A. Purpose

To ensure radiation exposures are maintained as low as reasonably achievable (ALARA) it is necessary to perform routine radiation protection surveys in areas where radioactive materials are used, stored or held for decay.

B. Applicability/scope

All clinical areas that use radioactive materials under the jurisdiction of Columbia University Radiation Safety. This includes Milstein Hospital, Children’s Hospital, Allen Hospital and off-site locations who contract with Radiation Safety to provide services.

C. Definitions

- DPM: disintegrations per minute
- RSO: Radiation Safety Officer

D. Policies

1. Ambient radiation levels: survey with ion chamber survey meter or other suitable instrument capable of detecting radiation exposure rates of at least 0.1 mR/hr
   a. Survey Areas
      i. In radiopharmaceutical elution, preparation, and administration areas, survey at the end of each day of use, or more frequently if contamination is suspected, with an appropriate radiation detection survey meter. If diagnostic administrations are occasionally made in rooms not specifically designated for RAM use (e.g. patient rooms, surgical suite, MRI scanner etc.) and special care is taken to remove all paraphernalia, those rooms need not be surveyed.
      ii. In laboratory areas where only small quantities of gamma-emitting radioactive material are processed (less than 0.1 mCi or 7.4 mBq at a time), survey monthly
      iii. In radiopharmaceutical storage and radiopharmaceutical waste storage areas, survey weekly.
      iv. In sealed source and brachytherapy storage areas, survey quarterly.
   b. Immediately notify the Radiation Safety Officer (RSO) if you find unexpectedly high or low levels.

2. Removable contamination surveys: survey by wiping selected areas with a cotton swab or small piece of filter paper. NOTE: the assay procedure should be sufficiently sensitive to detect contamination at 200 disintegrations per minute (DPM) or below. Results should be recorded in DPM.
   a. Survey Areas
i. In radiopharmaceutical elution, preparation, and administration areas, survey daily for removable contamination. If diagnostic administrations are occasionally made in patients' rooms and special care is taken to remove all paraphernalia, those rooms need not be surveyed.

ii. In laboratory areas where only small quantities of gamma-emitting radioactive material are processed (less than 0.1 mCi or 7.4 MBq at a time), survey monthly for removable contamination.

iii. In radiopharmaceutical storage and radiopharmaceutical waste storage areas, survey weekly for removable contamination.

b. **Immediately notify the RSO if you find unexpectedly high levels – i.e. above 200 DPM.**

3. Records of these surveys must include the following information:
   a. The date, area surveyed, and equipment used
   b. A drawing of the areas surveyed with contamination and dose rate action levels as established by the RSO
   c. Measured dose rates in mR/hr or contamination levels in DPM/100 cm², as appropriate
   d. The name or initials of the person who made the survey
   e. Actions taken in the case of excessive dose rates or contamination and follow-up survey information.

**E. Responsibilities**

Clinical departments are responsible to implement this procedure and maintain records of surveys. All personnel responsible for surveying should read and follow these procedures.

Radiation Safety personnel will audit

**F. Emergency contact**

Radiation Safety: 212-305-0303 (working hours)

Public Safety: 212-305-7979 (after working hours)

**G. Medical Surveillance**

N/A

**H. Recordkeeping**

1. Records of surveys should be maintained for at least three years
Radiation Protection Surveys in Clinical Areas

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I. Appendices

N/A

J. Forms

N/A

K. References

- New York City Licensing Guide 10.8, Rev. 2
- Rules of the City of New York - Title 24 - Article 175

L. Acknowledgements (optional)

N/A