



## Risk Services Best Practices Bulletin Bulletin #7: Capital Construction & Emergency Shower and Eyewash Drains

Presented by Office of the President Risk Services — September 10, 2010



Among our many goals and responsibilities in designing and constructing space at the University of California is to proactively manage risks of physical loss through design and engineering considerations that meet and exceed regulatory compliance.

The following Best Practices are provided in the spirit of ensuring that the design and installation of emergency shower/eye wash units are such that the efficacy of decontamination is optimized, the risk of serious injury due to chemical contact is minimized, and the severity and extent of property damaged is limited to the greatest extent practicable.

This Best Practices Bulletin reflects the minimal design standards for all new and remodeled facilities.

### **Design and Installation Requirements for New Construction**

---

- a. Comply with Section 4, "University of California Laboratory Safety Design Guide" 2<sup>nd</sup> ed. September 2007.
- b. Comply with ANSI Z358.1
- c. Comply with Cal/OSHA standard, Title 8, Section 5162.
- d. Install floor drains with p-traps below safety showers and slope floor (to a radius of 2 1/2 feet) sufficient to direct water into the sanitary sewer drain so as to prevent water damage.
- e. Install 15 minute, spring loaded automatic shut off valves which can be manually reactivated by the user if need be.
- f. Install water flow detection devices which are wired to deliver a signal to central plant control room and campus police dispatch center.
- g. Plumb eyewash basins to sanitary sewer to facilitate monthly required testing, avoiding spillage to the floor.

- h. Water shall be tempered (tepid) to prevent hypothermia resulting from 15 minute exposure.
- i. Units tagged with RFID chips for GIS mapping, tracking and testing data collection.
- j. Design and install to comply with ADA requirements.
- k. Control valve location shall be located in full view and within the immediate vicinity of the eyewash-shower station.
- l. Handheld drench hoses are not compliant substitutes for emergency eye wash units but may be used to supplement compliant eyewash units.
- m. Combination emergency shower/eyewash units shall be installed in areas requiring both emergency showers and eye wash units.

---

**Design and Installation Requirements for Retro-Fit, Remodel Construction**

---

- a. Comply with Section 4, "University of California Laboratory Safety Design Guide" 2<sup>nd</sup> ed. September 2007.
- b. Comply with ANSI Z358.1
- c. Comply with Cal/OSHA standard, Title 8, Section 5162.
- d. Install 15 minute, spring loaded automatic shut off valves which can be manually reactivated by the user if need be.
- e. Install water flow detection devices which are wired to deliver a signal to central plant control room and campus police dispatch center.
- f. Plumb eyewash basins to sanitary sewer to facilitate monthly required testing, avoiding spillage to the floor.
- g. Water shall be tempered (tepid) to prevent hypothermia resulting from 15 minute exposure.
- h. Units tagged with RFID chips for GIS mapping, tracking and testing data collection.
- i. Design and install to comply with ADA requirements.
- j. Control valve location shall be located in full view and within the immediate vicinity of the eyewash-shower station.
- k. Handheld drench hoses are not compliant substitutes for emergency eye wash units but may be used to supplement compliant eyewash units.
- l. Combination emergency shower/eyewash units shall be installed in areas requiring both emergency showers and eye wash units.