**Radiation Safety** **UPPS No. 04.05.07**

**Issue No. 1**

**Effective Date: 06/10/2022**

**Review Date: 10/01/2026 (E4Y)**

**Sr. Reviewer: Director, Environmental,**

**Health, Safety, Risk and Emergency Management**

**POLICY STATEMENT**

*Texas State University is committed to providing a safe environment for its students and employees.*

**01. SCOPE**

01.01 Because of university radiation usage, it is necessary to employ proper procedures in the purchase, use, storage, and disposal of radioactive materials (RAM) and radiation producing devices to ensure the safety of the Texas State University community and to comply with regulations.

01.02 Texas State will use radiation and RAM according to the [Radiation Control Act](https://www.dshs.state.tx.us/radiation/laws-rules.aspx) and the Texas Department of State Health Services (TXDSHS) regulations contained in [Title 25, Texas Administrative Code (TAC), Section 289](https://texreg.sos.state.tx.us/public/readtac%24ext.ViewTAC?tac_view=4&ti=25&pt=1&ch=289), and pursuant to a current Radioactive Materials License (RAML) or Certificates of Registration. Individuals can access these regulations via the TXDSHS [Radiation Control Program](https://www.dshs.state.tx.us/radiation/about.aspx).

01.03 Environmental, Health, Safety, Risk and Emergency Management has primary responsibility and authority for assuring that Texas State complies with all applicable regulations and policies associated with radiation and radiation producing machines.

01.04 Policies and procedures related to RAM and radiation producing machines can be found in the [Texas State Radiation Safety Manual](https://gato-docs.its.txstate.edu/jcr%3A11e0fb6d-acc9-4815-b59b-7e7b2ff8b7cd/2009RSM-R5%20current.pdf).

**02. RADIATION AND LASER SAFETY COMMITTEE**

02.01 The Radiation and Laser Safety Committee (R&LSC) will review and monitor university use of RAM, radiation producing machines, and lasers. R&LSC’s responsibilities will conform with [25 TAC §289](https://texreg.sos.state.tx.us/public/readtac%24ext.ViewTAC?tac_view=4&ti=25&pt=1&ch=289).

02.02 The R&LSC is comprised of at least five members to include a chair; the radiation safety officer (RSO); representatives from each department that utilizes or handles RAM, radiation producing devices, or lasers; and additional members who are experienced in dealing with RAM, radiation producing machines, or lasers for specific devices utilized on campus.

a. Duties of the R&LSC:

1) review incidents presented by the RSO;

2) review program and provide recommendations to the RSO; and

3) review and approve applications for use of RAM, radiation producing machines, and lasers including training and experience of users.

02.03 The R&LSC meets at least three times per year with number of meetings based on oversight needs, but at least once each semester (fall, spring, summer). A quorum and the presence of the RSO is necessary for a vote.

**03. RADIATION SAFETY OFFICER**

03.01 The RSO acts under the delegated authority of the university president, the RAML, and the Radiation Producing Machine Registration in the daily implementation of policies and procedures regarding the safe use of radioisotopes and sources of radiation. The RSO shall:

1. ensure that each user of radioisotopes or radiation sources is in compliance with all pertinent state, federal, or local regulations, including, with regard to registration and licensing, posting of notices to workers, receiving and opening of packages containing radioisotopes, storage and use of radioisotopes, surveys of work areas, storage and disposal of radioactive wastes and surplus radiation producing equipment, maintenance of records, and authorship and revisions of the radiation safety procedures in the [Texas State Radiation Safety Manual](https://gato-docs.its.txstate.edu/jcr%3A11e0fb6d-acc9-4815-b59b-7e7b2ff8b7cd/2009RSM-R5%20current.pdf);

1. perform leak tests of sealed sources as required by pertinent state, federal, or local regulations;

1. maintain records required by pertinent state, federal, or local regulations. Each user must maintain up-to-date records subject to review by the RSO and regulators;

1. stop any operations not in compliance with the above regulations or with the [Texas State Radiation Safety Manual](https://gato-docs.its.txstate.edu/jcr%3A11e0fb6d-acc9-4815-b59b-7e7b2ff8b7cd/2009RSM-R5%20current.pdf) until the user has corrected the violation; and

1. oversee proper registration of all radiation devices and supervise the radiation safety officers who hold registrations for x-ray generating equipment (radiation producing machines) as required by TXDSHS.

03.02 The RSO may delegate certain radiation safety duties to other regular university employees in departments with special needs (such as the Student Health Center).

03.03 The RSO, and designee, are authorized to immediately stop any operation that may compromise health and safety at the university, or which may result in a breach of any local, state, or federal environmental health and safety regulation.

03.04 The RSO must meet the training and experience as specified by [25 TAC §289](https://texreg.sos.state.tx.us/public/readtac%24ext.ViewTAC?tac_view=4&ti=25&pt=1&ch=289) and guidelines issued by the TXDSHS, Bureau of Radiation Control. The university shall pay the license renewal fee.

**04. PROCEDURES FOR USE, PROCUREMENT, RECEIPT, AND STORAGE OF RADIOACTIVE MATERIALS**

04.01 An individual must hold a license, or the university must list their name as an authorized user on the university’s license and, prior to procurement of RAM or devices, must contact the RSO for proper authorization and briefing on controls and regulations. The authorized users will assure that all workers and students under their responsibility follow safe and proper procedures.

04.02 The ordering department must submit orders for RAM to the RSO prior to order placement. The ordering department must coordinate with the RSO to identify the RAM delivery area.

04.03 When shipments of RAM are received, Materials Management shall notify theRSO. The RSO will perform the receipt survey and inventory the shipment to determine the type of radioisotope, chemical form of the radioisotope, and quantity in µCi or mCi. The RSO will deliver the RAM package to the proper authorized user.

04.04 Users may store RAM containers emitting no more than two milli-Roentgens per hour in their laboratories. Users must store materials emitting more than two milli-Roentgens per hour in a locked facility shielded to reduce radiation to no more than two milli-Roentgens per hour at the surface. The university will provide and the RSO must approve the storage facility.

04.05 Because of federal and state regulations regarding RAM procurement, ordering departments must make all such purchases via purchase order. Use of procurement cards (P-cards) to purchase RAM is strictly prohibited.

**05. PROCEDURES FOR USE, PROCUREMENT, RECEIPT, AND STORAGE OF**

**X-RAY GENERATING EQUIPMENT**

05.01 The R&LSC must approve all protocols for use of x-ray generating equipment requiring registration by the TXDSHS (including equipment such as x-ray diffraction equipment, medical or dental x-ray equipment, etc.). TXDSHS refers to x-ray generating equipment as radiation producing machines. The authorized user will assure that all supervised personnel follow safe and proper procedures. The RSO will coordinate proper maintenance related to x-ray safety (particularly x-ray safety interlocks and shielding) to assure authorized personnel perform the maintenance at appropriate intervals.

05.02 The authorized user must contact the RSO prior to procurement by purchase order, transfer from another institution, loan, or donation of x-ray producing equipment. Proper authorization and briefing on controls and regulations by the RSO must precede the procurement of any x-ray generating equipment.

05.03 A properly registered technician who is registered with TXDSHS must receive the shipment of x-ray generating equipment unassembled and oversee unpacking and installing the equipment to assure that it does not leak x-ray radiation during installation and operation exceeding amounts exempted by the TXDSHS. The user will notify the RSO in advance of all x-ray generating equipment brought or delivered to campus. The registered technician must provide a copy of their registration to the RSO prior to beginning any work.

05.04 The user must notify the RSO immediately of x-ray equipment safety interlock or shielding failures. The RSO must formally approve repairs to affected x-ray equipment. X-ray equipment storage must ensure that intentional or accidental unauthorized equipment operation is not reasonably possible. The RSO must review the status of any stored x-ray producing equipment.

**06. PROCEDURES FOR DISPOSAL OF RADIOACTIVE MATERIALS**

06.01 The disposal of RAM is strictly controlled by federal and state regulations. To assure compliance with these regulations, the user must arrange for the transfer of all RAM for disposal to the RSO.

06.02 General guidelines for the disposal of RAM are contained in the [Texas State Radiation Safety Manual](https://gato-docs.its.txstate.edu/jcr%3A11e0fb6d-acc9-4815-b59b-7e7b2ff8b7cd/2009RSM-R5%20current.pdf).

**07. PROCEDURES FOR DISPOSAL OF X-RAY GENERATING EQUIPMENT**

07.01 The disposal or transfer of x-ray generating equipment is strictly controlled by federal and state regulations. To assure compliance with these regulations, the user must arrange for the RSO to oversee the disposal of or transfer of x-ray equipment.

07.02 TXDSHS provides general guidelines for the disposal of x-ray generating equipment.

**08. EMERGENCY ACTION PROCEDURES**

08.01 Specific recommended actions for emergencies are given in the [Texas State Radiation Safety Manual](https://gato-docs.its.txstate.edu/jcr%3A11e0fb6d-acc9-4815-b59b-7e7b2ff8b7cd/2009RSM-R5%20current.pdf).

08.02 One of the following must be contacted in case of further emergency aid:

a. the RSO, Environmental, Health, Safety, Risk and Emergency

Management Office; and

b. the director, Environmental, Health, Safety, Risk, and Emergency

Management Office.

**09. REVIEWERS OF THIS UPPS**

09.01 Reviewers of this UPPS include the following:

Position Date

Director, Environmental, Health, October 1 E4Y

Safety, Risk and

Emergency Management

Radiation Safety Officer October 1 E4Y

Dean, College of Science October 1 E4Y

  and Engineering

Associate Vice President for October 1 E4Y

Research and Federal Relations

**10. CERTIFICATION STATEMENT**

This UPPS has been approved by the following individuals in their official capacities and represents Texas State policy and procedure from the date of this document until superseded.

Director, Environmental, Health, Safety, Risk and Emergency Management; senior reviewer of this UPPS

Vice President for Finance and Support Services

President