

**11.5.1 Radiation Safety Policy (Ionizing Radiation)**

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**PURPOSE:**

The Baylor University radiation safety policy is based on the applicable federal (NRC) and state regulations (Chapter 25, Paragraph 289 of the Texas Administrative Code). The radiation safety program's primary objective is to ensure that exposure to ionizing radiation is maintained As Low as Reasonably Achievable (ALARA).

**SCOPE:**

This policy applies to individuals directly involved with use of radioactive material and radiation machines, as well as incidental individuals (such as custodial, supervisory personnel, and students).

**RESPONSIBILITY:**

- A. The Department of Risk Management assists colleges, schools and departments in maintaining a comprehensive radiation safety program at Baylor University.
- B. The President of Baylor University
  - 1. commits the institution to the performance of the activities as specified in the radioactive material and radiation machine application and subsequent license(s)/registration(s).
  - 2. designates a qualified Radiation Safety Officer to have the authority to set radiation safety policy, suspend activities deemed unsafe, and require and direct remedial action when necessary.
- C. The "Radiation Safety Officer" (RSO) is the individual responsible for monitoring ionizing radiation use and safety. The RSO is the main contact between Baylor University and regulatory agencies. Specific duties of the RSO include, but are not limited to the following:
  - 1. establish and oversee operating, safety, emergency, and as low as reasonably achievable (ALARA) procedures, and review them at least annually to ensure that the procedures are current and conform with regulations;
  - 2. oversee and approve all phases of the training program for operations and/or personnel so that appropriate and effective radiation protection practices are taught;
  - 3. ensure that required radiation surveys and leak tests are performed and documented in accordance with regulations, including any corrective measures when levels of radiation exceed established limits;
  - 4. ensure that individual monitoring devices are used properly by occupationally-exposed personnel, that records are kept of the monitoring results, and that timely notifications are made in accordance with regulations;

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5. investigate and cause a report to be submitted to the regulatory agency for each known or suspected case of radiation exposure to an individual or radiation level detected in excess of limits established by regulations and each theft or loss of source(s) of radiation, to determine the cause(s), and to take steps to prevent a recurrence;
  6. investigate and cause a report to be submitted to the regulatory agency for each known or suspected case of release of radioactive material to the environment in excess of limits established by regulations;
  7. maintain a thorough knowledge of management policies and administrative procedures of Baylor University;
  8. assume control and authority to institute corrective actions, including shutdown of operations when necessary in emergency situations or unsafe conditions.
    - a. ensure that records are maintained as required by regulations
    - b. ensure the proper storing, labeling, transport, use, and disposal of sources of radiation, storage, and/or transport containers
    - c. ensure that inventories are performed in accordance with the activities for which the license application is submitted
    - d. perform an inventory of the radioactive sealed sources authorized for use on the license every six months and generate and maintain records of the inventory of the radioactive sealed sources authorized for use on the license every six months, to include, but not be limited to the following: (i) isotope(s); (ii) quantity(ies); (iii) activity(ies); and (iv) date of inventory
    - e. ensure personnel compliance with regulations, the conditions of the license and registration, and the operating, safety, and emergency procedures of Baylor University
    - f. serve as the primary contact with the regulatory agency
- D. Baylor University's radiation safety program is supported by a Radiation Safety Committee (RSC) which is a subcommittee of the Risk Management Committee. The RSC membership should include:
1. the RSO,
  2. a representative from each user organization,
  3. individuals with expertise in radiation technology or in the assessment of radiation hazards,
  4. ex-officio members from the Office of Sponsored Programs and Contracts, Office of Vice Provost for Research and other offices as requested.

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- A. Specific duties of the RSC include, but are not limited to the following:
1. meeting as often as necessary to conduct business but no less than three times a year;
  2. reviewing summaries of the following information presented by the RSO: (A) over-exposures; (B) significant incidents, including spills, contamination, or medical events; and (C) items of non-compliance following an inspection;
  3. reviewing the program for maintaining doses ALARA, and providing any necessary recommendations to ensure doses are ALARA;
  4. reviewing the overall compliance status for authorized users;
  5. sharing responsibility with the RSO to conduct periodic audits of the radiation safety program;
  6. reviewing the audit of the radiation safety program and acting upon the findings;
  7. developing criteria to evaluate training and experience of new authorized user applicants;
  8. evaluating and approving authorized user applicants who request authorization to use radioactive material at Baylor University;
  9. evaluating new uses of radioactive material and radiation machines; and
  10. reviewing and approving permitted program and procedural changes prior to implementation.
- E. Radiation users shall follow Baylor University policies and procedures pertaining to radiation safety.
- F. All incidental individuals are responsible for adhering to radiation safety postings and not entering posted areas without proper training and/or supervision.

**FAILURE TO COMPLY**

Violations of this policy may result in suspension of ionizing radiation use privileges for an appropriate period of time. In addition, the violator may be subject to university disciplinary procedures.

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Formulated: 8/2/07

Revised/Reviewed:

Approved by Risk Management Committee:

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Warren A. Ricks Chairman, Risk Management Committee Director of Risk Management	Date

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Charles D. Beckenhauer General Counsel	Date

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Reagan M. Ramsower Vice President for Finance and Administration	Date