Class 3B and 4 Emergency Shutdown Requirements

The following requirements are aimed at standardizing the emergency shutdown requirements for Class 4 and Class 3B lasers. The goal is to ensure clear and readily available emergency shutdown switches for all such lasers.

Class 3B and 4 Lasers:

Requirement for Emergency Shutdown Controls

Following the guidelines outlined in the ANSI Z136.1 standards, laser controlled areas at the University of Alberta must include the following Emergency Shutdown controls.

a. A clearly labeled emergency laser shutdown switch must be located in any Class 3B or Class 4 laser area, which will terminate all open beam laser hazards upon activation.

b. For Class 4 open beam lasers, a red colored and clearly labelled emergency shutdown button shall be located in the safe entrance area of the laboratory.

c. For Class 3B lasers, if not located in the entrance area, then such a control should be within the immediate line of sight of personnel entering the laser area. If not clearly visible, e.g. a power switch on the laser power supply itself, clearly visible signage must be posted indicating the direction to, and location of, the shutdown switch both with arrows and verbal description.

d. All Class 4 open beam laser systems must strictly conform to the requirements outlined in this document as soon as possible but no later than June 30, 2021. In the interim, the existing Class 4 facilities may use the guidelines for Class 3B laser systems until these requirements are fully implemented.

e. All laser lab users shall be trained by the laser owner, or designate, on the emergency shutdown procedure(s) for all lasers used in a lab.

Approved by the University of Alberta Radiation Safety Committee
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