

UNIVERSITY OF KANSAS-LAWRENCE CAMPUS LABORATORY SAFETY MANUAL PART V-LASER SAFETY PLAN

Appendix 8.5 - Outline for Written Laser Safe Operating Procedures

All Authorized Users and Occupants shall be informed of applicable hazards, trained in the applicable laboratory-specific operating procedures and shall follow them.

The following outline is to be followed in preparing written laser safe operating procedures. A written procedure is to include all lasers in a laser system, including alignment of lasers. This LSOP must be reviewed for adequacy yearly and is done via a simple e-mail from the EHS-Laser Safety Officer to the Laboratory Supervisor. Usually this will require no more than a simple response that there have been no changes in the laboratory.

I) INTRODUCTION

- a. Location of laser or laser system (site, building, room).
- b. Diagram of areal layout (attachment).
- c. Description of (each) laser, including classification, laser medium, and beam characteristics (divergence, aperture diameter, pulse length, repetition rate, and maximum output, as applicable).
- d. Purpose/application of beam(s).

II) HAZARDS

- a. Identification of the hazards (beams, electrical, chemical, etc./).
- b. Analysis of hazards (target area, absorbing media, beam path, severity of potential accidents, etc.).

III) CONTROLS

- a. Access controls (door interlocks, signs, signals).
- b. Beam controls (key-lock, enclosures, shutters, stops).
- c. Electrical controls (light on power supply, HV signs).
- d. Eye protection (medical surveillance requirements, type of eyewear, optical density required for beam).
- e. Other.

IV) OPERATING PROCEDURES

- a. Initial preparation of laboratory environment for normal operation (key position, warning lights on, interlock activated, identification personnel).
- b. Personnel protection requirements (eyewear, protective barriers).
- c. Target area.
- d. Countdown procedures.
- e. Shutdown procedures.
- f. Special procedures (alignment, safety tests, interlock bypass, emergency, etc.).

V) TRAINING

- a. Laser Safety Orientation Requirements.
- b. Laser-specific safety training requirements.
- c. Training maintenance and repair personnel.

VI) RESPONSIBILITIES

- a. Supervisory (include emergency contact).
- b. Operators and support personnel.

VII) MISCELLANEOUS

- a. Rules for visitors during laser operation.
- b. Procedures in case of accident.
- c. Other (maintenance, adjustment, special precautions, etc.).