

The Administrative Procedure Act requires the publication of substantive policy statement currently in use, including its full text, if practicable. (A.R.S. § 41-1091.01). Substantive policy statements are written expressions which inform the general public of an agency's current approach to rule or regulation practice. This substantive policy statement is advisory only. A substantive policy statement does not include internal procedural documents that only affect the internal procedures of the agency and does not impose additional requirements or penalties on regulated parties or include confidential information or rules made in accordance with the Arizona administrative procedure act. If you believe that this substantive policy statement does impose additional requirements or penalties on regulated parties you may petition the agency under section 41-1033, Arizona Revised Statutes, for a review of the statement.

NOTICE OF SUBSTANTIVE POLICY STATEMENT

ARIZONA RADIATION REGULATORY AGENCY

[ARRA-REG-8.10]

1. Subject of the substantive policy statement and the substantive policy statement number by which the policy statement is referenced:

Operating Philosophy for Maintaining Occupational Radiation Exposures As Low As Reasonably Achievable

2. Date the substantive policy statement was issued and the effective date of the policy statement if different from the issuance date:

Effective September 1994

3. Summary of the contents of the substantive policy statement:

Describes a general operating philosophy acceptable to ARRA as a necessary basis for a program to maintain occupational radiation exposure as low as reasonably achievable.

4. A statement as to whether the substantive policy is a new statement or a revision:

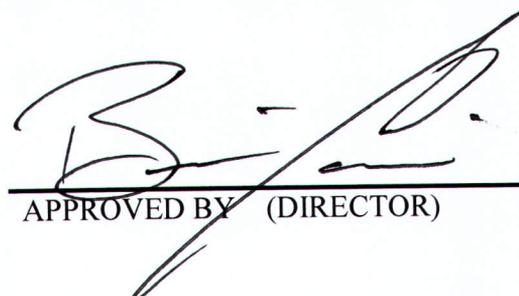
This is a current policy statement.

5. The agency contact person who can answer questions about this substantive policy statement:

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APPROVED BY (DIRECTOR)

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DATE

Policy Number: ARRA-REG-8.10
Effective Date: September, 1994

Subject Title: Operating Philosophy for Maintaining Occupational Radiation Exposures as Low as Reasonably Achievable

I. INTRODUCTION

Chapter 1 of Title 12, Arizona Administrative Code (A.A.C.) contains the rules of the Radiation Regulatory Agency for the control of radiation. A.A. C. R12-1-407, "Radiation Protection Programs", requires, in part, that licensees should make every reasonable effort to maintain radiation exposure and releases of radioactivity as far below the limits specified in Article 4 as practicable. This guide describes to registrants and licensees a general operating philosophy acceptable to the Agency staff as a necessary basis for a program of maintaining occupational exposures to radiation as low as is reasonably achievable (ALARA).

II. DISCUSSION

Even though current occupational exposure limits provide a very low risk of injury, it is prudent to avoid unnecessary exposure to radiation. The objective is thus to reduce occupational exposures as far below the specified limits as is reasonably achievable by means of good radiation protection planning and practice, as well as by management commitment to policies that foster vigilance against departures from good practice.

In addition to maintaining doses to individuals as far below the limits as is reasonably achievable, the sum of the doses received by all exposed individuals should also be maintained at the lowest practicable level. It would not be desirable, for example, to hold the highest doses to individuals to some fraction of the applicable limit if this involved exposing additional people and significantly increasing the sum of radiation doses received by all involved individuals.

III. REGULATORY POSITION

Two basic conditions are considered necessary in any program for keeping occupational exposures as far below the specified limits as is reasonably achievable. The management of the licensed or registered facility should be committed to maintaining exposures as low as is reasonably achievable, and the personnel responsible for radiation protection should be continually vigilant for means to reduce exposures.

1. Management Commitment

The commitment made by registrant or licensee management to minimize exposures should provide clearly defined radiation protection responsibilities and an environment in which the radiation protection staff can do its job properly. There are several aspects to this commitment:

- A. Facility personnel should be made aware of management's commitment to keep occupational exposures as low as is reasonably achievable. The commitment should

appear in policy statements, instructions to personnel, and similar documents. As a minimum, workers should be sufficiently familiar with this commitment such that they can explain what the management commitment is, what "as low as reasonably achievable" (ALARA) exposure to radiation means, why it is recommended, and how they have been advised to implement it on their jobs.

- B. Management should perform a formal audit, at intervals not to exceed 12 months, to determine how exposures might be lowered. This should include reviews of operating procedures and past exposure records, facility inspections, and consultations with the radiation protection staff or outside consultants. As a minimum, management should be able to discuss which operating procedures were reviewed, in which locations most exposures are being received, what groups of workers are receiving the highest exposures, what discussions they have had with the radiation protection staff or outside consultants, and what steps they have taken to reduce exposures.
- C. The management should ensure that there is a well supervised radiation protection capability with well- defined responsibilities. Applicants should select and state the qualifications for the individual who will be responsible for implementing the radiation protection program for the facility, i.e., the Radiation Safety Officer (RSO). The qualifications selected should be commensurate with the potential problems anticipated to be encountered in a facility of the type subject to the registration or license.
- D. The management should see that employees receive sufficient training. A.A.C. R12-1-1003 of the rules requires the registrant or licensee to provide instructions to personnel on radiation protection. Radiation workers should understand how radiation protection relates to their jobs and should be tested on this understanding at least once per year. They should have frequent opportunities to discuss radiation safety with the radiation protection staff whenever the need arises. Training should be sufficient to ensure that the workers can correctly answer questions on radiation protection as it relates to their jobs.
- E. The RSO should be given sufficient authority to enforce safe plant operation. The RSO should have the authority to prevent unsafe practices and to communicate promptly with an appropriate level of management about halting an operation deemed unsafe. Operating procedures related to radiation safety should be reviewed and approved by radiation protection personnel. This authority should be demonstrable by written policy statements.
- F. Modifications to operating and maintenance procedures and to plant equipment and facilities should be made where they will substantially reduce exposures at a reasonable cost. The management should be able to demonstrate that improvements have been sought, that modifications have been considered, and that they have been implemented where practicable. Where modifications have been considered but not implemented, the licensee should be prepared to describe the reasons for not implementing them.

2. Vigilance by the RSO and the Radiation Protection Staff

It should be the responsibility of the RSO and the radiation protection staff to conduct surveillance programs and investigations to ensure that occupational exposures are as far below the specified limits as is reasonably achievable. Additionally, they should be vigilant in searching out new and better ways to perform all radiation jobs with less exposure. There are several aspects to this responsibility.

- A. The RSO and the radiation protection staff should know the origins of radiation exposures in the facility. They should know these by location, operation, and job category and should be aware of trends in exposures. Where radiation work permits are used, exposures received should be recorded on the permits. The RSO and the radiation protection staff should be able to describe which locations, operations, and jobs are associated with the highest exposures and why exposures are increasing or decreasing.
- B. The RSO and the radiation protection staff should look for ways to reduce exposures. When unusual exposures have occurred, the radiation protection staff should direct and participate in an investigation of the circumstances of such exposures to determine the causes and take steps to reduce the likelihood of similar future occurrences. For each such occurrence, the RSO should be able to demonstrate that such an investigation has been carried out, that conclusions were reached as a result of the investigation, and that corrective action was taken, as appropriate. The RSO and the radiation protection staff should periodically review operating procedures that may affect radiation safety and survey facility operations to identify situations in which exposures can be reduced. Indicated changes should be promptly implemented. Procedures for receiving and evaluating suggestions relating to radiation protection from employees should be established. Workers should be knowledgeable of the procedures for making suggestions on radiation protection.
- C. Adequate equipment and supplies for radiation protection work should be provided. The RSO should be responsible for ensuring that proper equipment and supplies are available, are maintained in good working order, and are used properly. Written procedures for the use of the equipment should be available and followed.

IV. IMPLEMENTATION

The purpose of this section is to provide information to applicants, registrants, and licensees regarding the Agency staffs plans for utilizing this regulatory guide. Except in those cases in which the applicant, registrant, or licensee proposes an alternative method for complying with the provisions of A.A.C. R12-1-407, the methods described herein will be used in the evaluation of submittals in connection with applications for a specific registration or license.

Attachment A provides a model ALARA plan for dental offices. Likewise, Attachment B provides a similar plan for small medical facilities, i.e., one x-ray unit used for limited purposes. Each registrant or licensee should use one of the Attachments, if appropriate, or prepare a plan for their facility. Please note that Attachments A and B will not be adequate for large facilities. Attachment C provides a model ALARA program for a nuclear medicine licensee. As with Attachments A and B it is designed for a small facility and may not be appropriate for a large nuclear medicine program.