

# NOTICES OF SUPPLEMENTAL PROPOSED RULEMAKING

After an agency has filed a Notice of Proposed Rulemaking with the Secretary of State's Office for *Register* publication and the agency decides to make substantial changes to the rule after it is proposed, the agency must prepare a Notice of Supplemental Proposed Rulemaking for submission to the Office, and the Secretary of State shall publish the Notice under the Administrative Procedure Act (A.R.S. § 41-1001 et seq.). Publication of the Notice of Supplemental Proposed Rulemaking shall appear in the *Register* before holding any oral proceedings (A.R.S. § 41-1022).

## NOTICE OF SUPPLEMENTAL PROPOSED RULEMAKING

### TITLE 2. ADMINISTRATION

#### CHAPTER 18. GOVERNMENT INFORMATION TECHNOLOGY AGENCY

##### PREAMBLE

**1. Register citation and date for the original Notice of Proposed Rulemaking:**

Notice of Rulemaking Docket Opening: 10 A.A.R.1626, April 23, 2004

Notice of Proposed Rulemaking: 10 A.A.R.1576, April 23, 2004

**2. Sections Affected**

R2-18-101  
R2-18-201  
R2-18-301

**Rulemaking Action**

Amend  
Amend  
Amend

**3. The statutory authority for the rulemaking, including both the authorizing statute (general) and the statutes the rules are implementing (specific):**

Authorizing statutes: A.R.S. § 41-3504 A.(12) and (13)

Implementing statutes: A.R.S. §§ 41-1001(17), 41-3504(A)(12) and (13)

**4. The name and address of agency personnel with whom persons may communicate regarding the rule:**

Name: Mr. D.J. Harper  
Communication and Outreach Manager

Address: Government Information Technology Agency  
100 N. 15th Ave., Suite 440  
Phoenix, AZ 85007

Telephone: (602) 364-4772

Fax: (602) 364-4799

E-mail: djharper@azgita.gov

**5. An explanation of the rule, including the agency's reasons for initiating the rule:**

The Government Information Technology Agency (GITA) is the Office of Arizona's Chief Information Officer (CIO) and is responsible for information technology (IT) planning, oversight, coordination, and consulting. Under A. R. S. §§ 41-3504 A.(12) and (13), the Agency is granted authority to adopt rules "necessary or desirable to further the objectives and programs of the agency." The proposed rulemaking is submitted pursuant to that authority granted in Statute.

The proposed amendments are related to the agency's five-year review of its existing rules and their effectiveness. The proposed changes are designed to update the rules and to make them consistent with current rulewriting standards as well as with current agency practice. Amendments are proposed for three of the four primary areas described in the agency rules.

The proposed amendments create consistency in terminology relative to the current activities of the agency by updating specific definitions used in the rules. In addition, the amended rules clarify ambiguity currently surrounding references to secondary documents used to prescribe detailed requirements beyond those the rules describe.

The agency has received input to the effect that these secondary documents, such as policies, standards, and procedures (PSPs), referenced within the administrative rules are considered to have the force of rules themselves and must therefore be subjected to the rulemaking process. The agency was not aware of this consequence at the time the current rules were crafted. Proposed amendments provide reworded general compliance criteria that do not reference any specific Statewide policies, standards, procedures, or templates. Due to the ever-increasing pace of technological

*Arizona Administrative Register / Secretary of State*  
**Notices of Supplemental Proposed Rulemaking**

---

change, the agency requires flexibility in specifying detailed requirements for agencies beyond the rulemaking process. The Statewide PSP Program provides the framework for that flexibility along with extensive collaboration with Arizona's CIO Council concerning the content of any individual PSP document. The agency believes that no need exists for individual PSP documents to traverse the rulemaking process and is therefore amending those criteria provided in the rules that formerly relied on PSPs for details.

Two other provisions of the rulemaking package are noteworthy. A set of revisions is being undertaken to more consistently define the information technology plans required of both budget units of the state and of GITA at the state-wide level. Also, additional clarity is being added to the definitions of "major," "critical," and "quality assurance" to address stakeholder issues raised since the rules were originally created.

**6. An explanation of the substantial changes that resulted in this supplemental notice:**

The explanation below identifies changes to the Notice of Proposed Rulemaking published in the Arizona Administrative Code on April 23, 2004.

The Proposed Rules provided revised documentation requirements for IT Plans and Project Investment Justifications to remove all references to policies, standards, and procedures (PSPs). These Supplemental Rules provide general categories of information required for documentation.

The Proposed Rules provided revised approval requirements for IT Plans and Project Investment Justification documents to remove all references to policies, standards, and procedures (PSPs). These Supplemental Rules provide general criteria used by GITA to evaluate the acceptability of IT Plans and Project Investment Justification documents.

**7. A showing of good cause why the rule is necessary to promote a statewide interest if the rule will diminish a previous grant of authority of a political subdivision of this state:**

The rule will not diminish a previous grant of authority to a political subdivision of the is state.

**8. The preliminary summary of the economic, small business, and consumer impact:**

The agency does not directly impact private entities through its rules. No additional administrative costs to state agencies performing information technology functions governed by the rules are intended. Some benefit to agencies may be realized through making definitions more consistent with agency practice and clarification of the rules.

**9. The name and address of agency personnel with whom persons may communicate regarding the accuracy of the economic, small business, and consumer impact statement:**

Name: Mr. D.J. Harper  
Communication and Outreach Manager

Address: Government Information Technology Agency  
100 N. 15th Ave., Suite 440  
Phoenix, AZ 85007

Telephone: (602) 364-4772

Fax: (602) 364-4799

E-mail: djharper@azgita.gov

**10. The time, place, and nature of the proceedings for the making, amendment, or repeal of the rules, or if no proceeding is scheduled, where, when, and how persons may request an oral proceeding on the proposed rules:**

Date: August 4, 2004

Time: 2:00 p.m.

Location: See item #9 above

Nature: Written and/or oral comments will be accepted.

Close of Record: Upon conclusion of public hearing, August 4, 2004.

GITA will accept written comments until the close of record.

Persons with a disability may request a reasonable accommodation by contacting Claudia Vasquez at [cvasquez@azgita.gov](mailto:cvasquez@azgita.gov) or (602) 364-4482. Requests should be made as early as possible to allow sufficient time to arrange for the accommodation.

**11. Any other matters prescribed by statute that are applicable to the specific agency or to any specific rule or class of rules:**

Not applicable

**12. Incorporation by reference and their location in the rules:**

Not applicable

**13. The full text of the changes follows:**

**TITLE 2. ADMINISTRATION**

**CHAPTER 18. GOVERNMENT INFORMATION TECHNOLOGY AGENCY**

**ARTICLE 1. GENERAL PROVISIONS**

Section  
R2-18-101. Definitions

**ARTICLE 2. INFORMATION TECHNOLOGY PROJECTS**

Section  
R2-18-201. Information Technology Project Justification and Monitoring

**ARTICLE 3. INFORMATION TECHNOLOGY PLANNING**

Section  
R2-18-301. IT Planning

**ARTICLE 1. GENERAL PROVISIONS**

**R2-18-101. Definitions**

Unless the context requires otherwise, the following definitions shall govern:

1. No change
2. ~~“Budget Unit IT Plan,” as used in A.R.S. Title 41, Chapter 32, means a budget unit’s documented strategy for using IT investments, projects, applications, direction, and expenses over a specific period of time, in accordance with planning standards in the PSP.~~
- 3-2. No change
- 4-3. “Critical information technology project,” as used in A.R.S. Title 41, Chapter 32, means an IT project having development costs greater than \$1 million that GITA or ITAC determines warrants monitoring because it:
  - a. Is necessary to the state or budget unit mission; Involves extreme complexity.
  - b. Is legally mandated, or Involves advanced technology not previously deployed in any budget unit, or
  - c. Requires technical expertise that ~~may is not be~~ available in ~~a the~~ budget unit.
- 5-4. “Development costs” means the sum of IT project start-up costs, as defined in the ~~PSP Program~~ PIJ instructions.
- 6-5. No change
- 7-6. No change
- 8-7. “Incomplete IT Plan or PIJ” means an IT Plan or PIJ that is missing required ~~approvals or~~ information, sections, or approvals, as determined by GITA.
- 9-8. “Information technology plan” (“IT Plan”), as used in A.R.S. Title 41, Chapter 32, means a documented strategy for using the implementation of IT resources and projects practices to support business direction over a specific period of time.
- 10-9. No change
- 11-10. No change
- 12-11. No change
- 13-12. “Major information technology project,” as used in A.R.S. Title 41, Chapter 32, means an IT project that has development costs greater than \$1 million and contains risk factors such as:
  - a. Is necessary to the state or budget unit mission;
  - b. Is necessary to protect health, welfare, or safety;
  - c. Is necessary for homeland security;
  - d. Is legally mandated;
  - e. Is necessary to improve government efficiency and effectiveness;
  - f. Involves political subdivisions; or
  - g. Involves multiple budget units.
- 14-13. “PIJ” means project ~~and~~ investment justification document.
- 15-14. No change
- 16-15. “Project ~~and~~ investment justification template” means a standard set of forms and reporting formats, ~~contained in the PSP,~~ to be prepared by a budget unit and submitted to GITA to describe an IT project and to identify resources, technologies, values, costs, goals, risks, quality assurance issues associated with the project, and to establish a specific time period for development and implementation of the project.
- 17-16. “Project status report” means a standard project status summary, ~~as defined in the PSP,~~ that is used by a budget unit to report progress on IT projects.
18. ~~“PSP” means the Policy, Standards and Procedures, which is developed and maintained by GITA, for information technology topics including:~~
  - a. ~~IT planning guidelines;~~

*Arizona Administrative Register / Secretary of State*  
**Notices of Supplemental Proposed Rulemaking**

- b. ~~Project justification and monitoring criteria;~~
  - e. ~~PIJ review criteria;~~
  - d. ~~Current PIJ template;~~
  - e. ~~IT standards for state budget units; and~~
  - f. ~~Policies and procedures related to IT.~~
- 19-17. ~~“Quality assurance plan,” as used in A.R.S. Title 41, Chapter 32, means a budget unit’s written strategy that identifies the criteria and activities a budget unit uses to ensure that the expectations of functionality, budget, and schedule are achieved as the budget unit’s IT Plan is implemented. process of evaluating overall program or project activities and tasks on a regular basis to provide the confidence that the program or project will produce the desired outcomes.~~
- 20-18. ~~“Standards” as used in A.R.S. Title 41, Chapter 32 means PSP requirements; relating to technical coordination and security components of information technology adopted by GITA for the purpose of developing and maintaining statewide coordinated use of, and access to, information technology resources.~~
21. ~~“Statewide IT Plan,” as used in A.R.S. Title 41, Chapter 32, means a statewide strategy for the application of information technology, published by GITA.~~
- 22-19. No change
- 23-20. No change

**ARTICLE 2. INFORMATION TECHNOLOGY PROJECTS**

**R2-18-201. Information Technology Project Justification and Monitoring**

- A. If an IT project requires GITA approval, under A.R.S. Title 41, Chapter 23 and Chapter 32, a budget unit shall not commit or spend funds on the project and shall not enter into a project-related contract or vendor agreement until the budget unit receives written GITA approval.
1. ~~Using the PSP and the current PIJ template, a budget unit shall prepare and submit to GITA a PIJ describing the value to the public and the state for the budget unit’s IT project, which is consistent with the approved budget unit IT Plan submitted to GITA under R2-18-301, shall be completed using the current PIJ template and submitted to GITA.~~
  2. If the PIJ is incomplete, GITA shall identify deficiencies and either request additional information or return the PIJ to the budget unit for completion and resubmission.
  3. Using the following general criteria, GITA shall process a each completed PIJ and approve, conditionally approve, or disapprove the proposed IT project, and shall notify the budget unit CEO of GITA’s its decision-;
    - a. ~~If GITA conditionally approves the IT project, GITA shall identify the conditions that the budget unit shall satisfy for approval. The budget unit may begin the IT project, with GITA monitoring, until the identified conditions have been satisfied. How well the proposed solution addresses the stated problem or situation.~~
    - b. ~~If GITA disapproves the IT project, the budget unit shall not begin the IT project and shall not enter into any project-related contract or vendor agreement. Whether the budget unit is competent to carry out the project successfully.~~
    - c. Whether sufficient sponsorship and support by budget unit leadership exists.
    - d. Whether cost estimates provided are accurate.
    - e. Whether the proposed solution is compatible with other budget unit solutions.
    - f. How likely unintended consequences are.
    - g. Whether the proposed project plan is reasonable.
    - h. Whether the proposed solution complies with Statewide IT standards.
  4. ~~If GITA conditionally approves the IT project, GITA shall identify the conditions that the budget unit shall satisfy. The budget unit may begin the IT project with GITA monitoring while the identified conditions are being satisfied, unless otherwise stated.~~
  5. ~~If GITA disapproves the IT project, the budget unit shall not begin the IT project and shall not enter into any project-related contract or vendor agreement.~~
- 4-6. No change
- B. No change
- C. No change
- D. No change
1. No change
  2. No change

**ARTICLE 3. INFORMATION TECHNOLOGY PLANNING**

**R2-18-301. Information Technology Planning**

- A. ~~Using the PSP, In accordance with A.R.S. Title 41, Chapter 32, a each budget unit shall annually develop and submit to GITA an IT Plan and submit it to GITA, under A.R.S. Title 41, Chapter 32 containing goals, objectives, and performance measures.~~
- B. No change

Notices of Supplemental Proposed Rulemaking

- C. GITA shall review the proposed, complete, budget unit IT Plan to determine the degree of change from previous plans and whether:
  - a. Performance measures are measurable.
  - b. Quality measures have been included.
  - c. Security gaps are being addressed, and
  - d. IT goals and business goals align.GITA shall ~~and~~ either approve or disapprove the proposed plan and it and shall notify the budget unit CEO of GITA's its decision. An approved budget unit IT Plan shall remain in effect until the end of the fiscal year for which it is submitted, or until it is modified or replaced in accordance with subsection (E).
- D. No change
- E. No change
  - 1. No change
  - 2. No change

NOTICE OF SUPPLEMENTAL PROPOSED RULEMAKING

TITLE 12. NATURAL RESOURCES

CHAPTER 1. RADIATION REGULATORY AGENCY

PREAMBLE

**1. Register citation and date for the original Notice of Proposed Rulemaking:**

Notice of Proposed Rulemaking: 10 A.A.R. 954, March 12, 2004

**2. Sections Affected Rulemaking Action**

|            |              |
|------------|--------------|
| R12-1-541  | Repeal       |
| R12-1-542  | Repeal       |
| R12-1-1102 | New Section  |
| R12-1-1140 | New Section  |
| R12-1-1142 | New Section  |
| R12-1-1302 | Amend        |
| R12-1-1402 | Amend        |
| R12-1-1421 | Amend        |
| R12-1-1438 | New Section  |
| R12-1-1439 | Amend        |
| Appendix C | New Appendix |
| Appendix D | New Appendix |

**3. The statutory authority for the rulemaking, including both the authorizing statute (general) and the statutes the rules are implementing (specific):**

Authorizing statute: A.R.S. § 30-654(B)

Implementing statutes: A.R.S. §§ 30-657, 30-672, 30-673, and 30-683.

**4. The name and address of agency personnel with whom persons may communicate regarding the rule:**

Name: John Lamb  
Address: Arizona Radiation Regulatory Agency  
4814 S. 40th St.  
Phoenix, AZ 85040  
Telephone: (602) 255-4845, ext. 235  
Fax: (602) 437-0705  
E-mail: jlamb@arra.state.az.us.

**5. An explanation of the rules, including the agency's reasons for initiating the rule:**

Notice is given that new rules are going into Article 11. These rules are needed to complete the new Article 11 rule-making in package RMP-0056, that was approved by the Governor's Regulatory Review Council (G.R.R.C.) at their May 4, 2004 meeting. Further explanation follows.

In RMP-0056 the x-ray rules affecting industrial uses are being moved to Article 11. This change is made to clarify and improve understandability by separating the requirements for x-ray and radioactive material into two separate articles. The radioactive material rules affecting industrial radiography will remain in Article 5. Because all of the rules in Article 5 were not opened in RMP-0056, the remaining x-ray rules are being moved to Article 11 in this pack-

Notices of Supplemental Proposed Rulemaking

age. The affected rules are R12-1-541 and R12-1-542. They will be R12-1-1140 and R12-1-1142 respectively. Additionally, necessary x-ray related definitions are moved from Article 5 into a new definition rule R12-1-1102.

R12-1302, which contains registration and license categories used in determining costs thereof, is being amended to correct incorrect rule references related to the amendments made in Article 14 described below.

Article 14 is amended to list new standards for Intense Pulsed Light (IPL) devices and lasers used for medical purposes. R12-1-1402 is amended to add new definitions that will be helpful in understanding the new light based cosmetic surgery and hair removal requirements proposed in the other affected rules in Article 14. Of special interest and concern to affected users and patients are new standards for operator supervision for these light emitting devices and training standards for Laser Safety Officers (LSO) and operators. The standards for training are listed in the newly proposed Appendix C and D to Article 14.

**6. An explanation of the substantial change which resulted in this supplemental notice:**

In R12-1-1402 the definition for "indirect supervision" is changed to coincide with the intent of R12-1-1438. The word "cosmetic" is changed to "hair removal".

To diminish confusion and clarify the minimum standard in R12-1-1438(A)(2)(a) unnecessary language referencing "licensed practitioner use" and "under the direct supervision of a licensed practitioner" is removed. The focus of the rule is on indirect supervision.

**7. A showing of good cause why the rule is necessary to promote a statewide interest if the rule will diminish a previous grant of authority of a political subdivision of this state:**

Not applicable

**8. The preliminary summary of the economic, small business, and consumer impact:**

There is no economic burden associated with the moving of the rules from Article 5 to Article 11. The affected rules are not amended. Also, there is no new economic burden associated with the correction of the rule references in the category system located in R12-1-1302. There is an obvious economic implication associated with the proposed changes to Article 14. These costs are explained as follows:

Because of the potential public hazard associated with laser and IPL misuse, it is believed these rules are needed. The changes may present some increase in operating cost, if a user has not made an effort to stay abreast of training and industry safety. The actual cost associated with staying abreast of the new standards is unknown, however, it is believed to be minimal when compared to the cost of the machines that produce the nonionizing radiation and potential costs associated with resolving a court case if one of these devices is misused. As stated above, supervision and training for medical laser systems and IPL's is being proposed at this time. The annual cost to register a laser or an IPL system is \$40. At this time there are 220 medical laser registrants and less than 25 users of IPL systems in the state that will be affected by the new rules. It is estimated that a training program for operators of lasers and IPL's to be in the range of \$750 to \$2,000. It is believed that most of this cost will be passed on to the patient/ client receiving the laser/IPL treatment. As with tanning, improper use of these devices can result in severe burns, that may be permanently disfiguring. It has been estimated by a local cosmetic surgery provider that an unlicensed provider will charge \$800.00 to \$1,000.00 for a complete cosmetic surgery/hair removal procedure versus \$3,000.00 to \$5,000.00 for a licensed provider. In most cases a procedure will involve multiple visits over a 6 month period. Additionally, liability insurance for a licensed practitioner is approximately 10 times higher than the insurance costs for a unlicensed cosmetic surgery provider. Even though licensed practitioners are generally against the regulatory fees associated with Agency intervention, telephone surveys have disclosed that many believe the proposed rules, as a whole, are necessary to protect the public from unscrupulous and unqualified users.

**9. The name and address of agency personnel with whom persons may communicate regarding the accuracy of the economic, small business, and consumer impact statement:**

Name: Daniel H. Kuhl, State Health Physicist II  
Address: Arizona Radiation Regulatory Agency  
4814 S. 40th Street  
Phoenix, AZ 85040  
Telephone: (602) 255-4845 ext. 233  
Fax: (602) 437-0705  
E-mail: dkuhl@arra.state.az.us

**10. The time, place, and nature of the proceedings for the making, amendment, or repeal of the rule or, if no proceeding is scheduled, where, when, and how persons may request an oral proceeding on the proposed rule:**

An oral proceeding is not scheduled. A person may submit written comments concerning the proposed rules by submitting them no later than 5 p.m., on July 30, 2004, to the following person:

Name: Aubrey V. Godwin, Director  
Location: Arizona Radiation Regulatory Agency  
Address: 4814 S. 40th St.

Notices of Supplemental Proposed Rulemaking

Phoenix, AZ 85040

Telephone: (602) 255-4845

Fax: (602) 437-0705

**11. Any other matters prescribed by statute that are applicable to the specific agency or to any specific rule or class of rules:**

Not applicable

**12. Incorporations by reference and their location in the rules:**

| <u>Rule</u>      | <u>Incorporation</u> |
|------------------|----------------------|
| R12-1-1438(A)(1) | 21 CFR 878.48        |

**13. The full text of the changes follows:**

**TITLE 12. NATURAL RESOURCES**

**CHAPTER 1. RADIATION REGULATORY AGENCY**

**ARTICLE 5. SEALED SOURCE INDUSTRIAL RADIOGRAPHY**

Section

R12-1-541. ~~Enclosed Radiography Using X-ray Machines~~ Repealed

R12-1-542. ~~Baggage Inspection Systems~~ Repealed

**ARTICLE 11. INDUSTRIAL USES OF X-RAY, NOT INCLUDING ANALYTICAL SYSTEMS**

Section

R12-1-1102. Definitions

R12-1-1140. Enclosed Radiography

R12-1-1142. Baggage Inspection Systems

**ARTICLE 13. LICENSE AND REGISTRATION FEES**

Section

R12-1-1302. License and Registration Categories

**ARTICLE 14. REGISTRATION OF NONIONIZING RADIATION SOURCES AND STANDARDS FOR PROTECTION AGAINST NONIONIZING RADIATION**

Section

R12-1-1402. Definitions

R12-1-1421. Laser Safety

R12-1-1438. ~~Hair Removal and Cosmetic Procedures Using Laser and Intense Pulsed Light~~

R12-1-1439. ~~Additional Requirements for Medical Laser Applications~~ Laser/IPL User Safety Training

Appendix C. Hair Removal and Cosmetic Laser/IPL Operator Training Program

Appendix D. Laser User and Laser Safety Officer Training

**ARTICLE 5. SEALED SOURCE INDUSTRIAL RADIOGRAPHY**

**R12-1-541. ~~Enclosed Radiography Using X-ray Machines~~ Repealed**

~~**A.** Certified and certifiable cabinet x-ray systems, as defined in Article 1, are exempt from the requirements of Article 5, provided the following conditions are met:~~

- ~~1. The registrant shall make, or cause to be made, an evaluation of each certified and certifiable cabinet x-ray system, at intervals not to exceed 12 months, to determine conformance with the standards for certified and certifiable cabinet x-ray systems defined in Article 1. Records of the evaluations shall be retained for three years from the date of their creation; and~~
- ~~2. Physical radiation surveys shall be performed with a survey instrument appropriate for the energy range and levels of radiation to be assessed and calibrated within the preceding 12 months.~~

~~**B.** The registrant shall ensure that cabinet x-ray systems not exempted in subsection (A) comply with the recordkeeping requirements of this Article and the following special requirements:~~

- ~~1. Radiation levels measured at 5 centimeters (2 inches) from any accessible exterior surface of the enclosure shall not exceed 50 microsievert (0.5 milliroentgen) in one hour for any combination of technical factors (i.e., mA, kVp);~~
- ~~2. Access to the interior of the enclosure shall be possible only through interlocked doors or panels that allow production of radiation only when all interlocked doors or panels are securely closed. Opening any point of access shall~~

*Arizona Administrative Register / Secretary of State*  
**Notices of Supplemental Proposed Rulemaking**

- result in immediate termination of radiation production, and subsequent reactivation of the x-ray tube shall only be possible at the control panel;
3. Visible warning signals that are activated only during production of radiation shall be provided at the control panel and at each point of access to the interior of the enclosure;
  4. The registrant shall make, or cause to be made, evaluations of each x-ray system to determine conformance with this Article, before placing the x-ray system into use and thereafter at intervals not to exceed three months. Records of the evaluations shall be retained for two years, and
  5. Physical radiation surveys to satisfy the requirements of subsection (B)(4) shall be performed only with instrumentation meeting the requirements of R12-1-504.
- C.** The registrant shall ensure that shielded room x-ray systems comply with the recordkeeping requirements of this Article and the following special requirements:
1. Each x-ray room shall be so shielded that every location on the exterior meets the requirements for an "unrestricted area" as specified in R12-1-416;
  2. Access to the interior of a shielded x-ray room shall only be possible through doors or panels which are interlocked. Radiation production shall be possible only when all interlocked doors and panels are securely closed. Opening of any interlocked access points shall result in immediate termination of radiation production, and subsequent reactivation of the x-ray tube shall only be possible at the control panel;
  3. Each access point shall be provided with two interlocks, each on a separate circuit so that failure of one interlock will not affect the performance of the other;
  4. Visible warning signals activated only during production of radiation shall be provided at the control panel and at each point of access into the shielded room;
  5. The registrant shall make, or cause to be made, evaluations of each shielded room x-ray system before placing the system into use and thereafter at intervals not to exceed three months to determine compliance with this Article. Records of the evaluations shall be retained for two years.
  6. Radiation surveys performed to determine exposure shall be performed with instrumentation that meets the requirements of R12-1-504;
  7. Electrical interlocks and warning devices shall be inspected for proper operation at the beginning of each period of use, and records of the inspections shall be prepared and retained for two years;
  8. The registrant shall not permit any individual to operate an x-ray machine for shielded room radiography unless that individual has received a copy of, and instruction in, the operating procedures and has demonstrated competence in the safe use of the equipment;
  9. An individual shall not occupy the interior of any shielded room x-ray system during production of radiation; and
  10. The registrant shall provide personnel monitoring devices that meet the requirements of R12-1-523(C) to each shielded room x-ray machine operator, and require that each operator use the devices.
  11. The registrant shall maintain records of:
    - a. Quarterly inventories for mobile systems, as prescribed in R12-1-506; and
    - b. Utilization of all systems, as prescribed in R12-1-507.
  12. Records shall be maintained for three years from the date of the inventory or utilization.
- D.** The registrant shall connect an enclosed radiography machine to the electrical system in a manner that will prevent a ground fault from generating x-radiation.

**R12-1-542. Baggage Inspection Systems Repealed**

- A.** For x-ray systems designed to screen carry-on baggage at airlines, railroads, bus terminals, or similar facilities, a registrant shall station the operator at the control area in a position that permits surveillance of the ports and doors during generation of x-radiation to prevent exposure to passengers and other members of the public.
- B.** For an exposure or preset succession of exposures of one-half second or greater duration, a registrant shall use a system that enables the operator to terminate the exposure or preset succession of exposures at any time.
- C.** For an exposure or preset succession of exposures of less than one-half second duration, a registrant shall use a system that allows the operator to complete the exposure in progress, but prevent additional exposures.
- D.** A registrant shall operate a baggage inspection system according to the manufacturer's instructions.
- E.** A registrant shall not disconnect or otherwise tamper with the safety systems of a baggage inspection system, except for maintenance purposes.
- F.** In addition to the requirements in this Section, registrants using a baggage inspection system shall meet the requirements in R12-1-541(A), (B), and (D).

**ARTICLE 11. INDUSTRIAL USES OF X-RAY, NOT INCLUDING ANALYTICAL SYSTEMS**

**R12-1-1102. Definitions**

"Access panel" means any panel that is designed to be removed or opened for maintenance or service purposes, opened using tools, and used to provide access to the interior of the cabinet x-ray unit.

"Annual refresher safety training" means a review conducted or provided by the registrant for its employees on radiation safety aspects of industrial radiography. The review shall include, as applicable, the results of internal inspections, new proce-

*Arizona Administrative Register / Secretary of State*  
**Notices of Supplemental Proposed Rulemaking**

---

dures or equipment, new or revised state rules, accidents or errors that have occurred, and provide opportunities for employees to ask safety questions.

“Aperture” means any opening in the outside surface of the cabinet x-ray unit, other than a port, which remains open during generation of x-radiation.

“Door” means any barrier that is designed to be movable or opened for routine operation purposes, not opened using tools, and used to provide access to the interior of the cabinet x-ray unit.

“Ground fault” means an accidental electrical grounding of an electrical conductor.

“Hands-on experience” means accumulation of knowledge or skill in any area relevant to radiography.

“Port” means any opening in the outside surface of the cabinet x-ray unit that is designed to remain open, during generation of x-rays, for conveying material being irradiated into and out of the cabinet, or for partial insertion of an object for irradiation whose dimensions do not permit complete insertion into the cabinet x-ray unit.

“Practical examination” means a demonstration, through practical application of safety rules and principles of industrial radiography, including use of all radiography equipment and knowledge of radiography procedures.

“Radiographic operations” means all activities associated with use of a radiographic x-ray system. This includes performing surveys to confirm the adequacy of boundaries, setting up equipment, and conducting any activity inside restricted area boundaries.

**R12-1-1140. Enclosed Radiography**

**A.** The Agency has determined that certified and certifiable cabinet x-ray systems, as defined in Article 1, are exempt from the requirements of Article 5, provided the following conditions are met:

1. The registrant shall make, or cause to be made, an evaluation of each certified and certifiable cabinet x-ray system, at intervals not to exceed 12 months, to determine conformance with the standards for certified and certifiable cabinet x-ray systems defined in Article 1. Records of the evaluations shall be retained for three years from the date of their creation; and
2. The registrant performs a physical radiation survey with a survey instrument appropriate for the energy range and levels of radiation to be assessed and calibrated within the preceding 12 months.

**B.** A registrant shall ensure that cabinet x-ray systems not exempted in subsection (A) comply with the record keeping requirements of this Article and the following special requirements:

1. Radiation levels measured at 5 centimeters (2 inches) from any accessible exterior surface of the enclosure shall not exceed 50 microsievert (0.5 milliroentgen) in one hour for any combination of technical factors (i.e., mA, kVp);
2. Access to the interior of the enclosure shall be possible only through interlocked doors or panels that allow production of radiation only when all interlocked doors or panels are securely closed. Opening any point of access shall result in immediate termination of radiation production, and subsequent reactivation of the x-ray tube shall only be possible at the control panel;
3. Visible warning signals that are activated only during production of radiation shall be provided at the control panel and at each point of access to the interior of the enclosure;
4. The registrant shall make, or cause to be made, evaluations of each x-ray system to determine conformance with this Article, before placing the x-ray system into use and thereafter at intervals not to exceed three months. Records of the evaluations shall be retained for two years, and
5. The registrant performs a physical radiation survey to satisfy the requirements of subsection (B)(4) shall be performed only with instrumentation meeting the requirements of R12-1-1108.

**C.** A registrant shall ensure that shielded room x-ray systems comply with the record keeping requirements of this Article and the following special requirements:

1. Each x-ray room shall be so shielded that every location on the exterior meets the requirements for an “unrestricted area” as specified in R12-1-416;
2. Access to the interior of a shielded x-ray room shall only be possible through doors or panels which are interlocked. Radiation production shall be possible only when all interlocked doors and panels are securely closed. Opening of any interlocked access points shall result in immediate termination of radiation production, and subsequent reactivation of the x-ray tube shall only be possible at the control panel;
3. Each access point shall be provided with two interlocks, each on a separate circuit so that failure of one interlock will not affect the performance of the other;
4. Visible warning signals activated only during production of radiation shall be provided at the control panel and at each point of access into the shielded room;
5. The registrant shall make, or cause to be made, evaluations of each shielded room x-ray system before placing the system into use and thereafter at intervals not to exceed three months to determine compliance with this Article. Records of the evaluations shall be retained for two years.
6. Radiation surveys performed to determine exposure shall be performed with instrumentation that meets the requirements of R12-1-1108;
7. Electrical interlocks and warning devices shall be inspected for proper operation at the beginning of each period of use, and records of the inspections shall be prepared and retained for two years;
8. The registrant shall not permit any individual to operate an x-ray machine for shielded room radiography unless that

*Arizona Administrative Register / Secretary of State*  
**Notices of Supplemental Proposed Rulemaking**

---

individual has received a copy of, and instruction in, the operating procedures and has demonstrated competence in the safe use of the equipment;

9. An individual shall not occupy the interior of any shielded room x-ray system during production of radiation; and
  10. The registrant shall provide personnel monitoring devices that meet the requirements of R12-1-1130(C) to each shielded room x-ray machine operator, and require that each operator use the devices.
  11. The registrant shall maintain records of:
    - a. Quarterly inventories for mobile systems, as prescribed in R12-1-1110; and
    - b. Utilization of all systems, as prescribed in R12-1-1112.
  12. The registrant shall maintain the records for three years from the date of the inventory or utilization.
- D.** A registrant shall connect an enclosed radiography machine to the electrical system in a manner that will prevent a ground fault from generating x-radiation.

**R12-1-1142. Baggage Inspection Systems**

- A.** For x-ray systems designed to screen carry-on baggage at airlines, railroads, bus terminals, or similar facilities, a registrant shall station the operator at the control area in a position that permits surveillance of the ports and doors during generation of x-radiation to prevent exposure to passengers and other members of the public.
- B.** For an exposure or preset succession of exposures of ½ second or greater duration, a registrant shall use a system that enables the operator to terminate the exposure or preset succession of exposures at any time.
- C.** For an exposure or preset succession of exposures of less than ½ second duration, a registrant shall use a system that allows the operator to complete the exposure in progress, but prevent additional exposures.
- D.** A registrant shall operate a baggage inspection system according to the manufacturer's instructions.
- E.** A registrant shall not disconnect or otherwise tamper with the safety systems of a baggage inspection system, except for maintenance purposes.
- F.** In addition to the requirements in this Section, a registrant using a baggage inspection system shall meet the requirements in R12-1-1140(A), (B) and (D).

**ARTICLE 13. LICENSE AND REGISTRATION FEES**

**R12-1-1302. License and Registration Categories**

- A.** No change
  1. No change
  2. No change
  3. No change
  4. No change
- B.** No change
  1. No change
  2. No change
  3. No change
  4. No change
  5. No change
  6. No change
- C.** No change
  1. No change
  2. No change
  3. No change
  4. No change
  5. No change
  6. No change
  7. No change
  8. No change
  9. No change
  10. No change
  11. No change
  12. No change
  13. No change
  14. No change
  15. No change
  16. No change
  17. No change
- D.** No change
  1. No change
    - a. No change

- b. No change
- 2. No change
- 3. No change
- 4. No change
- 5. No change
- 6. No change
- 7. No change
- 8. No change
- 9. No change
- 10. No change
- 11. No change
- 12. No change
- 13. No change
- 14. No change
- 15. No change
- 16. No change
- 17. No change
- 18. No change
- 19. No change
- E. No change
  - 1. No change
  - 2. No change
  - 3. No change
  - 4. No change
  - 5. No change
  - 6. No change
- F. No change
  - 1. No change
  - 2. No change
  - 3. No change
  - 4. No change
  - 5. A laser light show registration authorizes the operation of a laser device subject to ~~R12-1-1440~~ R12-1-1441.
  - 6. A medical laser registration authorizes the operation of one or more laser devices subject to ~~R12-1-1439~~ R12-1-1440.
  - 7. A Class II surgical device registration authorizes the operation of one or more Class II surgical devices subject to ~~R12-1-1417~~ R12-1-1438.
  - 8. No change
  - 9. No change
  - 10. No change
  - 11. No change
  - 12. No change

**ARTICLE 14. REGISTRATION OF NONIONIZING RADIATION SOURCES AND STANDARDS FOR PROTECTION AGAINST NONIONIZING RADIATION**

**R12-1-1402. Definitions**

General definitions:

“Cosmetic procedure” means: Use of medical lasers or intense pulse light (IPL) devices, approved by the Federal Food and Drug Administration (FDA), for the purpose of spider vein removal, skin rejuvenation, non-ablative skin resurfacing, skin resurfacing, port wine stain removal, epidermal pigmented skin lesion, or tattoo removal.

“Direct supervision” means supervising the use of a radiation source for medical purposes by a licensed practitioner while present inside the facility where the radiation source is being used.

“Indirect supervision” means: For lasers or IPL used for hair removal procedures: there shall be, at a minimum, responsible supervision and control by a licensed practitioner who is easily accessible by telecommunication. The supervising practitioner shall have ordered the application of radiation prior to its application, shall have established a method for emergency medical care in the absence of the supervising practitioner, and shall assume legal liability for the service rendered by the indirectly supervised operator, who has participated in sufficient supervised training, as specified in R12-1-1438, to allow the supervised operator to function under indirect supervision.

“Licensed practitioner” No change

“Medical Director” No change

“Nonexempt nonionizing radiation source” No change

Radiofrequency and microwave radiation:

*Arizona Administrative Register / Secretary of State*  
**Notices of Supplemental Proposed Rulemaking**

---

“Accessible emission level” No change  
“Far field region” No change  
“Near field region” No change  
“Radio frequency controlled area” No change  
“Radio frequency exposure limits” No change  
“Radio frequency source” No change  
“Radio frequency radiation” No change  
“Safety device” No change

Laser:

“Accessible emission level (AEL)” No change  
“Accessible radiation” No change  
“Angular subtense” No change  
“Aperture” No change  
“Aperture stop” No change  
“Certified laser product” No change  
“CDRH” No change  
“Class 1 laser” No change  
“Class 2 Laser” No change  
“Class 2a laser products” No change  
“Class 3a laser” No change  
“Class 3b laser” No change  
“Class 4 laser” No change  
“Class 1, 2, 3, 4 facility” No change  
“Collateral radiation” No change  
“Continuous wave” (cw) No change  
“Controlled area” No change  
“Cosmetic procedure protocols” means delegated written authorization to select specific laser/IPL settings, initiate laser/IPL procedure, and exercise appropriate follow-up.  
“Demonstration laser” No change  
“Embedded laser” No change  
“Enclosed laser” No change  
“Federal performance standard for light-emitting products” No change  
“Human access” No change  
“Incident” No change  
“Integrated radiance” No change  
“Irradiance” No change  
“Laser” No change  
“Laser controlled area” No change  
“Laser energy source” No change  
“Laser product” No change  
“Laser protective device” No change  
“Laser radiation” No change  
“Laser Safety Officer” No change  
“Laser system” No change  
“Limited Exposure Duration ( $T_{max}$ )” No change  
“Maintenance” No change  
“Maximum permissible exposure (MPE)” No change  
“Maintenance” No change  
“Operation” No change  
“Protective housing” No change  
“Pulse duration” No change  
“Pulse interval” No change  
“Radiance” No change  
“Radiant energy” No change  
“Radiant exposure” No change  
“Radiant power” No change  
“Safety interlock” No change  
“Sampling interval” No change  
“Secured enclosure” No change  
“Service” No change

*Arizona Administrative Register / Secretary of State*  
**Notices of Supplemental Proposed Rulemaking**

---

- “T<sub>max</sub>” No change
- “Uncertified laser product” No change
- Ultraviolet, high intensity light, and intense pulsed light source:
  - “Consumer” No change
  - “EPA” No change
  - “FDA” No change
  - “High intensity mercury vapor discharge (HID) lamp” No change
  - “Intense pulsed light device” (IPL) means, for purposes of R12-1-1438, any lamp-based device that produces an incoherent filtered intense light.
  - “Maximum exposure time” No change
  - “Protective sunlamp eye wear” No change
  - “Sanitize” No change
  - “Self-extinguishing lamp” No change
  - “Sunlamp product” No change
  - “Tanning device” No change
  - “Timer” No change
  - “Ultraviolet lamp” No change
  - “Ultraviolet radiation” No change

**R12-1-1421. Laser Safety**

- A. No change
- B. No change
- C. No change
  - 1. No change
  - 2. No change
  - 3. No change
  - 4. No change
  - 5. No change
- D. A registrant ~~The licensee~~ shall retain records of:
  - 1. Surveys ~~Results of all physical surveys~~ made to determine compliance with this Article;
  - 2. Operating Records ~~indicating any restriction in operating~~ procedures necessary to prevent unnecessary or excessive exposure to laser or collateral radiation;
  - 3. Incidents ~~Records relating to any incident~~ for which reporting to the Agency is required ~~in pursuant to~~ R12-1-1436;
  - 4. Medical Results ~~of medical~~ surveillance to determine extent of injury resulting from exposure to laser or collateral radiation;
  - 5. No change
- E. The Laser Safety Officer shall meet the training requirements in Appendix D.

**R12-1-1438. Hair Removal and Cosmetic Procedures Using Laser and Intense Pulsed Light**

- A. Hair Removal Procedures
  - 1. When submitting an application for registration to use a medical laser or an IPL device for hair removal procedures that is a Class II or III surgical device certified as complying with the design, labeling, and manufacturing standards in 21 CFR878.48 2003 edition, Published April 1, 2003, by the Office of Federal Register National Archives and Records Administration, incorporated by reference and on file with the Agency, and containing no future editions or amendments, the applicant shall provide the following information with the application to the Agency for approval:
    - a. Documentation demonstrating the licensed practitioner is qualified in accordance with this rule; and
    - b. Documentation endorsed by a licensed practitioner, acknowledging responsibility for the minimum level of supervision of hair removal procedures, as defined in A.A.C. R12-1-1402 under “indirect supervision”.
  - 2. When using a medical laser or an IPL device, that is a Class II or III surgical device certified as complying with the design, labeling, and manufacturing standards of the FDA, for hair removal procedures, A registrant shall.
    - a. At a minimum, ensure the device is used under indirect supervision of a licensed practitioner.
    - b. Ensure that a Class II or III surgical device that will be used for hair removal procedures is purchased by or on the order of the licensed practitioner.
  - 3. A registrant shall:
    - a. Not permit an unlicensed practitioner to use a medical laser or IPL system for hair removal procedures until the individual:
      - i. Has completed an approved medical laser assistant didactic training course of at least 40 hours in duration. Successful completion of the training program shall be based on a test consisting of a least 50 multiple choice questions on subjects covered, with a minimum grade of 80%. The training shall be provided by an individual who is eligible, through training and experience, to apply for laser safety officer certification or is a certified laser safety officer; and

*Arizona Administrative Register / Secretary of State*  
**Notices of Supplemental Proposed Rulemaking**

- ii. Has completed a minimum of 24 hours of observation conducted under the direct supervision of a licensed practitioner;
  - iii. Has experience in at least 10 hair removal procedures performed by the registrant. The hands-on experience shall be conducted under the direct supervision of a licensed practitioner;
  - b. Ensure that user follows written procedure protocols established by a licensed practitioner; and
  - c. Ensure the user follows a written order provided by a licensed practitioner describing the specific site of hair removal.
4. A registrant shall maintain a record demonstrating that hair removal procedure protocols are approved by a licensed practitioner, and are reviewed by a licensed practitioner at least annually.
5. A registrant shall ensure that:
- a. Procedure protocols are maintained on site, and that the protocols contain instructions to be given to the patient concerning follow-up monitoring; and
  - b. Procedure protocols are designed to promote the exercise of professional judgement by the nurse or assistant commensurate with their education, experience and training; and need not describe the exact steps that a qualified assistant take with respect to the hair removal procedures.
6. A registrant shall ensure that a licensed practitioner observes the performance of each assistant operator during actual procedures at intervals not to exceed six months. A record of the observation shall be maintained for three years.
7. A registrant shall ensure the licensed practitioner is qualified to do hair removal procedures, by virtue of providing evidence to the registrant that the licensed practitioner has received appropriate training in physics, safety, surgical techniques, pre and post operative care, and can perform these procedures within the scope of practice as defined by the practitioner's licensing board.
8. The registrant shall ensure that radiation safety training is provided to all personnel involved with hair removal procedures, and shall ensure the training is commensurate with their involvement in the procedures. Records of training shall be available for Agency review for three years following assistant operator's period of employment.

**B. Cosmetic Procedures**

1. When using a medical laser or an IPL device, that is a Class II or III surgical device certified as complying with the design, labeling, and manufacturing standards of the FDA, for cosmetic procedures, A registrant shall:
- a. Ensure the device is only used by a licensed practitioner, or by an operator under direct supervision of a licensed practitioner;
  - b. Ensure that a Class II or III surgical device, used for cosmetic procedures, is purchased by or on the order of the licensed practitioner.
2. A registrant shall not permit an unlicensed practitioner to use a medical laser or IPL system for cosmetic procedures until the individual has:
- a. Completed an approved medical laser assistant didactic training course of at least 40 hours in duration. Successful completion of the training program will be based on a test consisting of a least 50 multiple choice questions on subjects covered, with a minimum grade of 80%. The training should be provided by an individual who is eligible, through training and experience, to apply for laser safety officer certification or is a certified laser safety officer;
  - b. Completed a minimum of 24 hours of observation, conducted under the direct supervision of a licensed practitioner; and
  - c. Completed hands on experience of at least 10 cosmetic procedures, for each type of procedure (spider vein removal, skin rejuvenation, non-ablative skin resurfacing, etc.). The hands-on experience shall be conducted under the direct supervision of a licensed practitioner.
3. A registrant shall ensure that cosmetic procedure protocols are approved by the licensed practitioner in writing, and reviewed at least annually. Protocols shall be:
- a. Maintained on site, and shall contain instructions to be given to the patient for follow-up monitoring; and
  - b. Designed to promote the exercise of professional judgment by the nurse or assistant commensurate with their education, experience and training; and need not describe the exact steps that a qualified assistant take with respect to cosmetic procedures.
4. A registrant shall ensure the licensed practitioner is qualified to do laser, IPL and related procedures, by virtue of providing evidence to the registrant that the licensed practitioner has received appropriate training in physics, safety, surgical techniques, pre and post operative care and can perform these procedures within the scope of practice as defined by the director's licensing board.
5. The registrant shall ensure that radiation safety training is provided to all personnel involved with cosmetic procedures, and shall ensure the training is commensurate with their involvement in the procedures. Records of training shall be available for Agency review for three years following assistant operator's period of employment.

**R12-1-1439. ~~Additional Requirements for Medical Laser Applications~~ Laser/IPL User Safety Training**

- ~~A. Each Class III and Class IV medical laser product shall incorporate the means for measurement of the level of laser radiation intended for human irradiation, with an error in measurement of no greater than +/- 20%, when calibrated in accordance with the laser product manufacturer's calibration procedure.~~

*Arizona Administrative Register / Secretary of State*  
**Notices of Supplemental Proposed Rulemaking**

- ~~B. Medical lasers used for human irradiation shall be calibrated in accordance with the manufacturer's specified calibration procedure, at intervals not to exceed those specified by the manufacturer.~~
- ~~C. The licensee shall ensure that medical lasers shall not be used for human irradiation unless all applicable requirements of this Article are met.~~
- ~~D. In institutions where a number of different practitioners may use Class IIIb and Class IV lasers, a laser safety committee shall be formed to govern laser activity, establish use criteria, and approve operating procedures:
  - ~~1. Membership on the committee shall include at least a representative of the Nursing staff, the Laser Safety Officer, a representative of institution management, and a representative of each medical discipline that utilizes the lasers.~~
  - ~~2. The committee shall review actions by the Laser Safety Officer in hazard evaluation and the monitoring and control of laser hazards.~~
  - ~~3. Users, and those ancillary personnel who may operate or assist in the operation of the lasers under the direction of the users, shall be approved by the committee.~~~~
- ~~E. For Class IIIb and IV lasers, the switch which controls patient exposure shall have a guard mechanism to prevent inadvertent exposure.~~
- A. A person or organization seeking to initiate a medical laser/IPL operator training program, shall submit to the Agency for approval an application containing a description of the training program. The application shall include a course syllabus, including a test consisting of at least 50 multiple choice questions on subjects covered. The course material shall address all of the safety issues in R12-1-1421 through R12-1444, and Appendix C.
- B. The Agency shall review the application in subsection (A) in a timely manner as required in A.A.C. R-12-2-301.
- C. The Agency shall maintain a list of approved laser/IPL training programs.

**Appendix C. Hair Removal and Cosmetic Laser/IPL Operator Training Program**

Hair Removal and Cosmetic Laser/IPL Operator Training Program

General Considerations:

1. Training programs shall be specific to the medical laser/IPL system in use, and to the clinical procedures to be performed.
2. Program criteria and content shall be in accordance with the facility policy and procedure, applicable standards, federal and state regulations.
3. The degree and type of training shall be appropriate for the hazards associated with the laser or IPL's in use.

Technical Considerations

1. Description of lasers and IPL's
2. Definitions
3. Laser/IPL radiation fundamentals
4. Laser mediums and types of lasers – solid, liquid, diodes, and gas and IPL's
5. Biological effects of laser/IPL light
6. Damage mechanisms
  - a. Eye hazard
  - b. Skin hazard (skin type and skin anatomy)
  - c. Absorption – wavelength effects
  - d. Thermal effects
7. Photo chemistry
8. Criteria for setting Maximum Permissible Exposure (MPE) levels for eye and skin associated hazards
9. Explosive, electrical, and chemical hazards
10. Photosensitive medications
11. Fire, ionizing radiation, cryogenic hazards, and others as applicable

Medical Considerations

1. Local anesthesia techniques, including ice, EMLA® cream and other applicable topical treatments
2. Typical laser settings for hair removal and other cosmetic procedures
3. Expected patient response to treatments
4. Potential adverse reactions with treatment
5. Anatomy and physiology of the skin areas to be treated
6. Indications and contraindications to use the pigment and vascular specific lasers for cutaneous procedures

General Laser/IPL safety

1. Laser/IPL classifications
2. Control measures including protective equipment
3. Management and user responsibilities
4. Medical surveillance practices
5. Federal and state regulatory requirements
6. Related safety issues
  - a. Controlled access

*Arizona Administrative Register / Secretary of State*  
**Notices of Supplemental Proposed Rulemaking**

---

- b. Plume management
- c. Equipment testing, aligning, and troubleshooting

**Appendix D. Non Medical Laser User and Laser Safety Officer Training**

Non Medical Laser User and Laser Safety Officer Training

1. For user personnel routinely working with or around lasers:
  - a. Fundamentals of laser operation (physical principals, construction, etc.)
  - b. Bioeffects of laser radiation on the eye and skin
  - c. Significance of specular and diffuse reflections
  - d. Non-beam hazards of lasers (electrical, chemical, reaction byproducts etc.)
  - e. Ionizing radiation hazards (x-rays from power sources and target interactions when applicable)
  - f. Laser and laser system classifications
  - g. Control measures
  - h. Overall responsibilities of management and employee
  - i. Medical surveillance practices (if applicable)
  - j. CPR for personnel servicing or working on lasers, with exposed high voltages and/or the capability of producing potentially lethal electrical currents
2. For the LSO or other individual responsible for the laser safety program, evaluation of hazards, and implementation of control measures, or any others if directed by management to obtain a thorough knowledge of laser safety:
  - a. The topics in 1. Above
  - b. Laser terminology
  - c. Types of lasers, wavelengths, pulse shapes, modes, power/energy
  - d. Basic radiometric units and measurements devices
  - e. MPE levels for eye and skin under all conditions
  - f. Laser hazard evaluations, range equations, and other calculations
3. Technical Considerations
  - a. Description of lasers and IPL's
  - b. Definitions
  - c. Laser/IPL radiation fundamentals
  - d. Laser mediums and types of lasers – solid, liquid, diodes, and gas and IPL's
  - e. Biological effects of laser/IPL light
  - f. Damage mechanisms
    - (1). Eye hazard
    - (2). Skin hazard (skin type and skin anatomy)
    - (3). Absorption – wavelength effects
    - (4). Thermal effects
  - g. Photo chemistry
  - h. Photosensitive medications
  - i. Criteria for setting Maximum Permissible Exposure (MPE) levels for eye and skin associated hazards
  - j. Explosive, electrical, and chemical hazards
  - k. Photosensitive medications
  - l. Fire, ionizing radiation, cryogenic hazards, and others as applicable