

<b>UT Health Science Center: RSP26 Proper Use of Dosimetry Procedure</b>	
<b>Version 1</b>	<b>Publication Date: 01/14/2025</b>

## **Objective**

This procedure establishes the requirements for individuals assigned radiation dosimeters by UTHSC

## **Scope**

This procedure applies to all personnel, students, and visitors at UTHSC that have been assigned dosimeters to monitor radiation exposure while conducting UTHSC work or study.

## **Roles**

Individual monitoring device wearer – a UTHSC student or employee expected to exceed 10% of the established occupation dose limits requiring the use of an individual monitoring device

Departmental badge coordinator – A UTHSC employee that manages the individual monitoring devices assigned to personnel and students in the department.

## **Definitions**

Individual monitoring devices - ("individual monitoring equipment") devices designed to be worn by a single individual for the assessment of dose equivalent, such as film badges, thermoluminescence dosimeters (TLDs), pocket ionization chambers, and personal ("lapel") air sampling devices.

Declared pregnant woman - a woman who has voluntarily informed her employer, in writing, of her pregnancy and the estimated date of conception. The declaration remains in effect until the declared pregnant woman withdraws the declaration in writing or is no longer pregnant.

## **Procedure**

- I. Responsibilities of all individuals assigned an individual monitoring device by UTHSC-
  - A. The assigned dosimeter must only be worn when conducting UTHSC business or UTHSC sponsored work or study.

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- B. The monitor device must be properly worn at all times in any posted for radiation use including x-ray suites, labs where radioactive materials are used, locations where portable x-ray machines are used, or other locations where a radiation hazard can be expected or anticipated area in which UTHSC job or study activities require he/she to be.
- C. The monitoring device must be stored away from any sources of radiation when not in use.
- D. The monitoring device must be worn only by the individual to which it is assigned. The sharing of badges is not allowed.
- E. Badge exposure processing
  - 1. Luxel badge users-
    - a. The badge must be exchanged in the last week of December, March, June, and September.
  - 2. Mirion badge users-
    - a. The badge must be read between the last day of each month and day 2 of the next month.
- F. Completion of a previous exposure history form must be done when you are designated as a radiation worker that must participate in the radiation monitoring program.
  - 1. The form must be filled out completely and signed.
  - 2. The form must be returned to Research Safety Affairs for processing.
- G. If your badge is lost or damaged, you must inform Research Safety Affairs (add email) at the time of discovery.
- H. If you receive a dose in excess of what is typical or expected for your work or study, you must complete a Radiation Exposure Investigation Form.
  - 1. The form needs to be completed by the badge wearer and returned to Research Safety Affairs within 3 days of notification of the excess dose.
- I. At the end of employment or study –
  - 1. the individual monitoring devices must be returned to your departmental badge coordinator.
  - 2. Leave a forwarding US mail address and an email address to which your final radiation exposure report should be sent.
- J. Complete appropriate, relevant training each 12 months –
  - 1. Radioactive materials users
    - a. Radioactive Materials Safety
      - (a) Radiation Safety Initial Training

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- (b) Radiation Safety Annual Refresher
  - 2. X-ray machine users
    - a. X-ray safety for the College of Dentistry
    - b. X-ray safety of Animal Care
    - c. X-ray Safety for Analytical X-ray Researchers
  - 3. Residents and Fellows
    - a. Radiation Safety Overview for Residents and Fellows
- K. Persons requiring an individual monitoring device will be required to complete the following:
- L. Complete a Previous Exposure History information form and submit it to the Research Safety Affairs Office for processing.
  - 1. History must include the following:
    - a. Dose received for the current calendar year
    - b. Attempt to obtain lifetime cumulative dose
- II. Research Safety personnel –
  - A. Collect badges for processing and deliver new badges
  - B. Order badges for new students and personnel
  - C. Monitor exposure results
  - D. Contact badge wearers if exposures are in excess of expected dose readings and conduct Radiation Exposure Investigations
  - E. Provide annual exposure summaries and termination exposure summaries to monitored personnel.

## **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**

Instructions to dosimeter wearers  
Exposure Investigation Form  
Dose

- I. Tennessee Administrative Code Title 0400 - Environment and Conservation Subtitle 0400-20 - Division of Radiological Health (§§ 0400-20-04-.01 — 0400-20-13-.08)

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- II. Tennessee Administrative Code Title 0400 - Environment and Conservation Subtitle 0400-20 - Division of Radiological Health (§§ 0400-20-05-.70 - 0400-20-05-.71)
- III. Tennessee Form RH
- IV. License R-79019-D30

### **Responsible Official & Additional Contacts**

<b>Subject Matter</b>	<b>Office Name</b>	<b>Telephone Number</b>	<b>Email/Web Address</b>
Procedure Clarification, Interpretation and 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. Tennessee Administrative Code Title 0400 - Environment and Conservation Subtitle 0400-20 - Division of Radiological Health §§ 0400-20-05-.71
- III. Tennessee Administrative Code Title 0400 - Environment and Conservation Subtitle 0400-20 - Division of Radiological Health §§ 0400-20-05-.133
- IV. Tennessee Administrative Code Title 0400 - Environment and Conservation Subtitle 0400-20 - Division of Radiological Health §§ 0400-20-05-.135
- V. [NUREG 1556 Volume 11 Revision 1](#)
- VI. License R-79019-D30