

**SUNY DOWNSTATE MEDICAL CENTER
UNIVERSITY HOSPITAL OF BROOKLYN
POLICY AND PROCEDURE**

**No: RAD-15
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Subject: RADIATION MONITORING OF
PERSONNEL

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Committee: Radiation Safety Committee
Approvals: Radiology PI Committee
Provision of Care Committee
Executive Performance
Improvement Council (EPIC)

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T.J.C. Standards: EC. 02.02.01 Radiation workers are checked periodically, by the use of exposure meters or badge tests, for the amount of radiation exposure. (EP. 18)
NYCBRH Article 175.03

Related Policies NoRAD-6 Radiology Patient Safety

Issued by: Radiation Physics
Radiology Department

I. PURPOSE:

To minimize radiation exposure to personnel by constantly monitoring and reporting the radiation exposure levels through the utilization of radiation monitoring devices, commonly referred to as a "**monitoring badge**" and by maintaining compliance with NYC, NYS and NRC Regulations.

II. DEFINITION(S):

Monitoring Badge is a device utilized to measure radiation exposure levels received by individuals working in or near a source of ionizing radiation.

III. POLICY:

All Personnel engaged in performing or participating in radiological procedures will be issued a film badge in accordance with criteria cited in Article 175

Personnel subjected to 1/10th. The maximum permissible annual dose of 5000mrem, will be issued a badge for monitoring, based on criteria cited in Article 175

- Personnel issued a monitoring badge are required to wear the badge at all times while on hospital premises
- When leaving the institution, personnel must leave their monitoring badge in one of the designated areas and should not move them front the premises.

- Personnel engaged in fluoroscopic procedures and nuclear medicine procedures will be issued a second monitoring device a ring monitor to be worn on the finger in addition to wearing the monitoring badge
 - Monitoring badge will be collected and a replacement badge distributed on a monthly basis by the Radiation Safety Office, BSB-7-26
- A. Monitoring badges will be sent to Landauer Inc. for calculation of exposure levels. The resulting monthly exposures levels report will be maintained on the file in the 'Radiation Safety Office. Copies of the monthly report will be distributed to department supervisors in which personnel, are being monitored.
- B. Supervisors receiving the report will post the report so that it is available for viewing by their respective personnel.
- C. All personnel issued a monitoring badge will receive annual training on the proper use of handling and storage of monitoring badges. This training will be provided by the RSO and documented, copies of which will be maintained on file in the Radiation Safety Office and in the employee's department personnel file.

IV. RESPONSIBILITIES

The Radiation Safety Officer (RSO) will assume full responsibility for the oversight of the radiation monitoring program. All personnel who are involved in wearing, storing collection, distribution and monitoring of the badges will be accountable for complying with the defined element of the program

A **master inventory of all personnel monitoring devices** including Monitoring badges and finger rings as well as control/ spare badges will be listed and maintained in the Radiation Safety Office. It is the responsibility of the Radiation Safety Officer to maintain the list. All deletions, additions or changes will be forwarded to Landauer Inc. as they occur.

V. PROCEDURES/GUIDELINES

1. Monitoring badges are to be worn only by the person to whom it was assigned
2. Monitoring badges will be personalized, indicating the name of the wearer
3. Monitoring badges are to be worn on the torso
4. Monitoring badges are to be worn at collar level outside of the protective apron. When a protective apron is worn, the badge will be placed facing outward.

Storage of Badges

Monitoring Badges are adversely affected by heat, Micro-waves, pressure, moisture and sunlight. It is imperative that badges are properly stored

- Monitoring badges are to be stored in the designated area of the assigned department in an area remote from exposure to radiation.
- Badges **MUST** not be removed from the hospital premises
- Monitoring badges which are damaged or lost must be reported immediately to the Radiation Safety officer
- Personnel **must** wear a Monitoring Badge when engaging in radiologic procedures.

Note: Proper use handling and storage of Monitoring badges will be covered during annual training.

VI. Reporting Exposure History

The Radiation Safety Officer is responsible for reporting the following issues to the New York City Department of Health, in a timely manner and in accordance with (Article 175)

- Exposure recorded on monitoring badges (dosimeter) that are not due to occupational exposure will be removed ONLY upon approval by the New York City Department of Health and the only if the RSO send the Employee consent
- Exposure in excess of the annual maximum permissible dose (5rem deep dose any equivalent) The RSO will review the individuals total exposure history, including any possible non-occupational exposure, to determine the cause of the overexposure
- Written documentation of the findings will be submitted to the DOH. The Radiation Safety Committee and the employee as mandated by NYC DOH code 175.03

VII. Note: the following information will be provided to the DOH when a request is made for removal:

- Copy of the radiation exposure report from the dosimetry provider
 - A written report to the ORH within thirty (30) days of the occurrence
 - An institutional investigation report /findings
 - A signed report by the staff involved/exposed
 - A personal dosimetry service provider investigation report
 - A report on the steps taken or planned to ensure no recurrence
- a) The Radiation Safety Officer will immediately initiate an investigation upon receipt of an overexposure (50mSV or more within 1 year) including performing calculations in accordance with DOH guidelines (Attachment 1)
 - b) The Radiation Safety Officer will consult with the individual and review the exposure history to determine the cause of exposure. This review will include but not be limited to identification of possible non-occupational related exposure.
 - c) The RSO will then perform any necessary calculations to determine the total exposure and develop a corrective action plan.

VIII. Review of Findings/Corrective Action /Corrective Action

The Radiation Safety Officer will submit the findings in writing to the Radiation Safety Committee for review.

- If warranted, action commensurate with the level findings will be initiated to limit additional exposure, and the action selected will be based on the anticipated magnitude of continued exposure. Action can include but not limited to work assignment or further monitoring
- The findings of the review and the corrective action will be provided to the employee in the form of a written document, which will be maintained on file in the Radiation Safety Office and in the employee's departmental personnel file.
- A copy of the over exposure, the investigative findings and the corrective action will be forwarded to the DOH upon completion of the investigation.

IX. ATTACHMENT

Article 174

Radiology Exposure Risk assessment

X. REFERENCE

Joint Commission Standard

UHB policy (

Date Reviewed	Revision Required (Check One)		Responsible Staff Name and Title
1/2010	Yes	No	James Shanahan, Director Department Radiology.
12/1015	(Yes)	No	Vincent Monte Assoc. Director
2/2016	(YES)		Maxine Barnes , RSO
	Yes	No	