

Emergency Eyewash Stations and Emergency Shower: Maintenance and Inspection		
Effective Date: February 2013	Replaces Date: October 18, 2003 Policy and Procedure	EHSS to review: February 2016

1. Introduction

This Guideline is intended to assist Red River College meet compliance with Manitoba Workplace Safety and Health Act W210 and minimize the impact of accidental exposure of hazardous materials to eyes, body or clothing where emergency initial treatment is required.

Controls, such as personal protective equipment should be in place and utilized to prevent exposure to hazardous materials. Areas where this risk is present must also have unobstructed access to an emergency eyewash and/or emergency shower as determined by a risk analysis.

2. Applicable Legislation and Standards

- a. Manitoba Workplace Safety & Health Act & Regulations W210
- b. ANSI Standard #Z358.1

3. Responsibilities

- a. Chairs/Managers
 - i. Train staff and students on use of emergency equipment including eyewashes and showers.
 - ii. Identify person(s) responsible for conducting and recording maintenance inspections & keeping records.
 - iii. Identify person(s) responsible for issuing work orders to fix emergency washing equipment as required.
 - iv. Identify person(s) responsible for re-ordering supplies required to maintain eyewash/shower equipment.
 - v. Ensure inspections occur in timely fashion and records are maintained.
 - vi. Ensure deficiencies corrected.
 - vii. If unusable, ensure the emergency washing unit is clearly tagged as unserviceable or not working.
- b. Users
 - i. Become familiar with the locations of eyewash stations/showers.
 - ii. Become familiar with the operation of eyewash stations/showers.
 - iii. Participate in the inspection program.
 - iv. Advise Chairs/Managers of any deficiencies.
 - v. Advise Chairs/Managers when Personal Eyewash Bottles are required to be replaced.
- c. Environmental Health & Safety Services.
 - i. Standardize the emergency washing equipment signage in the shops and hallways.
 - ii. Participate in selection of equipment and location.
 - iii. Periodically conduct random compliance inspections of the College that include emergency washing equipment and records inspections.
- d. MIT/Facilities

- i. Correct deficiencies in a timely fashion.
- ii. Schedule annual maintenance inspections that meet the ANSI Standard and manufacturers specifications with appropriate maintenance personnel.

4. Installation / Location Requirements

- a. Signs that identify the emergency eyewash/shower equipment's location should be present and clearly visible from all directions within the shop or lab that the unit is intended to serve.
- b. The area around the emergency eyewash/shower must be well lit.
- c. There should be no hazards or obstructions impeding access to the operating area of the unit.
- d. Be in accessible locations that require no more than 10 seconds to reach and should be within a travel distance no greater than 30.5 meters from the hazard.
- e. Shall be located on the same level as the hazard and the path of travel shall be free of obstructions that may inhibit its immediate use. For a strong acid or strong caustic, the eyewash should be immediately adjacent to the hazard.

5. Inspections

- a. Routine inspections and maintenance are required to ensure that the equipment is in working order and meets applicable standards. Weekly inspections verify the simple operational aspects and maintenance requirements of eyewash and shower equipment. These inspections are the responsibility of each department/program for which the equipment was installed (referred to as "department"). Departments must document inspections, work orders, maintenance and retain records for a 7-year period.
- b. Inspection tags, available from Environmental Health & Safety Services (EHSS) should be affixed to each eyewash station and shower. When weekly inspections have been conducted and appropriate operation of the unit verified, the inspecting person should initial the tag and indicate the date of the inspection. Once an inspection tag is full, ensure that the location of the emergency equipment (i.e., equipment identification or room number) is written on the top of the tag, install a new tag and retain completed tags for record retention.
- c. The Joint Workplace Safety & Health Committee (JWS&HC), Environmental Health & Safety Services (EHSS) and external compliance agencies periodically conduct random compliance inspections of the College. These inspections will audit departmental inspection/maintenance programs, including documentation related to emergency eyewash stations and showers.

6. Types

- a. **Plumbed eyewash stations** are permanently affixed within a facility and connected to a plumbed tempered water supply with scald protection and are the recommended option when eyewash equipment is required.
- b. **Self-contained eyewash stations** are stand-alone devices containing a reservoir of flushing fluid. They are used when plumbed eyewash stations are not feasible or as a temporary measure only. They are required to be inspected weekly and often require periodic maintenance which is defined by the manufacturer. Re-ordering of related supplies, including replacement cartridges should be conducted through regular College purchasing program.

CAUTION: Portable eyewash-stations are designed to meet specific flow capabilities. For some models, the flow cannot be verified during weekly inspections, as once the flow is activated it cannot be stopped.

- c. **Personal Eyewash Equipment (squeeze bottle)** provides immediate flushing to support plumbed and self-contained emergency eyewash shower equipment but shall not replace them. They should have the capacity to deliver immediate flushing fluid without being injurious to the user to allow the user to proceed to the plumbed or self-contained unit to complete the required flush. They are to be used when working in situations with identified eye-exposure hazards, where stationary emergency eyewash equipment is not located within 10 seconds (100 feet), (for example, building services or maintenance carts). Personal eyewash equipment must be protected from freezing and shall not be exposed to ambient temperatures exceeding 38°C.

Personal eyewash equipment must meet applicable standards and should be replaced or refreshed according to manufacturer's specifications. It is the responsibility of employees to whom this equipment is assigned, to notify their supervisor when a replacement bottle is required.

- d. **Emergency Showers** are devices that deliver flushing fluid in sufficient volume to cause that fluid to cascade over the entire body and are required for areas where potentially high-hazard materials and/or chemicals are used. Departments that work with or store these types of materials must alert the EHSS department as to the requirement for this type of emergency equipment, if it is not available in the immediate area.

Emergency showers must be inspected according to procedures set forth in the ANSI Standard and Manufacturer's recommendations.

Note: See Appendix 1 for Weekly Inspection Criteria for eyewash stations/emergency showers.

7. Maintenance

- a. The Department must correct deficiencies from the above noted inspection criteria by requesting an urgent repair through the Facilities Work Order system. In the event that deficiencies cannot be corrected immediately, the activity that could result in accidental exposure as described in this Guideline must stop until such a time as the unit meets the above inspection criteria and the unit clearly tagged as unserviceable or not working.
- b. The Facilities Management department must schedule maintenance inspections with appropriate maintenance personnel to ensure that the emergency equipment meets the ANSI Standard and manufacturers recommendations. This includes annual inspections of emergency showers.

8. Training

- a. All users (staff/students) who work with, or in close proximity to, hazardous materials, chemicals or other potential exposure hazards must be appropriately instructed with regard to WHMIS requirements and in the appropriate use of materials, their potential hazards, proper hazard controls and emergency response procedures including the use and location of emergency eyewash/shower units. It is the responsibility of the program manager or chairperson to ensure this training occurs and is kept current.

- b. Department employees who are designated to inspect emergency eyewash and shower equipment shall be trained in the proper inspection procedures of the equipment by Environmental Health and Safety Services at the department chair or manager's request.

9. Records

- a. All records of inspections and/or maintenance repairs shall be maintained for all equipment for a period of 7 years.
- b. All records of employee training should be forwarded to the Human Resources-Staff Development for mandated retention periods.

Appendix 1

Weekly Inspection Criteria for Eyewash Stations / Emergency Showers

	Plumbed Eyewash Stations	Self-Contained Eyewash Stations	Personal Eyewash Equipment (squeeze bottles)	Emergency Showers
Signs that identify the eyewash/shower equipment's location are present and clearly visible from all directions within the shop or lab that the unit is intended to serve	✓	✓		✓
The area surrounding the unit is well lit.	✓	✓		✓
No hazards or obstructions impeding access to the operating area of the unit.	✓	✓		✓
Unit is clean and free of debris and hazards. Nozzles are protected from airborne contaminants by dust caps that do not require a separate independent motion by the operator to remove when activating the unit.	✓	✓		
Mechanical parts operate properly (e.g., activation bar is not stripped and activates water flow with minimal effort).	✓			
Adequate water supply (volume and pressure) is present. Water flow should meet at a midpoint between the nozzles. The duration of the flush depends on the unit itself as well as the pipework leading to the unit. Ensure that all stagnant water has been flushed from the unit and the pipework that does not form part of the constant circulation system.	✓			
Water Temperature is Tepid (between 16-38 °C).	✓			✓
Follow manufacturer's instructions for verifying flow and water levels. Units that require to be tested weekly for flow verification will have the procedure defined in the manufacturer's instructions.		✓		
Check the expiry date of the flushing fluid or follow manufacturer's instructions for adding preservatives to the flushing fluid.		✓		
Follow manufacturer's instructions for additional maintenance and inspections. Copies of these instructions should be located near the equipment for reference. Review the manufacturer's inspection instructions before proceeding. Some units are required to be fully drained periodically and a preservative to be added.		✓		
Inspect bottle for expiry date. If the bottle is near its expiry date inform the appropriate personnel in the department to replace the bottle.			✓	
Activate the unit for a period long enough to verify operation and ensure that flushing fluid is available.				✓