Authored By: Tyler Brown	Blanchard Refining Company LLC Galveston Bay Refinery	Doc No.: RSW-000004-GB Rev No: 0
Doc Custodian: Safety Supervisor Approved By: Health & Safety Supervisor	EPR-6 Emergency Shower and Eyewash Stations	Refinery Safe Work Procedure
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1.0 Purpose

The purpose of this practice is to define the requirements for the inspection and testing of emergency shower and eyewash stations used throughout the Refinery and to provide guidance for complying with the American National Standard for Emergency Eyewash and Shower Equipment, ANSI Z358.1-2004 and MPC SAF-94003. This guidance addresses water temperature and distance for the placement of emergency eyewash and shower equipment.

The standards summarized in this document are for reference purposes. Consult the actual ANSI standard for a detailed analysis.

2.0 Scope

This document applies to all units/areas requiring emergency eyewash and shower equipment.

3.0 Procedure

3.1 Roles and Responsibilities

3.1.1 Each Operating Unit/Area

Each operating unit/area is responsible for weekly inspections of safety showers and eyewash stations as specified in this practice.

3.1.2 Unit Maintenance

Unit maintenance shall track and schedule all repairs through the SAP system.

3.1.3 All personnel

All personnel are responsible to report damaged safety showers and eyewash stations and initiate appropriate repair of equipment.

3.2 <u>General Requirements</u>

- 3.2.1 Emergency Showers and Eyewash Stations
 - 3.2.1.1 Operations personnel or equipment "owner" (e.g. Maintenance Shop, Laboratory, etc.) will inspect and flow emergency showers and eyewash stations weekly. These inspections verify the equipment is operational, not blocked, not damaged, check alarm operation if installed and ready for emergency use. Records are kept in the PRIDE/RADAR system.
 - 3.2.1.2 If any repairs are needed, Operations personnel will contact Maintenance and make sure that the needed repairs are made.
 - 3.2.1.3 The emergency shower and eyewash installation shall be located so that they are clearly visible (readily identifiable) from all of the area served. Adequate lighting (i.e. flashing green light) shall be provided at the shower location.
 - 3.2.1.4 Refer to ENV-45 Drinking Water Compliance & Safety for potable water system requirements.
- 3.2.2 Placement of Emergency Equipment
 - 3.2.2.1 OSHA 1910.151 requires facilities for immediate drenching or flushing of the eyes and body when persons may be exposed to injurious corrosive materials. ANSI Z358.1-2004 further defines immediately available to take an individual no longer than 10 seconds to reach the nearest facility. An average person can cover a distance of approximately 55 feet in 10 seconds.
 - 3.2.2.2 Additional factors should be considered in the placement of safety showers and eyewash stations, including:

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- 3.2.2.2.1 Ensure the path of travel is free of obstructions, such as a locking door, low-hanging equipment or pumps/valves, and other trip hazards
- 3.2.2.2.2 Protected from freezing
- 3.2.2.2.3 Same level as the hazard

3.2.3 Portable Eyewash Stations

- 3.2.3.1 During turnaround or capital project, portable eyewash stations may be placed around the work area. The onsite equipment supply contractor will supply and inspect the pressure, water level, and condition of the eyewash (e.g. leaks, hoses) and flush/add antimicrobial solution. Completed inspection checklists will be retained by the safety equipment supply contractor for one year.
- 3.2.4 Temperature of Emergency Equipment Flushing Fluid
 - 3.2.4.1 The OSHA standard 29 CFR 1910.151 does not give a water temperature for safety showers and eyewash facilities, but has accepted the ANSI standard. The ANSI standard has defined "tepid" water as moderately warm/lukewarm. This range has been further defined to a range of 60-100 °F in the ANSI standard, Appendix B.
 - 3.2.4.2 Temperatures less than 75 °F will begin to cause the user discomfort and lower than 60 °F can begin to cause hypothermia. Temperatures in excess of 100 °F have proven to be harmful to the eyes and can enhance chemical interaction with the eyes and skin. A medical professional may need to be consulted if a chemical reaction is accelerated by flushing temperatures.
 - 3.2.4.3 The optimum temperature for flushing fluids is 85 °F for maximum user comfort. Temperatures outside of the ranges of 60-100 °F can cause personnel to leave the shower due to discomfort prior to receiving the minimum required treatment.

4.0 Revision History

Revision Number	Description of Change	Written by	Approved by	Revision Date	Effective Date
0	Original Issue. Supersedes GBR-HESS- EPR-06. Added alarm conformation during inspection, updated OSHA 1910.151 language,	T. Brown	J.G. Montminy	12-Oct-17	13-Oct-17

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