

Radiation Safety Plan

Florida Institute of Technology (Florida Tech)

Environmental Health & Safety (EHS)

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Introduction

Florida Tech is committed to providing a safe and healthful environment for all employees, students, and visitors.

Florida Tech is licensed by the State of Florida, Department of Health, Bureau of Radiation Control as an authorized user of radioactive materials and radiation generating devices. The primary responsibilities of Florida Tech's Radiation Safety Program are to ensure radiation controls are implemented to protect all university personnel and the public and to guarantee radiation sources are used in accordance with [Chapter 64E-5 of the Florida Administrative Code \(FAC\)](#).

Florida Tech shall use, to the extent possible, administrative and engineering controls based upon sound radiation protection principles in maintaining occupational doses and public doses as low as reasonably achievable. Florida Tech's Radiation Safety Program is consistent with the rules and regulations set forth by the U.S. Nuclear Regulatory Commission (NRC) and the Florida Department of Health, Bureau of Radiation Control. To minimize exposure risks, the radiation safety practices outlined in this program must be maintained and adhered to by individuals using radioactive materials at Florida Tech.

Radiation Safety Program

This Radiation Safety Program sets forth policies, regulations and procedures approved by Florida Tech's Radiation Safety Committee (RSC). The Radiation35u(io)8 (n)-4erin1-3.9 (t)-4 (y)4 (Cm (,)18 0)10 (Sa) (ra8

1. Florida Tech's Radiation Safety Program will be accessible to all users. The written portions of the Radiation Safety Program are maintained in the Radiation Safety Plan and the [Florida Tech Radioactive Materials Use and Safety Manual](#). Written radiation safety procedures will be maintained by the RSO and peer reviewed by EHS. In the event changes are made to the Radiation Safety Program, the RSO shall discuss compliance with the RSC, Pls, and Authorized Users and make appropriate revisions to the Radiation Safety Plan and [Florida Tech Radioactive Materials Use and Safety Manual](#).
2. The use of radioactive material at Florida Tech is governed by rules and regulations set forth in [Chapter 64E-5, FAC](#) and provisions set forth in the specific radioactive material license issued to Florida Tech by the State of Florida, Department of Health, Bureau of Radiation Control.
3. The Florida Tech RSO/RSC shall, at intervals not to exceed 12 months, review the Radiation Safety Program content and implementation. An annual report shall be sent to the President of Florida Tech for review. The report must be signed by the RSO and the President indicating they have reviewed its contents and will address any weak areas in the program immediately. law 14.231.5 y-9R FI09 i. d001 0.

establishment, implementation, and operation of a radiation protection program that applies the ALARA philosophy of minimizing exposures to radiation.

The primary concept of the ALARA philosophy is that unnecessary exposure to radiation should be avoided even though current occupational exposure limits provide a very low risk of injury.

signed and dated by both. A report on each audit will be maintained on file for 3 years from the date of review, in accordance with section [64E-5.335, FAC](#).

Worker Commitment

All personnel working with sources of radiation will adhere strictly to policies and procedures applicable to activities involving radiation sources and will apply **ALARA** principles and good work practices to minimize their occupational exposures. **Time, distance and shielding** will be used to keep exposures **ALARA**. When working with sources of radiation, minimize the time spent near the source, maximize the distance from the source, and make use of available radiation shielding. Workers must report to the RSO any conditions in the workplace that have the potential for causing unnecessary exposures.

Participants and Responsibilities

Radiation Safety Officer (RSO)

Responsibility for the overall Radiation Safety Program shall rest with the RSO. The duties and responsibilities of the RSO shall include, but are not limited to the following:

1. Acts as Florida Tech's liaison officer with the Florida Department of Health on all

5. Inform the Radiation Safety Office of all changes in personnel working with radioactive materials or radiation producing devices and changes in facilities or use/storage locations in a timely manner.
6. Maintain current and adequate inventory and usage records.
7. Maintain security and control over radioactive material via keeping labs and storage locations locked/secured and accessible by authorized personnel only.
8. Perform daily contamination surveys on days radioactive materials are in use, weekly contamination surveys in areas where radionuclides are in use, and monthly contamination surveys.

Only the RSO (or their EHS designee) can receive, survey, and deliver packages containing radioactive materials. Thus, the shipping and receiving department will receive specialized annual training on the procedure for a campus shipment of radioactive materials. Please see the section on “Purchasing and Receiving Radioactive Materials” for further information.

Procurement staff will receive guidance from the RSO to prevent unauthorized purchases of radioactive materials.

Sealed source only PIs and authorized users have an optional initial and annual refresher training available. The Sealed Source Training is a truncated version of the Introduction to Radiation Safety and Handling Radioactive Materials courses. The RSO will provide this training upon request. Sealed source only users may also take the two courses (Introduction to Radiation Safety) in lieu of taking the Sealed Source only training. Users of unsealed sources may not take this training in lieu of the Introduction to Radiation Safety and Handling Radioactive Materials courses.

Training records must be retained for the lifetime of the university or the termination of the license with the RSO in the office of EHS: a copy of training records must be in the possession of the PI for the duration of their usage of radiation materials at Florida Tech.

Authorization to Use Radioactive Materials

A PI must submit the Radioactive Material Use Authorization (RMUA) form (see Appendix 2 of this document or the [Florida Tech Radioactive Materials Use and Safety Manual](#) Appendix D-2) for each project requiring the use of radioactive materials. This includes detailed protocols se mat 07 Tc 0(d)-4

Whenever possible, conduct all protocols on break resistant impervious trays or containers lined with disposable absorbent coverings. Volatile radioactive materials require special

Geiger meter surveys

Detailed records for all radioactive waste must be recorded and sent to the RSO before requesting the waste to be picked up: disposal records must be kept for the lifetime of the license with the RSO in the office of EHS.

All radioactive waste is picked up by the RSO. All waste containers must be properly labeled with either a tag or sticker with the radiation trefoil and the caution wording "Radioactive Waste." The label must also include the isotope, date, estimated activity on date, and the PI's name. Contact the RSO if you need assistance with labeling.

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Out of service sources will be maintained in storage at the Radiation Safety Storage location. Sources may not be put back into service without approval of the RSO and the subsequent amendment of the license to allow such use.

Further information regarding sealed source use at Florida Tech can be found in the [Florida Tech Radioactive Materials Use and Safety Manual](#) section 10.0.

Radiation Producing Equipment

Audits and Inventory

The RSO will conduct audits annually to evaluate the records and procedures of a PI and to conduct annual refresher training. Inventories of radioactive materials will be taken during these audits as well. The audit is to ensure compliance with regulations and to address any concerns the PI and authorized user may have. A PI or authorized user may contact the RSO for assistance outside of the provision of the audits.

Appendix 1 Radioactive Material Use Approval Request

Appendix 2 Radioactive Material Use Authorization

RADIOACTIVE MATERIAL USE AUTHORIZATION

(Prepare in original and one copy)

Department

Appendix 3- Caution: Radioactive Materials Sign

