

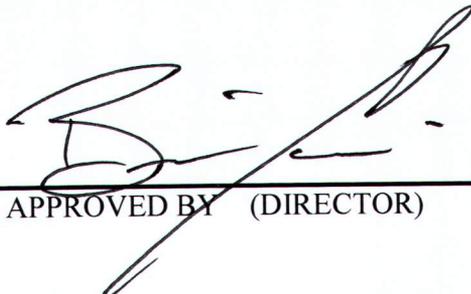
The Administrative Procedure Act requires the publication of substantive policy statement currently in use, including its full text, if practicable. (A.R.S. § 41-1091.01). Substantive policy statements are written expressions which inform the general public of an agency's current approach to rule or 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-8.7]

- 1. Subject of the substantive policy statement and the substantive policy statement number by which the policy statement is referenced:**  
Occupational Radiation Exposure Records System
- 2. Date the substantive policy statement was issued and the effective date of the policy statement if different from the issuance date:**  
Effective August 1994
- 3. Summary of the contents of the substantive policy statement:**  
Establishes a model program for preparation, retention and reporting of records of occupational radiation exposures.
- 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)

11/30/16  
DATE

Policy Number: ARRA-REG-8.7  
Effective Date: August 1994

Subject Title: Occupational Radiation Exposure Records System

## A. INTRODUCTION

Section A.A.C. R12-1-419, Article 4, "Standards for Protection Against Radiation", requires licensees or registrants to provide radiation monitoring for all occupationally exposed individuals who might receive a dose in excess of 10 percent of the limits in A.A.C. R12-1-408 A., R12-1-414, or R12-1-415. In R12-1-419, licensees and registrants are required to maintain records of the radiation exposures of all individuals for whom personnel monitoring is required. According to R12-1-412, the dose in the current monitoring year must be determined for all persons who must be monitored, and this information must be recorded on Agency Form Y or equivalent. In addition, R12-1-412 requires that, prior to allowing an individual to participate in a planned special exposure, records of all prior exposures must be acquired. Records of prior dose must be maintained on Agency Form Y or its equivalent.

This guide describes an acceptable program for the preparation, retention, and reporting of records of occupational radiation exposures. It includes copies of Agency Forms Y and Z and detailed instructions on completing them.

Any information collection activities mentioned in this regulatory guide are contained as requirements in Article 4, which provides the regulatory basis for this guide.

## B. DISCUSSION

This guide is structured to reflect the process a licensee or registrant would go through in deciding whether or not monitoring for occupational exposure is required under the revised Article 4. The guide describes acceptable methods for determination of prior exposures, records of monitoring provided, and reporting that are needed to comply with Article 4.

In order to avoid confusion with the acronym for effective dose equivalent (EDE), the abbreviation LDE is used to represent the eye (lens) dose equivalent, as defined in Article 4. The term total organ dose equivalent (TODE) has been added, and it means the sum of the deep dose equivalent and the committed dose equivalent to the organ receiving the highest dose as described in R12-1-408 C.

## C. AGENCY POSITION

### 1. DETERMINATION OF MONITORING REQUIREMENTS

According to R12-1-419, if an adult is likely to receive in one year a dose greater than 10 percent of any applicable limit, monitoring is required. The licensee or registrant should perform an evaluation of the dose the individual is likely to receive prior to allowing the individual to

receive the dose. This evaluation need not be made for every individual; evaluation can be made for employees with similar job functions or work areas. Further guidance on evaluating the need to provide monitoring is provided in ARRA-REG-8.34, "Monitoring Criteria and Methods to Calculate Occupational Doses. "

### 1.1 If Monitoring Is Not Required

If this prospective evaluation shows that the individual is not likely to exceed 10 percent of any applicable limit, there are no recordkeeping or reporting requirements in regard to the individual's exposure. For individual's who received exposure at other facilities in the current year, the previous dose need not be considered in this prospective evaluation. Only dose that could be received at the facility need be considered when determining the need for monitoring and, therefore, the recordkeeping and reporting requirements. If it is determined that monitoring is not required and a subsequent evaluation shows that the 10 percent threshold has or will be exceeded, the dose received when monitoring was not provided should be estimated, recorded, and reported. These estimates can be based on any combination of work location radiation monitoring or survey results, monitoring results of individuals in similar work situations, or other estimate to produce a "best estimate" of the actual dose received.

If monitoring is not required to demonstrate compliance with all limits but is required relative to one or more specific limits, the licensee or registrant should enter "NR" in the blocks on Agency Forms Y and Z to indicate the areas which monitoring was not required (e.g., extremity or skin dose). Where monitoring was provided but is not measurable, the licensee or registrant should enter "ND" for "Not Detectible."

### 1.2 If Monitoring Is Required

If the prospective evaluation shows that the individual is likely to exceed 10 percent of an applicable limit, monitoring is required (R12-1-419). Recording and reporting of the results of monitoring performed, regardless of the actual dose received, is required by R12-1-419 C.

### 1.3 Documentation of Prior Exposures

For the individuals for whom monitoring is required, determination of current year exposure at other facilities is required by R12-1-412. To document the determination of current year exposure, the individual to be monitored must provide an Agency Form Y signed by the individual or a written statement that includes the names of all facilities that provided monitoring for occupational exposure to radiation during the current year and an estimate of the dose received. Although not required by the regulations, it is considered good health physics practice to verify the information provided by the individual.

Verification may be documented with:

- An Agency Form Z for each listed monitoring period, or
- Electronic, telephone, or facsimile transfer of dose data provided by licensees or registrants listed on the written statements, or
- An Agency Form Y countersigned by a licensee, registrant or current employer.

In addition, R12-1-412 A.2. requires that licensees or registrants attempt to obtain records of lifetime cumulative occupational radiation dose. To demonstrate compliance with this requirement, the individual to be monitored may provide a written estimate of the cumulative lifetime dose or an up-to-date Agency Form Y signed by the individual, the information need not be verified so long as the individual dose not participate in a planned special exposure.

Agency Forms Y and Z and termination letters or reports, which report the results of monitoring prior to implementation of the revised Article 4, may be used without recalculating dose according to the requirements of the revised Article 4. For the purpose of assessing prior dose, whole body dose in rem as reported on the old (1993 or earlier) Agency Form 7 and 8 can be considered equivalent to total effective dose equivalent (TEDE).

#### 1.4 Records of Prior Exposure for Persons Participating in Planned Special Exposures.

If there are any periods of exposure during the life of the monitored individual that have not been determined and documented, participation in a planned special exposure is not permitted. Acceptable documentation of prior exposure is similar to that required for determining current-year exposure. Alternatively, the licensee or registrant may request in writing that a report of the monitored individual's exposure history be provided by the U.S. Nuclear Regulatory Commission if the individual's prior exposure was reported to the U.S. Nuclear Regulatory Commission. To request an exposure history, the licensee or registrant may send a request signed by the monitored individual to:

REIRS Project Manager  
Office of Nuclear Regulatory Research  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555

The request should include the social security number (or other unique identifying number) of the monitored individual authorizing release of the information and the name and address of the person or licensee or registrant to whom the report should be sent. The REIRS data base contains only reports submitted by the seven classes of licensees required by 10 CFR 20 to report occupational exposures. Any missing or other monitoring periods should be obtained directly from licensees or registrants.

#### 1.5 Individuals with No Social Security Number.

Doses to individuals who do not have a social security number, such as citizens of foreign countries, should be reported using another unique identification number. It is important to record the type of identification used in the data block labeled "ID Type" that follows the "Identification Number" data on Agency Form Y or Z. The appropriate code listed below should be inserted in the blank labeled " ID Type. "

ID TYPE	CODE
U.S. Social Security Number	SSN
Passport Number	PPN
Canadian Social Insurance Number	CSI
Work Permit Number	WPN
INDEX Identification Number	IND
Other	OTH

The use of licensee or registrant-generated identification numbers should be avoided whenever possible.

## RECORDS OF MONITORING RESULTS FOR INDIVIDUALS FOR WHOM MONITORING IS REQUIRED.

The preparation of Agency Form Z with the information clearly and legibly shown, or the collection of all the information requested by Agency Form Z using paper or electronic media (see Appendix A)" is required by R12-1-419 C.3. Such a record must be maintained for each individual for whom personnel monitoring is required by R12-1-419.

### 2.1 Multiple Badges.

Further guidance on interpreting the results of multiple dosimetric devices placed at different locations within a single dose category is provided in Regulatory Guide 8.34, " Monitoring Criteria and Methods To Calculate Occupational Doses. "

### 2.2 Dose Calculations for CDE and TODE to the Maximally Exposed Organ.

Licensees and occasionally, registrants are required by R12-1-419 C.1.f. to record the total organ dose equivalent (TODE), which is the sum of the deep dose equivalent (DOE) and the committed dose equivalent (CDE) to the organ receiving the highest dose. Organ doses need not be calculated if the committed effective dose equivalent (CEDE) does not exceed 0.01 Sv. (1 Rem) and there are no overexposure in any dose category within the monitoring year, including doses previously reported by other licensees or registrants. In this case the licensee or registrant may record "NC" for "Not Calculated" in items 16 and 18 on Agency Forms Y and Z. If during the course of the year the dose to date exceeds 0.01 Sv. (1 Rem) CEDE or the individual receives an overexposure in another category, the CDE in the maximally exposed organ must be calculated, recorded, and reported. When CDE and TODE to the maximally exposed organ must be calculated, the licensee or registrant should refer to Regulatory Guide 8.34.

### 2.3 Dose to the Embryo/Fetus.

A declared pregnant worker is a worker who has voluntarily informed her employer in writing of her pregnancy (the estimate month and year of conception. The embryo/fetus' dose for the entire gestation period must be recorded (R12-1-415 A.), but need not be included on Agency Forms Y

and Z. Multiple records are not required in the case of twins, triplets, etc. Any dose measured to demonstrate compliance with R12-1-415 must be recorded.

Licensee and registrants should be sensitive to the issue of personal privacy with regard to embryo/fetus dose. If requested by the monitored woman, a letter report may be provided to subsequent licensees or registrants to document prior embryo/fetus dose. Further guidance on assessing the dose to the embryo/fetus is provided in Regulatory Guide 8.36, "Radiation Doses to the Embryo/Fetus."

#### C. IMPLEMENTATION.

The purpose of this section is to provide information to applicants, licensees, and registrants regarding the Agency staffs plan for using this regulatory guide. Except in those cases in which an applicant proposes an acceptable alternative method for complying with specified portions of the Agency's regulations, the methods described in this guide will be used in the evaluation of applications for new licenses, registrations, renewals, and amendments and for evaluating compliance with Article 4.