

Radiation Protection Program and Records

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Radiation Protection Program

Regulatory Guide 3.16

Guide for the preparation of a radiation protection program for medical uses of radioactive materials

Radiation Protection Program

25 TAC 289.202(e)(1)

- ◆ Each licensee or registrant shall develop, document, and implement a radiation protection program sufficient to ensure compliance with the provisions of this section, i.e., TAC 289.202: Standards for Protection Against Radiation.
- ◆ 10CFR 20.1101 (a)

Radiation Protection Program

25 TAC 289.202(e)(2)

- ◆ The licensee or registrant shall use, to the extent practicable, procedures and engineering controls based upon sound radiation protection principles to achieve occupational doses and public doses that are as low as reasonably achievable (ALARA).
- ◆ 10CFR 20.1101 (b)

Radiation Protection Program

25 TAC 289.202(e)(3)

- ◆ The licensee or registrant shall, at intervals not to exceed 12 months, ensure the radiation protection program content and implementation is reviewed.
- ◆ 10 CFR 20. 1101 (c)

Requirements for a Medical Use Program

- ◆ TRCR or NRC regulations
- ◆ License conditions
- ◆ License application
- ◆ Operating, Safety, and Emergency Procedure Manual (OSEPM),
a.k.a. Radiation Safety Manual
- ◆ License amendments

Radiation Protection Program

- ◆ Operating, Safety, and Emergency Procedures
- ◆ Personnel Monitoring
- ◆ Quality Assurance Programs
- ◆ Training
- ◆ Posting / Labeling
- ◆ Compliance With Dose Limits to the Public

Radiation Protection Program

- ◆ Surveys / Audits / Environmental Monitoring
- ◆ Recordkeeping
- ◆ Waste
- ◆ Other Engineering Controls
- ◆ Instrumentation
- ◆ TAC 289.203 requirements(notices, instructions and reports)

Radiation Protection Program

- ◆ All licensees are required to submit an Operating, Safety, and Emergency Procedures manual when applying for a radioactive materials license. This manual can serve as the basis for the Radiation Protection Program.

Radiation Protection Program

- ◆ Personnel monitoring
 - Types of personnel monitoring devices used
 - Use of control badge
 - Instructions to employees on proper use
 - Procedures for ensuring TEDE < 5 rem/yr
 - Procedures for obtaining and maintaining occupational dose histories
 - Procedures for ensuring that if minors are employed, their TEDE < 500 mrem/yr

Radiation Protection Program

- ◆ Personnel monitoring

 - Documentation that $< 10\%$ for employees not badged

 - Procedures for monitoring/calculating internal dose

 - Documentation that $< 10\%$ of ALI

 - Procedures for addressing a declaration of pregnancy

Radiation Protection Program

- ◆ Personnel monitoring

Procedures for documentation of dose to embryo/fetus for declared pregnant woman

Documentation if any employee participates in a planned special exposure

Radiation Protection Program

- ◆ Quality Assurance Programs

Document and explain any quality assurance programs for handling and/or using radioactive materials. Include checks done, interval, actions taken if discrepancies noted, and who is responsible.

Radiation Protection Program

- ◆ Training

Document the training employees are required to have in order to handle/use radioactive materials

Document training provided to employees

Radiation Protection Program

- ◆ Posting / Labeling

- Identify areas that are required to be posted
 - Procedures for ensuring that such areas are properly posted

- Procedures for ensuring that containers are labeled as required

- Identify who is responsible for maintaining signs and labels

Radiation Protection Program

- ◆ Compliance with dose limits to the public
 - Procedures for calculating dose to a member of the public
 - Assumptions used in calculations, such as sources, occupancy, and workload factors
 - Documentation of surveys or monitoring conducted to determine dose to a member of the public

Radiation Protection Program

- ◆ Surveys/Audits/Environmental Monitoring
 - Identify types of surveys, program audits and/or environmental monitoring conducted
 - Identify who is responsible
 - Identify where and at what intervals conducted
 - Procedures for conducting
 - Instructions to employees on proper use of instrumentation

Radiation Protection Program

- ◆ Surveys/Audits/Environmental Monitoring
 - Documentation of all results
 - Procedures for ensuring that containers are properly surveyed
 - Procedures for conducting inventories
 - Procedures for conducting leak tests
 - Procedures for ensuring that packages are properly surveyed

Radiation Protection Program

- ◆ Recordkeeping

- Identify who is responsible for all TRCR required records

- Identify where maintained

- Identify format in which records and documentation are kept

- Procedures for recordkeeping at additional authorized sites

Radiation Protection Program

- ◆ Waste

 - Procedures for ensuring proper handling/storage

 - Procedures for waste disposal

Radiation Protection Program

- ◆ Other Engineering Controls

Types used to reduce or control exposure, eg, fume hoods, gloves, interlocks, etc.

Procedures for inspection/maintenance of such controls

Identify who is responsible for inspection or maintenance and at what interval

Radiation Protection Program

- ◆ Instrumentation

- Identify types of detection instrumentation available

- Describe what it is used for

- Procedures for calibrating, including who performs and at what interval

- Identify who is responsible for inspection and maintenance and at what interval

Radiation Protection Program

- ◆ TAC 289.203 Requirements

- Procedures for ensuring that notices to workers are appropriately posted

- Identify who is responsible

- Procedures for ensuring workers are provided instructions required in TAC 289.203(c) Identify who is responsible for this instruction