

UT Health Science Center: RSP02 - Security of Radioactive Materials	
Version 2	Publication Date: 09/17/2024

Objective

This procedure establishes security procedures for radioactive materials on campus. Nationally tracked sources are covered under source specific security procedures.

Scope

This procedure has been developed and implemented by UTHSC Research Safety Affairs. The policy applies to personnel in all radioactive materials obtained under License R-79019-D30 excluding nationally tracked sources.

Roles

UTHSC authorized users of radioactive materials must ensure all radioactive materials are properly secured when in storage and in use.

Research Safety Affairs personnel will review laboratory radioactive security implementation during laboratory inspections.

Definitions

Procedure

- I. Laboratory personnel responsibilities-
 - A. Radioactive materials including stock solutions, waste, samples, or contaminated equipment/spaces and generally licensed devices must be secured by one of the methods listed below and access must be limited to persons who have completed UTHSC required radiation training and authorized by the UTHSC Radiation Safety Committee to use radioactive materials:
 1. Locked storage container such as a freezer, refrigerator or cabinet
 2. Lock box non-portable (secured to stationary object or stored in a locked room).
 3. Stored in a locked room with access limited to the authorized user and other UTHSC employees who have completed UTHSC required

UT Health Science Center: RSP02 - Security of Radioactive Materials	
Version 2	Publication Date: 09/17/2024

radiation training and authorized by the UTHSC Radiation Safety Committee to use radioactive materials.

- B. Live animals labeled with radiation materials must be kept in locked rooms posted for radioactive materials use. All workers providing care to the animals must complete all required radiation training before handling contaminated animals. All radioactive tissues from euthanized animals, animal excreta containing radioactive materials, animal bedding containing radioactive materials, and equipment contaminated with radioactive material must be managed as specified in section I.A. of this procedure.
- C. While radiation work is underway or materials are being transported between labs, radioactive materials must be under constant surveillance by persons who have completed UTHSC required radiation training and authorized by the UTHSC Radiation Safety Committee to use radioactive materials.
- D. When shipments of radioactive materials arrive on campus, the packages must be secured by UTHSC Police Front Desk Personnel until picked up by Research Safety Affairs.
- E. When radiation work is underway and lab workers must temporarily leave the work area, radioactive materials must comply with section I.A. of this policy.
- F. Lost or missing radiation materials must be reported immediately upon discovery to Research Safety.

II. Research Safety Affairs responsibilities-

- A. Research Safety personnel will audit lab security during laboratory inspections.
- B. Audit results will be documented.
- C. Any deficiencies or concerns will be provided to the authorized user and assistance in developing a corrective action plan will be provided.
- D. Upon receiving a report of lost or stolen radioactive material, Research Safety Affairs will determine if a report to the Tennessee Division of Radiological Health is required per RULES OF TENNESSEE DEPARTMENT OF

UT Health Science Center: RSP02 - Security of Radioactive Materials	
Version 2	Publication Date: 09/17/2024

ENVIRONMENT AND CONSERVATION DIVISION OF
RADIOLOGICAL HEALTH 0400-20-05-.140 REPORTS OF THEFT OR
LOSS OF LICENSED MATERIAL. A summary of common campus
radionuclides is provided in table 1.

- a. All reports required to be submitted to the Tennessee Division of Radiological Health regarding lost or stolen material will be made in accordance with RULES OF TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION DIVISION OF RADIOLOGICAL HEALTH 0400-20-05-.140 REPORTS OF THEFT OR LOSS OF LICENSED MATERIAL.
- b. Coordinate with law enforcement in cases of theft or suspicion of theft of radioactive materials.
- c. Coordinate search activities for lost or misplaced sources.
- d. Make a report to the Tennessee Department of Radiological Health for any quantity (less than quantities specified in RULES OF TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION DIVISION OF RADIOLOGICAL HEALTH 0400-20-05-.140 REPORTS OF THEFT OR LOSS OF LICENSED MATERIAL of radioactive material lost or stolen after a search is complete and the material is not found or determined to be used up, decayed, or properly disposed of.

Penalties/Disciplinary Action for Non-Compliance

License violations are subject to civil penalties up to \$5,000 per day per violation. In the event of a threat to public health and safety, the Division has the right to confiscate radiation sources.

References

Tennessee Administrative Code Title 0400 - Environment and Conservation
Subtitle 0400-20 - Division of Radiological Health (§§ 0400-20-05-.161 Schedule
RHS 8-31)

Tennessee Administrative Code Title 0400 - Environment and Conservation
Subtitle 0400-20 - Division of Radiological Health (§§ 0400-20-05-.140)

UT Health Science Center: RSP02 - Security of Radioactive Materials	
Version 2	Publication Date: 09/17/2024

Tennessee Administrative Code Title 0400 - Environment and Conservation
 Subtitle 0400-20 - Division of Radiological Health (§§ 0400-20-05-.100)

Tennessee Administrative Code Title 0400 - Environment and Conservation
 Subtitle 0400-20 - Division of Radiological Health (§§ 0400-20-05-.101)

NUREG 1556 Volume 11 Revision 1

License R-79019-D30

Radionuclide	Immediate notification quantity μCi	30 day notification quantity μCi
^3H	10^6	10^4
^{14}C	10^6	10^4
^{35}S	10^5	10^3
^{99}Mo	10^5	10^3
$^{99\text{m}}\text{Tc}$	10^6	10^4
^{125}I	10^3	10
^{131}I	10^3	10
^{137}Cs	10^4	100

Table 1 - Reporting Threshold Quantities of common campus radionuclides

Responsible Official & Additional Contacts

This Responsible Official and Additional Contacts section contains those who are responsible or share certain policy responsibilities, organized by subject matter, such as monitoring compliance with the policy, providing additional guidance on policy clarifications, organizing policy training, updating the policy, etc.

Subject Matter	Office Name	Telephone Number	Email/Web Address
Policy Clarification and Interpretation	Research Safety Affairs	(901) 448-6114	radsafety@uthsc.edu
Policy Training	Research Safety Affairs	(901) 448-6114	radsafety@uthsc.edu

UT Health Science Center: RSP02 - Security of Radioactive Materials	
Version 2	Publication Date: 09/17/2024

Related Policies/Guidance Documents

- I. [Tennessee Administrative Code Title 0400 - Environment and Conservation Subtitle 0400-20 - Division of Radiological Health \(§§ 0400-20-04-.01 – 0400-20-13-.08\)](#)
- II. [NUREG 1556 Volume 11 Revision 1](#)
- III. License R-79019-D30