



Emergency Eyewash and Shower Unit Program

Northern Illinois University

Review and Updates

Date	Reviewed by	Changes Made
Dec 2, 2016	D Scharenberg	Final version.
Jan 25, 2017	D Scharenberg	Added Transportation to inventory list
Sept 26, 2019	D Scharenberg	Added new locations, removed Health Services

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Introduction

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 in any area where corrosive materials are used. Departments that have areas where corrosive materials are used are responsible for ensuring that emergency eyewash stations and safety showers are installed and maintained before allowing work with corrosive materials to be performed. 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. Chemical exposure to corrosive materials should be flushed immediately – a lag time of 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.

Purpose

The Environmental Health and Safety (EHS) department at Northern Illinois University (NIU) has developed this program to ensure that safety eyewash and shower units are kept in proper working condition. This program defines emergency eyewash and shower guidelines for inspection, testing and maintenance. Information is provided on areas where eyewashes and showers are required and the eyewash and shower equipment specifications.

Scope

The program applies to the emergency eyewash and shower practices of and is applicable to buildings on all NIU properties. The principles of this program are based on 29 CFR 1910.151 and the American National Standard for Emergency Eyewash and Shower Equipment (ANSI Z358.1) and all reasonable efforts will be made by the University to meet ANSI's standards.

Installation of new units shall follow NIU Design and Construction Standard, Div 22 4500, Emergency Showers and Eyewash Stations.

At this time this program excludes units in the academic laboratories such as those in chemistry, biology, and engineering departments. Please check with the Office of Research Compliance and Integrity, Laboratory Safety, for additional details.

Definitions

American National Standards Institute (ANSI): Is a non-profit organization that coordinates the standardization and conformity assessment systems in the United States.

Hazardous materials: Materials that are caustics, as well as additional substances and compounds that have the capability of producing adverse effects on the health and safety of humans.

Emergency Eyewash: A unit that flushes water specifically to the eyes.

Emergency Shower: A unit that cascades water over the whole body.

Emergency Units or Equipment: General term for emergency eyewash, eye/face wash, shower, and combination units.

Combination Units: or Safety Stations, units that consist of both the emergency shower and an eye/face wash.

Stay-Open Valve: A valve that manually opens and closes the emergency shower and/or eyewash units.

Responsibilities

Environmental Health and Safety:

EH&S provides program oversight and consultation to NIU departments with emergency eyewash and shower units. EH&S reserves the right to periodically inspect eyewash and shower units. The responsibilities of EHS include:

- Advise and assist with necessary training on emergency eyewash and shower unit inspections and maintenance.
- Serve as technical support, aid in interpreting any regulatory requirements and help establish safe practices.
- Conduct a periodic review of the NIU Eyewash and Shower Unit program and make necessary revisions to the program including but not limited to all (ANSI) Z358.1 and OSHA 29 CFR 1910.151(c) updates.

Heating Plant, Campus Services, and Grounds:

Building engineers and department representatives shall be responsible for the following:

- Conduct monthly inspections of emergency eyewash and shower units.
- Resolve any issues pertaining to the cleanliness and maintenance of eyewash and shower units.
- Ensure that emergency eyewash and shower units can be accessed easily and are clear of obstructions.
- Report any changes to the building function or design that would require EH&S to re-evaluate additions or the removal of eyewash and shower units.

Affected Employees and Users:

- Check that the units are being inspected by viewing the details on the tags.
- Know the location of the emergency eyewash and shower units in your work area.
- Keep access to emergency eyewash and shower units free and clear of obstructions.
- Contact EHS if the monthly tests are not documented on the tags.

Eyewash and Shower Requirements

Emergency Eyewashes

A plumbed or self-contained eyewash shall be provided in all work areas where the eyes of any person may be exposed to hazardous material of any of the following:

- Chemicals that are classified as corrosive (this includes household bleach), irritating to the eye, acutely toxic (Global Harmonized System categories 1-3), or as having health effects (carcinogens, reproductive toxins, mutagens, target organ effects GHS Cat 1-2)
- Biological materials that require biosafety level 2 containment or greater
- Such work areas include but are not limited to:
 - Laboratories, storerooms
 - Pesticide storage or mixing facilities
 - Battery charging/repair areas

Emergency Showers

An emergency shower shall be provided in all work areas where a person may be exposed to hazardous material of any of the following:

- Chemicals that are classified as corrosive to the skin, irritating to the skin, acutely toxic (GHS categories 1-3), or as having health effects (carcinogens, reproductive toxins, mutagens, target organ effects GHS Cat 1-2)
- Such work areas include but are not limited to:
 - Storerooms and other work areas where these hazardous chemicals are present
 - Pesticide storage or mixing facilities
 - Battery charging/repair areas

Combination Units

Showers, eyewashes, eye/face washes, and drench hoses can be utilized in Combination Units. It must be assumed that all drenching systems may be activated simultaneously. In such an event, the system must be capable of delivering an uninterrupted 15-minute, ANSI compliant, tepid flush (ANSI Z358.1 7.4.4).

Emergency Eyewash and Shower Placement Requirements

- Emergency showers and plumbed or self-contained eyewashes shall meet the following requirements of ANSI Z358.1 and NIU Design and Construction Standards in effect at the time of installation.
- New equipment must be certified by the manufacturer as meeting the most recent edition of ANSI Z358.1.
- The equipment shall have a controlled flow of flushing fluid that is provided to both eyes simultaneously (for eyewashes), which is not injurious to the user.
- Valves on emergency eyewashes and showers shall be designed so that the flushing fluid remains on without requiring the use of the operator's hands. The valve should be designed to remain activated until intentionally shut off.
- Emergency eyewash nozzles shall be protected from airborne contamination using manufactures recommended nozzle covers or equivalent. Whatever means is used to afford such protection, its removal should not require a separate motion by the operator when activating the unit.
- The equipment shall be in unobstructed and accessible locations that require no more than 10 seconds for the injured person to reach along an unobstructed pathway from the source of the hazard. If the pathway includes a door, then the door shall have panic hardware for easy egress.
- The equipment shall be located such that accessing the equipment should not require going up and down stairs or ramps.
- The equipment location should be identified with a highly visible sign. (See Attachment 1)

Locations of Shower and Eyewash Stations and Maintenance Responsibilities

The majority of shower and eyewash stations (other than laboratories) are located in building mechanical rooms throughout campus. Maintenance of those units, unless otherwise specified, is the responsibility of the Heating Plant. Other units not located in mechanical rooms are the responsibility of the department for which they have been installed. (See Attachment 2).

Basic Inspection, Testing and Maintenance

- Inspect units for corrosion that may inhibit operation
- Inspect for proper protective nozzle covers; replace if broken or missing
- Run water through shower unit until water runs clear
- Run water through eyewash unit until water runs clear
- Ensure any water on the surrounding floor is properly cleaned up
- Fill out Monthly Shower/Eyewash Checklist located with unit (If none, ensure one is placed with the unit. (See Attachment 3). Return completed (annually) checklist to department supervision.
- Checklists may be designed in any manner that suits the responsible department. Completed (annually) checklists may be kept with the responsible department at the discretion of that department.

Attachment 1:

Similar high visibility signage is required.



Attachment 2

Shower and Eyewash Locations. Heating Plant responsibility.

Building	Location	System
East Heating Plant		
	RO room	Combination
	Enginator Room	Eyewash
	Lab/Test Room	Eyewash
West Heating Plant		
	Testing Room	Eyewash
	West Generator Room	Eyewash
	Boiler Room South	Shower
	Boiler Room North	Combination
	South East Corner	Eyewash
Jack Arends Hall (Art bldg.)		
	Room 101	Combination
Music Room		
	Room 169a	Eyewash
	Room 169	
Anderson		
	Room B10	Combination
Engineering Building		
	Main Mechanical Room	None
Campus Life		
	Main Mechanical Room	Eyewash
Holmes Student Center		
	Penthouse Mechanical	
	Enginator Room	Eyewash
Founders Library		
	Main Mechanical Room	None
	Enginator Room	Eyewash
Davis Hall		
	Basement Mechanical	Eyewash
Faraday West		
	Room 125A	Eyewash
Psych/Math		
	Room B05	Eyewash
	Room B04	Combination
Montgomery		
	Room 117	Combination
Health Center/Public Safety	Main Mechanical Room	None
	Enginator Room	Eyewash

Grant Towers		
	Room 45	Eyewash
Stevenson Towers		
	North Generator Room	Eyewash
	South Generator Room	Eyewash
	South Chiller Room	Combination
Graham		
	Main Mechanical Room	Eyewash
Zulaf		
	Main Mechanical Room	Shower
La Tourette		
	Main Mechanical Room	

Other locations. Other responsible parties.

Dorland	Receiving dock	Combination	Materials Management
	Garage	Combination	Transportation
	Materials Distribution (MDC)	Combination	Materials Management
EHS	Hazardous Waste bldg.	Portable	EHS

Attachment 3

Monthly checklist example



MONTHLY SAFETY SHOWER/EYEWASH CHECKLIST

LOCATION: _____

DATE	OK	COMMENTS	INITIALS

Please check safety shower/eyewash station once a month. Make sure water pressure is sufficient to produce a spray and the water runs clear. If either unit is not working properly or needs maintenance, please contact supervision.