

UT Health Science Center: RSP25 - Radioactive Materials Spill Response	
Version 1	Publication Date: 09/18/2024

Objective

This procedure establishes the requirements to respond to spill of radioactive materials on campus.

Scope

This procedure has been developed and implemented by UTHSC (University of Tennessee Health Science Center) Research Safety Affairs. Requirements of this procedure will be applied to all radioactive materials spilled on campus.

Roles

UTHSC personnel involved in the spill must contact Research Safety Affairs as soon as practical after the spill. Research Safety personnel will advise and assist involved personnel in responding to the spill, make any required regulatory reports, collect spill cleanup debris for disposal, and prepare the final spill cleanup report.

The Radiation Safety Committee will review the report and determine if additional corrective actions, policy modifications, or other changes are needed to reduce the probability of another occurrence.

Procedure

I. UTHSC personnel involved in the spill

- A. Don clean gloves and monitor personnel potentially contaminated with an appropriate survey meter.
 1. Remove any clothing that is contaminated and collect for radiation safety collection and processing.
 2. Check skin for contamination.
- B. Removing contamination from skin or eyes
 1. Flush eyes for 15 minutes in an emergency eye wash if contamination is found or suspected.
 2. Wash contaminated skin with room temperature water and hand soap for at least 15 minutes.
 3. Repeat steps 1. And 2. if contamination remains.
- C. Contact the Research Safety Affairs Office and report spill as soon as possible after occurrence.
 1. Work hours
 - a. radsafety@uthsc.edu
 - b. 901.448.6114
 2. After hours, holidays
 - a. 901.448.4444 (UTHSC Police)

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- D. UTHSC personnel should contain the spilled material and prevent the further spread of contamination by placing absorbent bench paper over the spill and surrounding areas.
 - E. If the spill is limited to a small area, lab personnel can perform initial cleanup and monitoring. The following personal protective equipment must be used by all participants-
 - 1. Double gloves
 - 2. Lab coat
 - 3. Long pants
 - 4. Closed toe shoes and shoe covers if contamination is on the floor
 - 5. Safety glasses or chemical splash goggles if the spill involves liquid.
 - F. Cleanup debris must be collected for pickup by radiation safety.
 - G. Survey the cleaned areas frequently to assess the decontamination effectiveness. (Reference Radioactive Materials Laboratory Survey and Contamination Limits Procedure)
 - H. Research Safety Affairs will conduct the final survey to verify decontamination is complete.
 - I. When cleanup is completed, UTHSC personnel involved in the spill must participate in the investigation.
- II. Research Safety Administration responsibilities-
- A. Respond to the spill.
 - B. Assist/supervise spill cleanup.
 - 1. Refer to the Job Hazard Analysis for radioactive spill PPE requirements. Depending on the spill location, additional PPE may be required for non-radiation hazards. Comply with all local requirements as well as the Job Hazard Analysis requirements.
 - 2. Refer to the **Radioactive Materials Laboratory Survey and Contamination Limits Procedure for monitoring equipment**
 - C. Conduct the final survey of the area when cleanup is completed. (Reference **Radioactive Materials Laboratory Survey and Contamination Limits Procedure**)
 - D. Conduct the spill cleanup investigation.
 - E. Follow-up and ensure completion of action items developed during the investigation.
 - F. Report the spill cleanup investigation results to the Radiation Safety Committee.
- III. Documentation
- A. Radioactive Materials Spill Investigation Report

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.

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References

- 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

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

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. University of Tennessee Health Science Center Radioactive Materials License R-79019-D30