

The University of Southern Indiana

LASER SAFETY MANUAL

Revised: March 2006
Environmental Health and Safety

1.0 PURPOSE

The purpose of this manual is to ensure the safe use of lasers within the University. This manual also serves to outline the procedures and responsibilities laser users are to follow to ensure safe operation.

2.0 SCOPE

This manual applies to the ownership, use and operation of all classes of lasers (class I – IV) used in research and laboratories within the University. Safety guidelines referenced in this manual are from the "*Guide for the Safe Use of Lasers*" (ANSI Z136.1 – 1986), published by the American National Standards Institute.

3.0 ACQUISITION PROCEDURES

All lasers acquired after June 1, 1996 must be reported in writing to Environmental Health and Safety. The written notice shall include the manufacturer, laser class, room and building where the laser will be used and the party responsible for the laser. Refer to the Laser Acquisition Form

4.0 LASER SAFETY OFFICER (LSO)

Each departmental owner, operator or user of lasers shall be responsible for selecting a Laser Safety Officer (LSO). The LSO shall be an individual "with the authority and responsibility to monitor and enforce the control of laser hazards, and to effect the knowledgeable evaluation and control of laser hazards" (ANSI Z136.1-1986). Therefore, the LSO shall be responsible for the safe operation of all lasers under their control and shall be responsible for the implementation of all requirements within the laser safety manual. The LSO will be the primary contact between Environmental Health and Safety and their respective department regarding all laser safety issues. Any LSO changes must be reported to Environmental Health and Safety within 24 hours.

5.0 ASSISTANT LASER SAFETY OFFICER (ALSO)

The LSO is responsible for designating an Assistant Laser Safety Officer (ALSO) to assume the duties of the LSO in his/her absence.

6.0 LASER REGISTRATION

The LSO shall be responsible for any state or federal agency notification or registration requirements regarding the use of laser devices.

7.0 OPERATION

7.1 Policy

Operation of any class laser or laser system shall be authorized by the LSO. Operator authorization requires demonstration of sufficient knowledge of the device and satisfactory completion of basic laser safety training.

7.2 Requirements

7.2.1 The LSO shall ensure that a written Standard Operating Procedure (SOP) plan is developed. The plan will describe the intended use of the laser device, its associated safety features and the procedures to assure the safety to laser operators and other persons in the vicinity of the laser device. The SOP must also include the names of all laser operators.

7.2.2 The LSO shall ensure that all laser users understand the following:

Written SOP
Basic laser fundamentals
Basic laser safety principals
Requirements for personal protective equipment

- 7.2.3** The LSO shall be responsible for developing a written laser safety-training program for all laser operators. The LSO shall maintain training records for all laser users for a period of 5 years beyond the date of termination or end of enrollment of the operator. Provide copies of the training records to Environmental Health and Safety for each year or when a new laser user is trained.
- 7.2.4** The LSO shall ensure that SOPs and laser operator authorization are specific to each laser device.

8.0 ACCIDENT REPORTING

The LSO shall be responsible for notifying Environmental Health and Safety within 24 hours of any accident involving a laser device. Lasers involved in an accident shall be taken out of service immediately. The LSO and Environmental Health and Safety shall be responsible for evaluating the accident and the safety of the laser device.