

**2005
Rationale for Revisions**

**Part AA
Registration and Radiation Safety Requirements for Lasers**

Introduction.

The current Part AA is divided into six major sections that include General Provisions, Registration, Requirements for Protection Against Laser Radiation, Tables, Figures, and Appendices. Part AA has been revised and the title of this Part was changed to more accurately reflect the contents. Sections AA.3(c) addressing general exemptions, AA.4 - Additional Requirements, AA.5 - Violations, AA.7 - Inspections, AA.8 - Tests, AA.9 - Administrative Review, AA.11 - Communications and AA.12 - Severability have been deleted from Part AA as they are addressed in Part A, General Provisions. and Part J, Notices, Instructions, and Reports. Laser registrants will be required to comply with Parts A and J under Section AA.1 Purpose and Scope instead of delineating separate sections within Part AA.

Because the American National Standards Institute (ANSI) Z136.1, Safe Use of Lasers is widely used in the laser industry, Part AA was revised and updated using ANSI Z136-1, Safe Use of Lasers as a basis for the changes. Outdated tables and graphs have been deleted. References to tables and graphs in ANSI Z136.1, Safe Use of Lasers and to Title 21, Code of Federal Regulations (CFR), Part 1040.10 are inserted.

Optional language is shown as bracketed language.

Section AA.1 - Purpose and Scope.

This section has been reformatted and revised to combine several sections in the Part and to more accurately describe the purpose and scope.

Section AA.2 - Definitions.

The definitions of Continuous wave, Embedded laser, Enclosed laser, Limiting duration, and Practitioner of the healing arts were added to define language in the section and to be consistent with language in ANSI Z-136.1, Safe Use of Lasers. The definition of photothermolysis was added as a section on the registration and use of intense-pulsed light devices (IPL) is now included in Part AA. The definitions of Accuracy, Attenuation, Class I, II, III, or IV facility, Operable laser, and Uncontrolled area were deleted as they are not used in the final version of Part SR-AA. Many of the other definitions were changed to clarify the meaning and to be consistent with ANSI Z-136.1. The definitions for Class 1, 2, and 3a lasers are revised to also include the current numbering system utilized by the International Electrotechnical Commission as well as references to the applicable, accessible emission limits in ANSI Z136.1-2000, Safe Use of Lasers.

Section AA.3 - Exemptions

Exemptions from Section AA.16 and AA.3 were combined into Section AA.3 for clarification.

Old Section AA.4 - Additional Requirements. - This was deleted as it was repetitive of language in Part A, General Provisions.

Old Section AA.5 - Violations. - This was deleted as it was repetitive of language in Part A, General Provisions.

Old Section AA.6 - Impounding. - This was deleted as it was repetitive of language in Part A, General Provisions.

Old Section AA.7 - Inspections. - This was deleted as it was repetitive of language in Part A, General Provisions.

Old Section AA.8 - Tests. - This was deleted as it was repetitive of language in Part A, General Provisions.

Old Section AA.9 - Administrative Review. - This was deleted as it was repetitive of language in Part A, General Provisions.

New Section AA.4 - (Old AA.10 - Reserved) - Prohibited Uses.
Because of the potential for misuse and possible injury, prohibitions were added to Part AA.

Old Section AA.11 - Communications. - This was deleted as it was repetitive of language in Part A, General Provisions.

Old Section AA.12 - Severability. - This was deleted as it was repetitive of language in Part A, General Provisions.

Old Section AA.13 - Purpose. - This was combined with Purpose and Scope in Section AA.1 for clarification.

Old Section AA.14 - Scope. - This was combined with Purpose and Scope in Section AA.1 for clarification.

New Section AA.5 - Old Section AA.15 - General Registration Requirements. - The title of this section was revised to indicate general registration requirements that apply to all applicants for registration of lasers. The requirement that a laser safety officer be designated on each application and his/her qualifications be submitted to the agency was added to ensure that qualified individuals serve in this capacity.

New Sections AA.6 - AA.12 - These sections contain specific requirements for registration applications for different uses of lasers including healing arts and veterinary facilities, industrial, academic, and research and development facilities, demonstration for the purpose of sales, providers of lasers, alignment, calibration, and repair of lasers, laser light shows, and laser mobile services. Applicants for laser registration would be required to submit documentation or

comply with items specific to the type of registration in question in addition to the general requirements.

New Section AA.13 - Requirements for Intense-Pulsed Light Device (Photothermolysis) Facilities. - This new section contains requirements for intense-pulsed light devices that are commonly used for hair removal. Since not all states regulate these devices, the language was added as bracketed optional language

New Section AA.14 - (Old Section AA.17) - Laser Safety Officer Qualifications. - This section was revised and language that was also referenced in the Training and Experience Appendix for Radiation Safety Officers was deleted as it was repetitive. The duties of the Laser Safety Officer were moved to new Section AA.15.

(Old Section AA. 18 - Acceptance of Laser Safety Officer). - When an application is submitted for registration that includes the qualifications for laser safety officer, the agency makes a decision on the application as a whole including the laser safety officer. This language is unnecessary and was deleted.

(Old Section AA. 19 - Annual Report.) - A registrant is required to report changes throughout the year as they occur as delineated in new Section AA.19. An annual report is unnecessary and this section was deleted.

New AA.15 - Duties of Laser Safety Officer. - The requirements were moved from the old Section AA.17 and were expanded to more accurately reflect the duties of this individual.

New AA.16 - Issuance of Laser Registration. - This section was added to delineate that a laser registration will be issued if the applicant has met the requirements. It also allows the agency to amend the registration as necessary when circumstances so dictate.

New Section AA.17 - Expiration of Laser Registration. - This section provides a time frame for expiration of the laser registration.

New Section AA.18 - Renewal of Laser Registration. - This section contains requirements for renewal of laser registrations.

New Section AA.19 - Report of Change. - This section contains requirements for reporting any changes to the application.

New Section AA.20 - Termination of Registration. - This section contains requirements for terminating a laser registration.

(Old Section AA.24 - Purpose and Scope.) - This section was combined with Section AA.1, Purpose and Scope.

New Section AA.26b.iv. - (Old Section AA.27(b)iv.) - Warning Systems - This section was revised to be more consistent with ANSI Z-136.1, Safe Use of Lasers.

New Section AA.31 (Old Section AA.32) - Measurement and Instrumentation. - This section has been bracketed as optional language. ANSI Z-136.1, Safe Use of Lasers indicates that measurements should be attempted only by personnel trained or experienced in laser technology and radiometry. Routine survey measurements of lasers or laser systems are neither required nor advisable when the laser classifications are known and the appropriate control measures implemented. Generally this would apply to research and development facility registrants.

Tables I, IIa, IIIa, IVa, IVb, IVc, V, VI, VII, and VIII have been deleted and reference made to ANSI Z-136.1, Safe Use of Lasers and Title 21, Code of Federal Regulations (CFR), Part 1040.

Figures 3, 4, 5, 6, 7, 8, 9, 10, 11, and 12 have been deleted and reference made to ANSI Z-136.1, Safe Use of Lasers and Title 21, Code of Federal Regulations (CFR), Part 1040.

Appendix AA, Medical Surveillance has been revised to be less prescriptive and to be more consistent with language in ANSI Z-136.1, Safe Use of Lasers. It is shown as bracketed optional language and renumbered to Appendix C.

Appendix AA, Guidelines for Laser Light Shows has been renumbered to Appendix A.

Appendix AA, Training has been renumbered to Appendix B.

Appendix AA, Measurements for Maximum Permissible Exposure has been deleted. See the rationale in Section AA.31.