



Health Facilities Engineering Section

## EYEWASH/DRENCH SHOWER BULLETIN

Revised September 10, 2008

Healthcare facilities may be required to install plumbed eyewash/drench shower systems in certain areas to comply with regulations of the Michigan Department of Labor & Economic Growth (DLEG), Division of Occupational Health (MIOsha). Past inspections of hemodialysis units by MIOsha resulted in citations related to the lack of eyewash stations in the treatment room. The reprocessed dialyzers, which are opened and rinsed in the treatment area, contain a sterilant (e.g. formaldehyde or hydrogen peroxide) which was considered an injurious corrosive material.

Occupational Health Standards for General Industry, Chapter IV, Part IV, Rule 4401(3) states... "Where the eyes or body of any person may be exposed to injurious corrosive materials, suitable facilities for quick drenching or flushing of the eyes and body shall be provided within the work area for immediate emergency use."

Injurious corrosive materials are defined as caustic compounds of a pH of 9.0 or greater or acid compounds of a pH of 4.0 or less in solution. There are some exceptions to this definition. However, undiluted solutions of bleach, certain cleaning compounds, high level disinfectants such as glutaraldehyde, and other materials may be considered injurious corrosive materials and an eyewash/drench shower facility would be required in the area where the chemical is used. MIOsha does not specifically require eyewash/drench showers in response to employee exposures to blood and body fluids. Health care facilities may pursue other options such as providing sterile water or saline solution to treat Blood Borne Pathogen exposures to eyes.

Suitable eyewash/drench shower facilities must comply with performance standards stated in ANSI Z358.1. The 2003 Michigan Plumbing Code references the 1998 version of ANSI/ISEA Z358.1. Many hand held, portable or self contained eyewash units do not meet this standard and plumbed units would be required. Portable, self contained eyewash devices which meet the following performance criteria are acceptable; a) flush both eyes simultaneously, b) have a "stay open" feature allowing both hands free to hold eyelids open, and c) deliver not less than 0.4 gallons per minute for 15 minutes (i.e. 6 gallons).

It should be noted that since 1998, the ANSI emergency eyewash/shower standard has required that plumbed units be provided with tepid water. Tepid has been defined by ANSI as water in the temperature range of 60 F – 100 F. If eyewash units are installed on a required hand wash lavatory, the lavatory must deliver water in the temperature range 105 F – 120 F for hand washing and 60 F – 100 F for the eyewash. This is typically accomplished by a third and separate tepid water supply piping to the spigot for the eyewash or a swing arm activated unit mounted at the back or side of the lavatory.

It is recommended that whenever possible, the water dispensing from the eyewash not spray outside the lavatory basin so that the surrounding area and floor does not get wet when testing the eyewash unit on a weekly basis. Note, however, that MiOSHA does not require that eyewash units be provided with a drain.

Areas of a health care facility that typically require eyewash units include: laboratory, boiler room (boiler treatment chemicals), main housekeeping storage room, dialysis, laundry, and autopsy.

Questions regarding this issue should be directed to the Division of Occupational Health, Michigan Department of Labor & Economic Growth (DLEG) at (517) 322-1608.

The following is one *example* of acceptable eyewash installations:

