DEPARTMENT OF THE NAVY
NAVAL POSTGRADUATE SCHOOL
1 UNIVERSITY CIR
MONTEREY, CA 93943-5000

IN REPLY REFER TO:
NAVPGSCOLINST 5100.27A
015
11 Oct 11

NAVPGSCOL INSTRUCTION 5100.27A

Subj: LASER (NON-IONIZING RADIATION) HAZARDS CONTROL PROGRAM

Ref: (a) OPNAVINST 5100.27B
(b) ANSI Z136.1
(c) SECNAVINST 5100.14D
(d) BUMEDINST 6470.23
(e) OPNAVINST 5100.23G
(f) OPNAVINST 5100.19E
(g) OPNAVINST 5102.1D/MCO P5102.1B
(h) MIL-STD-882D
(i) OPNAVINST 3500.39C
(j) MIL-HDBK-828A
(k) DoDD 4160.21-M
(l) DoDD 4160.21-M-1
(m) 29 CFR 1926.54 and 1926.102(b)
(n) ANSI Z136.3
(o) BUMEDINST 6470.19A
(p) ANSI Z136.2
(q) SECNAV M-5210.1
(r) SECNAV M-5210.2
(s) NAVMC DIR 5210.11E
(t) 21 CFR 1040

Encl: (1) NPS Laser Hazard Control Program
(2) NPS Laser Safety Committee Charter

1. Purpose. To prescribe policy and guidance in the identification and control of laser radiation hazards at the Naval Postgraduate School (NPS). This is a complete revision and should be read in its entirety.

2. Cancellation. NAVPGSCOLINST 5100.27

3. Background. The widespread use of lasers in both commercial and military applications has increased the probability of injury from exposure to laser radiation. References (a) through (t) either provide controls over laser system design and operation for protection of personnel and equipment or contain specific information on various laser safety subjects. This instruction is not intended as a substitute for references (a)

through (t) but rather as an implementation directive. Those sections of references (a) through (t) directive in nature and applicable to laser use and laser safety at NPS shall be observed. Accordingly this instruction, while directive, is not intended to be used as a stand-alone document. Intimate knowledge of references (a) through (d) and a familiarity with the remaining references is required to use this instruction and to effectively administer the command laser safety program at NPS.

4. Scope. The provisions of this directive are mandatory for all NPS Faculty, Staff, and Students. They apply to the design, procurement, use, storage, and disposal of all equipment and systems capable of producing laser radiation, including laser fiber optics and system support equipment. Directed energy weapons emitting laser radiation and other high-energy laser systems are subject to the requirements of this directive. Medical, industrial, and construction laser systems having no military-specific applications are exempted from this instruction.

5. Policy. The Department of the Navy and thus NPS policy is to identify and control laser radiation hazards early during design and development as a matter of military necessity. NPS policy is also to ensure personnel are not exposed to laser radiation in excess of the applicable Maximum Permissible Exposure throughout the life cycle of laser systems, including research, design, testing, development, evaluation, acquisition, deployment, operation, support, maintenance, service, demilitarization, and disposal.

6. Responsibilities

a. Supporting Organizations. Responsibilities of supporting organizations are provided in reference (a).

b. Naval Postgraduate School. Activities within NPS use class 3B or class 4 lasers. Activities within NPS also use class 1, 2, 3a, or 3R lasers used in combat training or classified in the interest of national security. NPS shall:

(1) Establish a laser safety organization and program per enclosure (1). Operational risk management is an essential part of the laser hazard control process and shall be implemented per reference (i).

(2) Impose design and operating requirements of this instruction and references (a) and (b) on equipment and facilities. Provide adequate warnings, safety training, documentation, and audits for the control of all hazards resulting from the use of lasers. Ensure all lasers are classified as to hazard and labeled per reference (b).

(3) Ensure appropriate Laser Eye Protection (LEP) is worn by all personnel within the Nominal Hazard Zone (see reference (b) for definition) during testing or operational use of any laser system. If optical aids are used, LEP should meet the aided Optical Density (see reference (b) for definition) requirement.

(4) Appoint a Laser System Safety Officer (LSSO) and forward the LSSO's name, organizational code, and telephone number to appropriate authorities. The President, acting through the command appointed LSSO has final authority over all laser operations at NPS or those involving NPS personnel participating in NPS sponsored laser related activities or research at other locations.

(5) Ensure only those laser installations and ranges have been certified for laser use and approved by the LSSO as safe for specific applications using specific laser systems are allowed to operate and then solely for those applications. Laser systems shall not be fired outside of these LSSO-designated areas and targets.

(6) Use and dispose of military exempt lasers in accordance with references (c), (k) and (l).

(7) Maintain a current inventory of all military exempt lasers and all class 3B and class 4 lasers. Report lost lasers to the Navy Administrative Lead Agent using the inventory formats given in reference (a).

(8) Make provisions so immediate consultation can be obtained with an ophthalmologist or optometrist for personnel with suspected or observed potentially injurious laser exposure. Since early medical intervention may lessen the severity of the damage or subsequent retinal scarring for laser injury, efforts should be made to have the individual promptly seen by an ophthalmologist or at the ophthalmology department of a hospital on an urgent basis. The command LSSO shall notify the Navy Bureau of Medicine and Surgery (BUMED) (M3B4) by electronic mail, fax, message or telephone of suspected or observed laser

exposure incidents as soon as possible at Comm: (202)762-3448, DSN: 762-3448, Comm FAX: (202)762-0931, DSN FAX: 762-0931, and contact the tri-service laser safety hotline (800-473-3549) as soon as possible.

(9) Submit a laser incident report for all cases where personnel are inadvertently exposed to laser energy and maintain the laser incident reports per reference (q) SSIC 8140.1. This report is required for all incidents involving personnel with suspected or observed exposure to class 3B or class 4 lasers. The report shall be sent by the LSSO to BUMED within 30 days of the incident and shall include those items so specified in reference (d).

(10) Submit a safety investigation report per references (e), (f), and (g) for all incidents meeting the safety investigation thresholds.

(11) Submit a hazard report for any work-related events having potentially resulted in a laser exposure.

(12) Obtain Navy Laser Safety Review Board (see reference (a) for definition) approval for all class 3B, class 4 (except those lasers exempted from such approval in accordance with reference (a)), and military exempt lasers.

(13) IAW reference (a), coordinate all space directed (above-horizon) emissions with North American Aerospace Defense Command, CMD/J3S USSTRATCOM JSCC USV, Attn: Orbital Safety Officer, Cheyenne Mountain AFS, CO 80914-6020, Laser Clearinghouse, Comm: (719)474-4416, DSN: 268-4416.

c. Members of the NPS faculty, staff, or student body. Members of the NPS faculty, staff, or student body shall:

(1) Members possessing or desiring to possess only class 1, 2, and 3a or 3R lasers not used in combat, combat training or classified in the interest of national security ensure they read manufacturer literature and labeling and report any instances of contact of the laser beam with an eye to the laser safety office immediately. Time permitting, when making this report be prepared to provide the wavelength, class, approximate duration of exposure of the laser, and any noticeable degradation of eyesight. Do not substantially delay reporting to gather this information.

(2) Members possessing or desiring to possess class 3B or 4 or military exempt lasers used in combat or combat training or classified in the interest of national security ensure they comply with the provisions of references (a) through (t) and enclosure (1) to this instruction.

8. Forms and Reports

a. Reference (a) contains all of the forms, records, and reports necessary to administer a laser safety program in compliance with higher level requirements. Forms, records, and reports contained in reference (a) may be reproduced directly and used in support of the command laser safety program at NPS. The command LSSO is also authorized to produce electronic substitutes for these forms which provide equivalent recordkeeping and direct their use in lieu of paper forms, provided compliance with the requirements of references (a) through (t) can be demonstrated. In so doing the LSSO will make such forms available to end users, usually through the NPS Laser Safety Webpage(s).

DANIEL T. OLIVER

Distribution:
http://intranet.nps.edu/Code00/Instructions/IndexNew_page XX.html

NPS LASER HAZARD CONTROL PROGRAM

1. Introduction. Reference (a) requires all activities using military exempted, class 3B or class 4 lasers or systems incorporating any class 3B or class 4 lasers, or conducting maintenance on laser systems containing class 3B or class 4 lasers, establish a formal laser hazard control program. This enclosure forms the laser hazard control program at the Naval Postgraduate School (NPS).

2. Program Requirements. The NPS laser hazard control program consists of the following:

a. Regulations. References (a) through (t) contain the regulations necessary to establish an effective laser hazard control program at NPS and are hereby invoked directly. Those personnel wishing to obtain, possess, use, or dispose of lasers at NPS shall comply with these regulations. Assistance is available from the Command Laser Systems Safety Officer (LSSO). Personnel wishing to deviate from requirements in the base instructions shall formally petition the LSSO to do so. The LSSO is authorized to grant provisional waivers from the requirements of references (a) through (t) when reasonable alternatives are available to retain the same level of safety. Such provisional waivers shall be brought before and finally approved by the NPS Laser Safety Committee (LSC) (see enclosure (2)).

b. LSSO. The President has designated an individual by name and code as the LSSO. Organizationally, this officer resides within the office of Research Safety within the office of the Dean of Research. LSSO responsibilities and duties are delineated in reference (a). The LSSO has direct access to the President and has the authority to suspend, restrict, or terminate the operation of a laser or laser system at any time when in his/her judgment such action is necessary to demonstrate compliance with regulations or provide for a working environment adequately protecting NPS personnel, members of the public, equipment, or the environment. The LSSO has authority to appoint, at his/her discretion an Assistant Laser Systems Safety Officer. This officer when so appointed may act authoritatively for, and has direct access to the President, regarding all matters dealing with laser safety when the LSSO is not available.

c. Laser Classification and Labeling. Use of each class 3B, class 4, or military exempt laser or laser system on the NPS campus or used by NPS personnel in support of NPS sponsored activities off the NPS campus requires approval from the LSSO and the LSC and under some circumstances the Navy Laser Safety Review Board. Each laser also requires classification and labeling prior to use. Laser classification is detailed in reference (b). Some class 1 or class 2 lasers, when broken down for maintenance, allow class 3B or class 4 radiation levels to be accessible and are treated as class 3B or class 4 under those conditions. For example, if radiation at the level of class 3B or class 4 is accessible when a class 1 laser housing is removed, then procedures and labeling of the laser and maintenance manuals must warn of this condition. When a class 1 laser has a defeatable interlock, when defeated, allows access to class 3B or class 4 emission levels, an additional label is needed on or near the access panel stating the following:

DANGER
Laser Radiation When Open and Interlock Defeated,
Avoid Eye or Skin Exposure to Direct or Scattered Radiation.

(1) Laser warning signs shall be posted at all entrances to protect unsuspecting personnel from laser radiation. Warning sign design, signal words, and required labeling shall be as specified in reference (b). Laser protective housings, optical cable disconnects, and unenclosed beam paths shall be posted with special warning signs and labels as specified in reference (b).

(2) Laser warning devices and additional precautions for Class 3b and 4 laser system operations are contained in reference (b) tables 10 and 11.

d. Protective Equipment. All NPS personnel using lasers shall wear appropriate laser protective equipment (e.g., eyewear, clothing, barriers, screens, etc.) as prescribed by the LSSO following a formal hazard analysis. Laser eye protection shall provide optical densities at the operating wavelength(s), under both unaided and (if applicable)optically aided viewing, to ensure the applicable Maximum Permissible Exposure (see reference (b) for definition) is not exceeded. Eyewear shall be inspected for serviceability prior to issue and at least

annually to ensure its integrity. Any degradation such as cracks or bleaching shall result in replacement.

e. Safety Evaluations, Inspections, and Surveys. Laser facilities and ranges shall receive compliance inspections annually by the LSSO or a designated alternate who is certified as a Technical Laser Safety Officer or Laser Safety Specialist. The inspection guide in Appendix C of enclosure (6) of reference (a) or equivalent (as approved by the LSSO and LSC) is used during these inspections. Naval Surface Warfare Center (NSWC), Dahlgren Division, NSWC Corona Division, or an Administrative Lead Agent (ALA)/Lead Navy Technical Laboratory (LNTL)-certified Range Laser Safety Specialist shall perform complete laser radiation hazard surveys and evaluations on laser ranges to determine the degree of laser radiation hazard and to recommend proper controls. These hazard surveys and evaluations shall be performed on all new laser ranges and on portions of a certified range wanting to incorporate changes. These ranges must be re-certified every three years. Inspection records will be maintained by the LSSO for three years.

f. Medical Surveillance Program. A laser medical surveillance program is hereby established and will be maintained per reference (d). A record of the completion of the initial and termination ocular exams will be maintained by the LSSO indefinitely.

g. Laser Inventory. The LSSO shall maintain a record of all class 3B, class 4 and military exempt lasers and their locations at NPS and submit all necessary records required by reference (a) and other government regulations to the ALA and Technical Lead Agent (TLA). Records for lost or disposed laser systems shall be maintained for submission to the ALA and TLA. This inventory can be kept in any suitable format, including electronic, complying with the intent of reference (a).

h. Documented Safety Duties for Laser Custodians (Laser Supervisors) and Laser Workers. Laser Custodians (sometimes referred to as Principal Investigators or Laser Supervisors), are designated personnel who are authorized by NPS to possess and use lasers and supervise authorized laser workers in the same. The responsibilities of the Laser Custodian include:

(1) Assisting the LSSO in maintaining an accurate laser inventory for lasers they are authorized to possess.

(2) Ensure during laser operations an NPS laser safety trained laser worker is physically present at or near the control station while lasers are being actively fired.

(3) Safety planning for the installation of laser systems within their authorized spaces.

(4) Providing and enforcing operational procedures.

(5) Ensuring employees under their supervision receive appropriate training.

(6) Providing appropriate laser protective equipment to personnel who are present in an area where lasers under their custody are being actively fired.

(7) Assisting in investigating incidents.

(8) Ensuring class 3B and class 4 laser firings are logged.

(9) Ensuring laser authorized spaces under their custodial responsibility are in compliance with the requirements of references (a) and (b) at all times and available for inspection by the LSSO with reasonable (normally 1 working day) notice.

i. Operator Training and Certification. All prospective laser custodians and prospective laser workers shall be trained on the safe use of lasers in accordance with referance (a) enclosure (7) paragraph 4 prior to first of use of a class 3B or 4 or military exempt laser. Note this reference stipulates topics beyond those specified in the reference may be added as deemed necessary by the LSSO. Third party contractors and laser vendor personnel involved in laser installation, service, or maintenance shall provide proof of their training to the LSSO prior to being allowed to service, maintain, or fire lasers on the NPS campus. Training records will be maintained by the LSSO until individuals transfer. Refresher training, similar in scope to initial training, is also required to be completed

annually in order to maintain status as a custodian of or worker on an active laser permit.

j. Emergency Provisions. Laser custodians are to ensure emergency procedures (to include emergency shutdown procedures, laser hazard information, and points of contact) shall be included as an enclosure to each laser Standard Operating Procedure (SOP) and posted at each laser installation in a location safely accessible to personnel rendering emergency aid. The LSSO shall coordinate with emergency medical technicians and firefighters in order to provide basic instruction on laser hazards and controls.

k. Laser Safety Committee. An NPS laser safety committee is hereby established to assist the LSSO in administering the command laser safety program. Details on LSC formation, duties, and responsibilities are contained in enclosure (2) to this instruction.

l. Laser Mishap Investigation. Each laser custodian and the LSSO are charged with ensuring prompt medical attention is given to laser injuries. The LSSO shall investigate and report laser mishaps per references (a) through (c), and (e) through (g). Copies of reports shall be sent to the Naval Safety Center, Bureau of Medicine and Surgery (M3B4), Headquarters Marine Corps Safety Division (if Marine Corps personnel or systems are involved), the LNTL and the ALA. The LSSO shall ensure corrective actions are effective in preventing a recurrence of similar mishaps.

m. Disposal of Military Exempt Lasers. Each laser custodian shall obtain LSSO approval who in turn will obtain ALA approval prior to disposal of military exempt lasers. Lasers previously carring the designation as "military exempt" are not to be sold or donated outside the Department of the Defense unless they have been brought into compliance with 21 Code of Federal Regulations part 1040 and received Food and Drug Administration registration and ALA approval. Disposition/disposal shall be in accordance with references (k) and (t), with demilitarization in accordance with reference (l).

n. Laser Pointers. In the past several years the use of laser pointers has proliferated significantly. They are routinely used in demonstrations, alignment, educational, and

numerous other applications. With advances in laser device technology driving new designs, the new laser pointers generally contain a diode laser classified as Class 3a or 3R. This should be contrasted with previous generations of laser pointers based on HeNe lasers and were generally classified as Class 2. The great proliferation of these devices has made it more likely individuals who are not familiar with appropriate safety precautions are now in possession of such lasers. Some commercially available laser pointers are class 3a or 3R lasers with output levels not considered safe for all viewing conditions. A formal laser safety program is not required for class 3a or 3R laser pointers. However, users in possession of such lasers on the NPS campus should recognize care must be taken to control its accessibility (kept out of the hands of children who are unaware of the hazardous nature of lasers), and to avoid directing the pointer at people or specularly reflective surfaces. Class 2 laser pointers do not pose a hazard during normal viewing, and their use is not restricted. While it is unlikely momentary exposure to laser pointers will cause permanent retinal damage, exposure to these devices can cause other visual impairment. Flash blindness, afterimage, and glare can occur as a result of exposure to laser pointers and may result in visual dysfunction affecting visual-critical activity such as driving or flying. **Accordingly, it is explicit NPS policy no person shall intentionally shine a laser at another person, regardless of class, without prior approval of the Laser Safety Committee (note: the only condition under which this approval could conceivably be given is in support of sponsored research with appropriate protective safety precautions and an approved research test plan). Personnel found to be in violation of this policy are subject to administrative or disciplinary action.**

o. The authorized laser custodian permit concept. NPS hereby establishes a "Laser Custodian Permit" concept. Following review and compliance with laser firing prerequisite requirements of references (a) through (d) each laser custodian will be issued an NPS Laser Custodian Permit. Among other things, this permit will specify for each custodian:

(1) Lasers or laser systems authorized for use by custodian.

(2) Spaces authorized for active firings of lasers under supervision of the custodian.

(3) Laser workers authorized to operate lasers under the custodian.

(4) An acknowledgement of responsibilities as a laser custodian.

(5) Other appropriate information as may be deemed necessary by the LSSO.

p. Requirements for use of lasers in approved laboratories, facilities, and on outdoor ranges. References (a) through (d) contain the necessary requirements for meeting initial and continuing laser safety requirements in approved laboratories, facilities, and on outdoor ranges at NPS. Prospective laser custodians should thoroughly familiarize themselves with these references. The LSSO can assist in the interpretation and implementation of these requirements on request. While not a substitute for references (a) through (d) the following guide may be useful to custodians in understanding the important first steps toward firing a laser as a new custodian:

(1) **Take NPS Laser Safety Training.**

(2) **Complete a pre-use eye examination.**

(3) **Provide inventory and technical information on your lasers to the LSSO.** This will allow a hazard analysis to be done in advance of an inspection of your laboratory or facility.

(4) **Submit a laser SOP to the NPS LSSO for review and approval.** An example template is available from the NPS Laser Safety webpage or from the LSSO. A properly completed SOP also includes an appropriate Operational Risk Assessment.

(5) **Have your laser(s) and lab(s) inspected by the NPS LSSO.** Prior to this step, prospective laser custodians are strongly encouraged to review the ANSI Z136.1-2007 section on Engineering and Administrative Controls for the appropriate class of laser(s) proposed to be used in your facility and make lab accessible upon request of the LSSO during any time you have an active laser permit.

(6) **Purchase the required PPE for yourself and all prospective laser workers who will work under your permit.**

(7) **Have any laser workers whom you would like attached to your permit complete their training and pre-use medical exams.**

(8) **Receive your "NPS Authorized Laser Custodian" designation and use permit.**

NPS LASER SAFETY COMMITTEE

1. Purpose. This enclosure defines the membership, authority, responsibilities, and rules of order and serves as the charter for the Laser Safety Committee (LSC) at the Naval Postgraduate School (NPS).

2. Scope & Mission Statement

a. Scope. The LSC, a standing committee at NPS, is an advisory body for all aspects of laser safety and protection within NPS, including all affiliated research, instructional, and service units using laser sources in facilities owned or controlled by NPS. The primary purpose of the committee is to review all class 3B, class 4, and military exempt laser activities involving NPS personnel and/or facilities and advise the President, through actions of the Laser Systems Safety Officer (LSSO), on the same. In so doing the committee shall pay particular notice to compliance with existing Federal, Department of the Navy, and state of California requirements, laws, and regulations as they relate to laser safety.

b. NPS Laser Safety Mission Statement. The mission of the LSC is to enhance protection of NPS faculty, staff, students, contractors, the public, and the environment through advice and consent of actions taken in support of the NPS Laser Hazard Control and Safety Program.

3. Discussion. The LSC is a standing committee responsible for the oversight of the NPS Laser Protection Program. In fulfillment of this role, the committee promulgates policies, rules, and procedures for the safe use of laser sources. The committee has the authority to deny, require changes, or withdraw permission for the use of any laser devices within NPS in order to comply with regulations or meet reasonable standards for health and safety. Note while the LSSO is a standing member of the committee, only the LSSO has the certified training to approve laser use for NPS faculty, staff, and students. Still it is NPS policy no use of a class 3B, class 4, or military exempt laser can be finalized without the concurrent consent of the committee. Stated in short; The LSSO may independently provide interim approval for laser use at NPS but this approval does not become final until the LSC consents to this use through their regularly scheduled meeting process. Note laser

custodians do not have to wait for final LSC approval to begin active laser operations once LSSO interim approval is obtained but should the LSC vote to deny use at a subsequent regularly scheduled meeting, laser activity must be suspended until LSC approval is obtained.

4. Responsibilities. The committee reports to the NPS Dean of Research. The committee is responsible for the following:

a. Reviewing and approving NPS laser policies;

b. Reviewing and approving laser training procedures and criteria;

c. Reviewing and providing consent on all proposals for class 3B, class 4, or military exempt laser use following interim approval by the LSSO;

d. Voting to approve, disapprove, or amend proposals;

e. Advising the President, on all laser safety related matters on the NPS campus or involving NPS faculty, staff, or students;

f. Reviewing all laser incidents;

g. Delegating authority to approve procurement, transfer, or disposal of lasers defined as routine;

h. Reviewing the annual audit/review of the laser hazard control program including a review of documentation and performance required to comply with Navy regulations, and LSC recommendations. This audit is reviewed and discussed at a LSC meeting and is recorded in the minutes;

i. Maintaining a list of the members and their appropriate training and experience;

j. Making recommendations to the NPS Dean of Research on risk management issues related to laser safety.

5. Membership. Membership of the committee includes the Military Associate Dean of Research, Military Associate Dean of the Graduate School of Engineering and Applied Sciences, the NPS

LSSO, NPS faculty and staff who are knowledgeable, cognizant, and experienced in the use of non-ionizing lasers at NPS, and a non-voting secretary, who is normally the research safety office manager. The Dean of Research is also a standing Emeritus member of the committee. He may attend or not attend meetings as his schedules and desires permit. When he attends, he is a voting member of the committee. Membership may also include Environmental and Safety Compliance Officers from the various NPS schools and/or departments where lasers are used. One member, but not the LSSO, will serve as the chair of the committee for a term not to exceed three years, which is non-renewable.

a. The committee size and composition shall be large enough to represent the spectrum of laser users across NPS. The extent of representation shall be as recommended by the LSSO and approved by the NPS Dean of Research.

b. The membership process consists of formal appointment to the committee from the Dean of Research. Members shall be appointed for a renewable term of two years. Nominations for membership shall be made by existing committee members to provide representation from major academic and research areas using laser sources. Qualified nominees shall include principal investigators and/or experienced professionals, proficient in the use and handling of laser sources, who are knowledgeable in regulatory compliance and NPS policy related to laser use. Representatives of other groups or functions closely associated with the laser safety program, (e.g. purchasing, safety and maintenance) may also be nominated.

c. The Chair has the responsibility for conducting regular committee meetings and implementing the control functions of the committee.

d. The committee may choose to elect an alternate Chair, for a three-year term, responsible for discharging the duties of the Chair, if the Chair is unavailable.

6. Attendance, Alternates, and Replacements

a. Regular attendance shall be required at committee meetings. In the event a member does not attend three consecutive meetings, at the discretion of the Chair, the

committee may vote to request the Dean of Research to appoint a replacement.

b. To plan for temporary absences, each committee member may, with the consent of the Chair, appoint a designated alternate for a particular meeting. The designee may represent the absent committee member in all aspects of committee participation, and shall have the responsibility and authority to act as a voting member on behalf of that member.

c. A committee member may nominate a qualified replacement at any time during the appointed term for the remainder of the term. A formal letter from the Dean of Research shall be required to document member appointment. In the event a member or designee leaves NPS, membership is automatically terminated.

d. The secretary shall document changes to membership and designated attendance in writing.

7. Meetings, Agenda, and Quorum. The committee meets at least once during each calendar quarter, or more frequently, at the discretion of the Chair. A quorum consists of more than fifty percent of its then current membership, and must include the Chair (or his alternate if so assigned), and the LSSO. All members present are entitled to vote with the exception of the administrative secretary. Committee decisions are made by the majority vote of a quorum of committee members and members shall not vote on issues they have a personal involvement in. Between regularly scheduled meetings, issues may be forwarded to the committee by electronic mail for interim decisions. Balloting and approval are under the same rules of order as above, i.e. approval or denial through a simple majority of those who respond within the stated timeline of the request, but such decisions shall not be considered final until ratified by vote at a called meeting of the committee. Parliamentary procedures shall be determined by Robert's Rules of Order, as appropriate. The LSSO with current Navy laser safety officer certification has the final authoritative vote for all issues directly related to safety and for denial of any actual laser use. The LSSO will develop the meeting agenda and through the secretary make it, and any supporting documentation, available to members not less than 3 working days prior to the scheduled meeting date.

8. Reports, Records, and Minutes

a. The minutes of the committee meetings, together with all reports submitted to the committee, serve as the official documentation of the laser hazard control program of NPS. The minutes of each meeting shall include the date of the meeting, the members present and absent, a summary of deliberations and discussions, and recommended action items. Following each meeting, minutes shall be prepared in draft form and made available to all members by the secretary for a reasonable period of time for review and comment. A majority vote at the next meeting shall be taken to approve the minutes.

b. A copy of the minutes of all committee meetings, with all subcommittee reports and attachments, shall be submitted annually to NPS archives and retained with Laser Safety Office files for permanent storage in accordance with existing NPS policies and instructions.

9. Subcommittees. The committee may establish subcommittees to perform specific functions. Each subcommittee shall submit a written report of its activities and actions to the committee for each quarter in which it was active. Any authority granted to a subcommittee is subject to approval for action by the full committee. As described above, each subcommittee report accepted by the committee becomes part of the record filed in NPS Archives or retained with the Laser Safety Office files.

10. Changes to this charter. This enclosure serves as the charter for the LSC. The LSC is authorized to revise this enclosure, and any appendices, as it deems necessary for the efficient conduct of committee business. Such changes shall be by unanimous consent of a quorum of the committee. In the event it becomes necessary to act on an urgent change to this enclosure before members can be assembled in a quorum, the secretary is authorized to gather the votes for members in a suitable electronic means, e.g. e-mail, in order to meet the provision of voting to amend this charter. The secretary is further charged with the responsibility of maintaining a current copy of this charter as approved by the committee. The charter (i.e. this enclosure to this instruction) is to be updated when this instruction is revised for any other reason.

APPENDIX 1
NPS LSC MEMBERSHIP ROSTER

Name	Department	Date Appointed	Date Terminated

APPENDIX 2
NPS LSC Member Appointment Letter

From: Dean of Research, Naval Postgraduate School
To:

Subj: APPOINTMENT TO THE NAVAL POSTGRADUATE SCHOOL LASER SAFETY COMMITTEE

Ref: (a) NAVPGSCOLINST 5100.27A

1. You are hereby appointed to the Naval Postgraduate School (NPS) Laser Safety Committee for a period of two years effective _____.

2. Your appointment carries with it the responsibility to participate in and contribute to the execution of the NPS laser hazard controls program as outlined in reference (a). Accordingly, you are asked to thoroughly familiarize with reference (a), paying particular attention to the structure, purpose, authority, and responsibility of the committee as discussed in enclosure (2) to reference (a).

3. Should unforeseen circumstances make it necessary for you to terminate your membership prior to your planned termination date of _____, please inform the Laser Safety Committee Chairman, and the Laser Systems Safety Officer just as soon as possible so a suitable replacement can be found.

4. Your willingness to serve NPS in this capacity is greatly appreciated. The committee and I look forward to the benefit of your participation in committee activities for the purpose of enhancing the safe use of lasers for all NPS faculty, staff, and students.

5. Welcome Aboard!

//signature//
Dean of Research

APPENDIX 3
NPS LSC Chairman Appointment Letter

From: Dean of Research, Naval Postgraduate School
To:

Subj: APPOINTMENT TO CHAIR OF THE NAVAL POSTGRADUATE SCHOOL LASER SAFETY COMMITTEE

Ref: (a) NAVPGSCOLINST 5100.27A

1. You are hereby appointed to the Naval Postgraduate School (NPS) Laser Safety Committee to serve as its Chairman for a period of three years effective _____. This appointment is non-renewable.

2. Your appointment carries with it the responsibility to lead committee activities as they relate to the execution of the NPS laser hazard controls program as outlined in reference (a). Accordingly, you are asked to thoroughly familiarize with reference (a), paying particular attention to the structure, purpose, authority, and responsibility of the committee and its Chairman as discussed in enclosure (2) to reference (a).

3. Should unforeseen circumstances make it necessary for you to terminate your chairmanship prior to your planned termination date of _____, please inform the Laser Safety Committee, and the Laser Systems Safety Officer just as soon as possible so a suitable replacement can be found.

4. Your willingness to serve NPS in this capacity is greatly appreciated. The committee and I look forward to the benefit of your leadership in committee activities for the purpose of enhancing the safe use of lasers for all NPS faculty, staff, and students.

5. Welcome Aboard!

//signature//
Dean of Research