

**BY ORDER OF THE COMMANDER
HILL AIR FORCE BASE**

**HILL AIR FORCE BASE INSTRUCTION
48-108**



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Aerospace Medicine

BASE LASER SAFETY PROGRAM

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This instruction implements local requirements to support Air Force Instruction (AFI) 48-139, *Laser and Optical Radiation Protection Program*. This instruction prescribes the precautionary measures and procedures for requisitioning, handling, storing, using and disposing of lasers. It applies to all Hill Air Force Base (AFB) personnel, contractors, tenant organizations, Geographically Separated Units (Little Mountain, Utah Test and Training Range, and Carter Creek), and other operating locations controlled by Hill AFB using lasers. Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the Air Force (AF) Form 847, *Recommendation for Change of Publication*; route AF Forms 847 from the field through the appropriate functional chain of command. Ensure that all records generated as a result of processes prescribed in this publication adhere to Air Force Instruction (AFI) 33-322, *Records Management and Information Governance Program*, and disposed of in accordance with Air Force Records Disposition Schedule located in the Air Force Records Information Management System.

SUMMARY OF CHANGES

The requirement for when a shop needs to appoint an ULSO has been revised. Information required for adding a laser to the inventory has been changed.

1. Roles and Responsibilities.

1.1. Unit Commanders.

1.1.1. Shall appoint a Unit Laser Safety Officer (ULSO) in writing and submit a copy to the Installation Laser Safety Officer (ILSO) for units operating at least one Class 3B and/or Class 4 laser.

1.1.2. Shall ensure that Department of Defense (DoD) personnel who operate lasers or are exposed to laser radiation are trained on and comply with all federal, state, Air Force and Hill AFB laser safety regulations and requirements.

1.1.3. Shall ensure that all non-DoD personnel, such as contractors, visitors, students and foreign nationals that will operate lasers or are present in work areas where lasers are used, are briefed on potential health and safety hazards in those work areas to include warning signs and laser identification.

1.2. Unit Laser Safety Officer (ULSO).

1.2.1. The ULSO can be from any level of the Unit and will be trained to the Laser Safety Officer level, as defined in ANSI Z136.1, *American National Standard for Safe Use of Lasers*.

1.2.2. Shall notify the ILSO when new lasers are obtained.

1.2.3. Shall submit a current inventory of Class 3B lasers and Class 4 lasers to the ILSO annually by 31 March or as requested by Bioenvironmental Engineering. The minimum required information needed for each submitted laser inventory is as follows:

1.2.3.1. Organization

1.2.3.2. Building

1.2.3.3. Room number

1.2.3.4. Manufacturer

1.2.3.5. Model

1.2.3.6. Serial number

1.2.3.7. Type of laser

1.2.4. Shall notify the ILSO when any of the information on the inventory changes.

1.3. Workplace Supervisors:

1.3.1. Shall ensure to cease any laser operations if conditions could present an uncontrolled health or safety hazard. This includes operations involving DoD personnel, contractors and visitors.

1.3.2. Shall ensure initial and termination occupational laser eye exams are accomplished for DoD employees before and after the period of employment or work in which laser exposures might occur.

1.4. Changing Laser Location or Status.

1.4.1. Permanently Installed Lasers: Laser Operators/Users must notify the ULSO when a user proposes to move a laser from its installed location to another location (room, table, building, area of the table) or when the status of the laser changes or its use terminated.

1.4.2. Portable Lasers: Laser Operators/Users must notify the ULSO when a user proposes to use a laser outside its designated use area or when the status of the laser changes or its use terminated.

1.5. Contract administrators will ensure that the Unit Project/Program Manager include in the statement of work for contracted laser operations language specifying that contract personnel who operate lasers or are present in work areas where they are exposed to laser radiation comply with AF laser safety standards and requirements.

2. Base Laser Safety Program.

2.1. The base laser safety program consists of a Laser Safety Committee (LSC) established by the ILSO or her/his designee and a laser inventory. Before operating any Class 3B or Class 4 laser, or laser system on Hill AFB, the laser must be evaluated and added to the inventory. Lasers are not approved for use on Hill AFB until they have been entered in the inventory.

2.2. The ULSO must be notified when any of the laser information changes or the laser is no longer used. The ULSO then notifies the ILSO. The ILSO must be notified directly if there is no ULSO.

2.3. Laser pointers for general use are limited to Class 3A (less than 5 mW power) or lower. Any pointer exceeding this requirement must have a variance letter issued by the United States Food and Drug Administration Center for Devices and Radiological Health and be approved for use on base by the ILSO.

2.4. The ILSO maintains an inventory of Class 3B lasers and Class 4 lasers on Hill AFB. Information for the inventory will be provided from the ULSOs to the ILSO.

2.5. Each Unit owning at least one ANSI Class 3B and Class 4 laser must develop a site specific written Standard Operating Procedures (SOP). The manufacturer's instructions may be used as the SOP. A copy of the SOP must be provided to the ILSO as part of the initial hazard evaluation process.

2.6. Warning signs required to meet ANSI Z136.1 must be affixed at all entry points to areas where Class 3B and Class 4 lasers are being used. The type of laser information required on the sign, such as its wavelength, pulse duration (if appropriate), maximum energy output, and the class of the laser or laser systems must be visible at door entryways.

2.7. Any use of lasers outside, to include on open ranges, must be reviewed and approved by the ILSO.

2.8. Appropriate range signs, warning devices, written open range protocols and controls must be used according to AFI 48-139, and as determined by the ILSO.

2.9. A Laser Safety Committee has been created and conducted in accordance with AFI 48-139 and AFRL-SA-WP-SR-2014-0015.

DANIEL L. CORNELIUS, Colonel, USAF
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Attachment 1**GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION*****References***

AFI33-322, *Records Management and Information Governance*, 23 March 2020; Incorporating Change 1, 28 July 2021

AFI 48-139, *Laser and Optical Radiation Protection Program*, 30 September 2014

AFRL-SA-WP-SR-2014-0015, *Bioenvironmental Engineer's Guide for Lasers and Optical Radiation*, August 2014

ANSI Z136.1, *American National Standard for Safe Use of Lasers*, 10 December 2013

Adopted Forms

AF Form 847, *Recommendation for Change of Publication*

Abbreviations and Acronyms

75 OMRS—75th Operational Medical Readiness Squadron

75 OMRS/SGXB—75th Operational Medical Readiness Squadron/Bioenvironmental Engineering Flight

AF—Air Force

AFB—Air Force Base

AFI—Air Force Instruction

AFRL-SA-WP-SR—Air Force Research Laboratory, Sponsoring Agency, Wright-Patterson, Special Report

DoD—Department of Defense

ILSO—Installation Laser Safety Officer

LSC—Laser Safety Committee

OD—Optical Density

OPR—Office of Primary Responsibility

SOP—Standard Operating Procedures

ULSO—Unit Laser Safety Officer