

APPENDIX 8-B

OUTLINE FOR LASER SAFE OPERATING PROCEDURES (LSOP)

The following outline is to be followed in preparing a Laser Safe Operating Procedures (LSOP). The LSOP is to include all lasers in a laser system, including alignment lasers. The LSOP must be reviewed annually.

I. INTRODUCTION

1. Location of laser or laser system (site, building, room).
2. Diagram of area layout (attachment).
3. Description of (each) laser, including classification, lasing medium, and beam characteristics.
4. Purpose/application of beam(s).

II. HAZARDS

1. Identification of the hazards (beams, electrical, chemical, etc.).
2. Analysis of hazards (target area, absorbing media, beam path, severity of potential accidents, etc.).
3. Identification of Nominal Hazard Zone (NHZ) of all beam paths if applicable (see Section M).
4. Identification of additional hazards during maintenance and service.
5. Laser warning sign description.

III. CONTROLS

1. Engineering Controls including:
 - Access controls (key-lock, enclosures, shutters, and stops)
 - Beam controls (door interlocks, signs, and signals)
 - Electrical controls (light on power supply, HV signs)
2. Administrative Control
3. Protective Equipment
4. Other Controls

IV. OPERATING PROCEDURES

1. Initial preparation of laboratory environment for normal operation (key position, warning lights on, interlock activated, and identification of personnel).
2. Personal protection requirements (eyewear, protective barriers).
3. Target area.
4. Countdown procedures.
5. Shutdown procedures.
6. Special procedures (alignment, safety tests, interlock bypass, emergency, etc.).

V. TRAINING

1. User training program.
2. Training for maintenance and repair personnel.

VI. RESPONSIBILITIES

1. Supervisory (include emergency contact).
2. Users and support personnel.

VII. MISCELLANEOUS

1. Rules for visitors during laser operation.
2. Procedures in case of accident.