed eyewash - An eyewash unit permanently connected to an uninterruptible water supply that is capable of delivering a minimum of 0.4 gallons per minute (GPM) for 15 minutes.

Potentially Injurious Material- Includes acids, caustics, and any additional substances or compounds that have the capability of producing adverse effects on human health and safety.

Areas where Potentially Injurious Materials are likely to be located include laboratories, storerooms and other work areas where any of the following type materials are stored and/or used including, but not limited to:

-bleach
-formaldehyde
-phenol
-liquids with pH equal to or less than 2 or greater than 12.5
-biotoxins
-organic solvents
-biological materials that are at BSL 2 or greater
-radioactive materials
-Pesticide storage or mixing facilities
-Battery repair areas
-Acid neutralization tank storage areas.

Self-contained eyewash - A stand-alone eyewash device containing flushing fluid that is capable of delivering a minimum of 0.4 GPM for 15 minutes.

PERTINENT INFORMATION

This policy applies to operations at TSTC where employees or students may be exposed to potentially injurious materials

Should portions of this policy conflict with any applicable building codes or other laws, then such laws shall take precedence over these guidelines.

The Occupational Safety and Health Administration (OSHA) regulation 29 CFR 1910.151 (c) specifies where and when emergency eye wash and shower equipment must be available. The American National Standards Institute (ANSI) standard Z358.1-1990 (revised in 2004), "Emergency Eye Wash and Shower Equipment" provides guidance for selecting, installation, operation and maintenance of this equipment to meet OSHA requirements.

All reasonable efforts shall be made to meet the requirements specified in the most recent edition of the ANSI Standard for the design, performance, installation, use, and maintenance of emergency eyewashes and showers.

Emergency eyewashes and showers are not a substitute for the use of personal protective equipment (glasses, goggles, gloves, aprons, etc.). Contact the Safety, Health and Environmental Affairs Officer or campus Additional Duty Safety Officer (ADSO) for additional information or assistance in

determining areas where emergency eyewashes and showers are required.

ROLES AND RESPONSIBILITIES

1. Instructional Program Chairs and Staff Department Heads:

a. Ensure that emergency eyewashes and showers are provided for all areas with potentially injurious materials as defined in Paragraph 2, above.
b. Ensure that emergency eyewashes and showers located in all areas of responsibility are tested and inspected as specified in this policy. This includes weekly testing of plumbed eyewashes and showers and monthly inspections of those stations.

2. Instructors/Staff Department Supervisors:

a. Should collaborate with Program Chair or Department Head to ensure that emergency eyewashes and showers are provided for laboratories and other areas as required by this policy.
b. Will ensure that plumbed emergency eyewashes and showers installed in their areas are tested and inspected weekly and to provide documentation as well. (inspection tags)
c. Are responsible for reporting problems with safety showers and eyewashes to the Safety, Health and Environmental Affairs Officer and Physical Plant.
d. Ensure that all employees and students using the area served by the safety shower and eyewash are familiar with the location and operation of the equipment.

3. Engineering Projects Office:

a. Assists campus personnel or units with the selection and installation of emergency eyewashes and showers that meet the requirements of the campus program.

4. Physical Plant:

a. Will be responsible for the proper installation and repair of existing safety showers and eyewash stations.
b. Will notify Safety, Health and Environmental Affairs once repairs are made.

5. Safety, Health, and Environmental Affairs (SHEA) Officer:

a. Serves as the campus subject matter expert on safety showers and eyewashes and will become familiar with all applicable rules and standards.
b. Assists in the development and maintenance of the campus program for emergency eyewashes and showers.
c. Assists campus departments with the selection of emergency eyewashes and showers that meet the requirements of the campus program.
d. Verifies that emergency eyewashes and showers in a given area meet the requirements of this campus program during EH&S inspections.
e. Will ensure that all safety showers and eyewashes are flow tested upon installation and flow and function test them annually thereafter to verify operating conditions. A barrel with drain capability, measuring tape, thermometer, and timer are required to test showers and eyewashes. Verify compliance and record the following data:

-Water Pressure
-Water Flow Rate
-Time Water Ran
-Water Temperature
-Serial Number of Unit
-Building Number

REQUIREMENTS

1. Emergency Shower Requirements

a. Unless expressly approved by the Safety, Health and Environmental Affairs Officer due to specific circumstances, only plumbed emergency showers permanently connected to a source of potable water will be used.

b. Heads:
   i. Positioned 82"-96" from floor
   ii. Spray pattern will have a minimum diameter of 20" at 60" above the floor
   iii. Flow Rate equals 20 gallons per minute (GPM) at 30 pounds per square inch (PSI)
   iv. The center of the spray pattern shall be located at least 16 inches from any obstruction

c. Valves:
   i. Activate in one second or less
   ii. Stay-open valve (no use of hands)
   iii. Valve remains on until the user shuts it off

d. Location:
   i. Emergency shower shall be located in an area that requires no more than ten seconds to reach.
   ii. Shower location shall be in a well-lit area and identified with a sign
   iii. ower shall be located on the same level as the hazard
   iv. The perimeter of the area (e.g., 3 ft x 3 ft) directly under the showerhead shall be demarcated.

e. Maintenance and Training:
   i. Plumbed emergency showers will be activated weekly to verify correct operation
   ii. All employees and students who might be exposed to a chemical splash shall be trained in the use of the equipment
   iii. All showers shall be inspected annually to ensure they meet with ANSI Z358.1 requirements.

2. Eye Wash Station Requirements

a. Unless expressly approved by the Safety, Health and Environmental Affairs Officer due to specific circumstances, only plumbed eyewash stations permanently connected to a source of potable water will be used.

b. Heads:
    i. Positioned 33"-45" from floor
    ii. Positioned 6" from wall or nearest obstruction
    iii. .4 gallons per minute (GPM) for 15 minutes for plumbed units shall provide flushing fluid at 30 PSI
    iv. Emergency eyewash nozzles shall be protected from airborne contamination. Whatever means is used to afford such protection, its removal should not require a separate motion by the operator when activating the unit.

c. Valves:
    i. Activate in one second or less
    ii. Stay-open valve (leaving hands free)

d. Location:
    i. Eyewash station shall be located in an area that requires no more than ten seconds to reach.
    ii. The location of the eyewash station shall be in a well-lit area and identified with a sign
    iii. Eyewash stations shall be on the same level as the hazard

e. Maintenance and Training:
    i. A plumbed eyewash station shall be activated weekly to verify proper operation
    ii. ll students and employees who might be exposed to a chemical splash shall be trained in the use of the equipment
    iii. ll eye/face wash stations shall be inspected annually to ensure they meet ANSI Z358.1 requirements

3. Eye/Face Wash Station Requirements

a. Heads:
    i. Positioned 33"-45" from floor
    ii. 6" from wall or nearest obstruction
    iii. Large heads to cover both eyes and face or regular size eyewash heads plus a face spray ring
    iv. Three gallons per minute (GPM) for 15 minutes

b. Valves:
    i. Activate in one second or less
    ii. Stay-open valve (leaving hands free)

c. Location:
    i. Eye/face wash shall be located in an area that requires no more than ten seconds to reach.
    ii. The location of the eye/face wash station shall be in a well-lit area and identified with a sign
    iii. Eye/face wash stations shall be on the same level as the hazard

d. Maintenance and Training:
    i. A plumbed eye/face wash station shall be activated weekly to verify proper

operation and
ii. All students or employees who might be exposed to a chemical splash shall be trained in the use of the equipment,
iii. All eye/face wash stations shall be inspected annually to make sure they meet ANSI Z358.1 requirements

4. Personal Eyewash bottle station and Drench Hose Requirements

a. A personal eyewash bottle station is a supplementary station that supports an ANSI approved plumbed or gravity- fed unit by delivering immediate flushing fluid, but cannot be a substitute. The personal eyewash units can provide immediate flushing when they are located near the work-stations , but care must be exercised as they have an expiration date.

b. A drench hose is a flexible hose connected to a water supply and used to irrigate and flush eyes, face and body areas. Hand-held drench hoses support shower and eyewash units but shall not replace them according to the ANSI standards.

EMERGENCY PROCEDURES

1. Eyewashes, Drench Hoses, and Eyewash/Facewash Units

a. Assist the victim to get to the eyewash. Sight may be impaired.
b. Activate the unit using the hands-free valve.
c. Hold the eyelids open with the fingers if necessary.
d. Place the eyes in the stream of water.
e. Flush for 15 minutes.
f. Get medical attention.

2. Emergency Showers and Drench Hoses

a. Assist the victim to the shower. Do not let them slip and fall.
b. Activate the unit using the hands-free valve.
c. Put modesty aside. If possible, remove contaminated clothing. (Rinsing contaminated clothing will wash chemicals out of the clothing and onto the skin).
d. Flush for 15 minutes.
e. Get medical attention

3. Additional Considerations

a. Assist the victim with procedures. Shield them using fire blankets if necessary. Provide alternative clothing (lab coats, hospital scrubs, fire blankets can be used as necessary).
b. Although the contaminated water from a deluge shower or eyewash is already diluted, take the necessary precautions when cleaning the area.
c. Drains may not be installed under some emergency showers intentionally. Sanitary sewer drains from any fixture (floor drains, sinks, etc.) have an S-trap that contains a small amount of water to prevent sewer gas from entering the buildings. Because of the infrequent use of an emergency shower, drains under emergency showers will go dry and allow sewer gas into the building. If one is present, pour some water down

the drain at regular intervals.

TEST FAILURES, MALFUNCTIONS, AND DEFICIENCIES

a. Any malfunction or deficiency noted during weekly activations, regular/annual inspections, or during an emergency activation will result in removing the unit out of commission and placing a tag "DO NOT USE".
b. Notify the Departmental Supervisor and the Safety Health and Environmental Affairs Officer.
c. Inform Physical Plant by initiating a repair work request.

TRAINING

a. Students and employees will receive documented training during laboratory and chemical safety training on the proper procedure for eyewash and shower use during an emergency.
b. Training to perform weekly activations and maintain minimum performance requirements for eyewash and shower equipment will be is provided during annual testing or safety inspections.

PERFORMANCE STANDARDS

1. TSTC implements the Eyewash and Shower Station SOS for the safety of TSTC employees and students.

2. The Eyewash and Shower Station policy is reviewed and updated annually by the TSTC Risk Manager and Safety Committee.