



ILLINOIS EMERGENCY MANAGEMENT AGENCY

JB Pritzker
Governor

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Director

A Summary of the Requirements of the Illinois Emergency Management Agency For Facilities that Possess Class 3b and Class 4 Laser Systems (32 Ill. Adm. Code 315)

Ensure that all Class 3b and Class 4 laser systems are registered with the Agency before they are placed in operation. Notify the Agency within 30 days after the installation of new, used, relocated/reactivated laser systems, disposal of any laser system or in the event of a change in operator/ownership. Maintain records of receipt, transfer, storage, and disposal of laser radiation systems. (315.60 and 315.70)

Ensure that there is a designated laser safety officer that possesses specific qualifications, training, experience and familiarity with the laser equipment utilized at the facility. (315.90(a))

Ensure that the laser safety officer: 1) has established and implemented a laser radiation safety program including training that addresses potential hazards, safety practices, and emergency procedures; 2) permits operation of laser system only by trained individuals; and 3) has established control measures for safe laser system operation and periodically audits the functionality of the control measures. (315.90(b))

Provide personnel operating lasers written operating and safety procedures. Provide initial and annual in-service training in laser safety. Operators shall be instructed and able to demonstrate competence with operating and safety procedures. Laser systems shall be operated at all times under the direct supervision or control of an experienced, trained operator. Maintain records of authorized laser system operators. (315.100 and 315.170)

Ensure that appropriate protective eyewear, gloves, clothing, and shields, when required, are provided, used and maintained as specified in the regulations. Maintain records of required inspections. (315.100 and 315.170)

Ensure that no individual is exposed to levels of laser radiation higher than the MPE. Measurements and calculations to determine MPE limits shall be made with appropriate conformance to ANSI standards. (315.100)

Alignment of laser optical system shall be performed in a manner that assures that no one is exposed to laser radiation above the MPE. Evaluate expected beam path and potential hazards from reflective surfaces along the beam path. Ensure that adequate/appropriate safety precautions are in place for all areas along the beam path where the MPE is exceeded. (315.100(a))

Establish appropriate controlled areas when exposure to laser radiation in excess of MPE limit is possible. Such areas shall be posted and access shall be granted only by permission of the laser safety officer or trained designated representative. (315.100(a))

Ensure that laser products certified by a manufacturer are maintained in compliance with appropriate regulations. Ensure that all service procedures are performed by qualified personnel. (315.100(b)(7) and 315.100(b)(4))

Ensure that any engineering controls, safety interlocks, warning systems, and viewing optics and windows are maintained and operated as appropriate. Safety interlocks and other controls should be periodically checked for proper operation. (315.100(c))

Ensure that additional requirements for infrared laser systems, optical fiber communication laser systems, medical laser applications, and entertainment laser light shows are in compliance as required for type of laser radiation systems at the facility. Maintain records when required for medical laser applications. (315.110, 315.120, 315.130, and 315.140)

Ensure that any and all caution signs, labels and posting (as required) are compliant with applicable regulations. (315.150)

Report the occurrence (and maintain records) of any of the following to the Illinois Emergency Management Agency, Bureau of Radiation Safety: (315.160)

- An exposure to an individual of greater than 5 times the MPE;
- An exposure to an individual that involves the partial or total loss of sight in either eye;
- An exposure to an individual that involves perforation of the skin or other serious injury exclusive of eye injury; or
- An exposure to an individual that involves second or third degree burns to the skin.

(Refer to 32 Ill. Adm. Code 315 for a complete text of the regulations, or call Mary Ann Spohrer at 217-524-3504 for further information.)