

SOP For Occupational & Environmental Monitoring

Issue Date	Review Date	Version
November 2019	November 2024	4

Purpose

To ensure that there is appropriate management arrangements for occupational monitoring of staff working with ionising radiations, and environmental monitoring to ensure staff and other persons are adequately protected against exposure to ionising radiations, and exposure is restricted “as low as reasonably practicable” in accordance with statutory provisions.

This procedure will apply to all areas of the Trust and to all individuals employed by the Trust, radiation workers (“workers”) and to other staff (including contractors, voluntary workers, supernumerary staff, students, locum and agency staff, and honorary contract holders).

This procedure does not apply to the monitoring of workplace exposure to Radon. This is covered by a separate Trust procedure.

Who should read this document?

All managers whose staff work with ionising radiations, or who are responsible for areas where ionising radiations are used.

All staff who work with or in areas where ionising radiations are used (including voluntary workers, supernumerary staff, locum and agency staff, and individuals holding honorary employment contracts).

Key Messages

Managers are responsible for risk assessments for uses of ionising radiations and ensuring their employees are subject to appropriate radiation monitoring. They must ensure they implement appropriate management arrangements.

Employees are responsible for their own safety and must comply with the requirements under this procedure including wearing any radiation monitors as instructed and returning them at appropriate intervals.

The Trust will ensure that environments where ionising radiation is used are monitored to ensure that exposures are restricted and in line with planning constraints

Core accountabilities

Owner	Radiation Safety Committee
Review	Radiation Safety Committee
Ratification	Peter Wright – Director of Healthcare Science and Technology
Dissemination (Raising Awareness)	Radiation Safety Committee
Compliance	Service Lines

Links to other policies and procedures

This is a subsidiary document of the Ionising Radiation Safety Policy (218) which contains full details of definitions, dissemination etc.

Version History

1	February 2001	Approved by Radiation Protection Committee
2	April 2013	Review and approved by RPC
2	April 2015	Extended by the Medical Director to August 2015
2	January 2016	Extended by the Director of Corporate Business to January 2017
3	November 2016	Review & approved by Radiation Safety Committee
4	November 2019	Reviewed & Updated

The Trust is committed to creating a fully inclusive and accessible service. Making equality and diversity an integral part of the business will enable us to enhance the services we deliver and better meet the needs of patients and staff. We will treat people with dignity and respect, promote equality and diversity and eliminate all forms of discrimination, regardless of (but not limited to) age, disability, gender reassignment, race, religion or belief, sex, sexual orientation, marriage/civil partnership and pregnancy/maternity.

**An electronic version of this document is available on Trust Documents.
Larger text, Braille and Audio versions can be made available upon
request.**

Standard Operating Procedures are designed to promote consistency in delivery, to the required quality standards, across the Trust. They should be regarded as a key element of the training provision for staff to help them to deliver their roles and responsibilities.

Section	Description	Page
1	Introduction	
2	Definitions	
3	Regulatory Background	
4	Key Duties	
5	Procedure to Follow	
6	Document Ratification Process	
7	Dissemination and Implementation	
8	Monitoring and Assurance	
9	Reference Material	
Appendices		
	Required Documentation (example)	
	Electronic Processes and Records (example)	
	Specialised Processes (example)	

Ionising Radiation Safety Policy: SOP For Occupational & Environmental Monitoring

1 Introduction

1.1 The Trust uses ionising radiations from x-ray and radiotherapy equipment, and radioactive substances for the benefit of patients. It must ensure that the exposure of any other persons, staff or members of the public is controlled and that exposures are restricted in accordance with the legislative requirements. In doing so it must implement a management programme for monitoring occupational and environmental exposure.

2 Definitions

2.1 Ionising Radiations in the context of this procedure include x-rays, neutrons, and emissions from radioactive sources.

2.2 Radiation Safety Committee (RSC). Delegated committee with responsibility for policy and monitoring safety of use of ionising radiations

3 Regulatory Background

3.1 Ionising Radiations Regulations 2017 (IRR17). Statutory instrument under the Health & Safety at Work etc Act 1974. Places a duty on employers to protect staff and members of the public from exposure to ionising radiations.

3.2 Work with ionising radiation. Ionising Radiations Regulations 2017. Approved Code of Practice and guidance

3.3 Staff working with ionising radiations regulations may require occupational monitoring to demonstrate that they are adequately designated (Classified Worker / Non-Classified Worker), and that their exposure is As Low As Reasonably Practical (IRR17, R9).

3.4 The Trust must ensure members of the public (which includes patients, and staff whose duties do not include working with ionising radiations) are protected against exposure to ionising radiations. In order to demonstrate ensure areas are adequately designated and demonstrate this by a programme of monitoring (IRR17, R20).

4 Key Duties

4.1 Managerial responsibilities are detailed in Trust Procedure 425: Managerial Responsibilities for Radiation Safety.

Additional, specific responsibilities are detailed below

Employees
<ul style="list-style-type: none">• Must comply with the employers requirements for occupational monitoring, and wear and return any monitors (dosemeter) issued to them as directed.• Ensure any monitor issued to them is worn as instructed whenever they work in areas with Ionising Radiations.• Store monitors appropriately and in the required location when not in use, taking particular care to keep them away from sources of heat or corrosion. Monitors should not be taken home at the end of a shift.• Take all reasonable steps to prevent their monitor from becoming mislaid or damaged.• Inform their line manager or Radiation Protection Supervisor if the monitor is lost, of any fault with the monitor or if they think they may have received an unusual dose as soon as possible.• Exchange any monitor after the appropriate time interval.• Not wear another person's monitor.• Not wear any monitor issued to them by the Trust in any work involving ionising radiations on premises of other employers.• Notify their manager and RPS should they undertake any work with ionising radiations in any other capacity than their employment with the Trust.• Not maliciously damage or otherwise interfere with a monitor.
Dosimetry Service (Clinical & Radiation Physics)
<ul style="list-style-type: none">• Make arrangements for supply of dosimetry services to the Trust using an Approved Dosimetry Service if required by the regulations.• Provide sufficient monitors for the provision of the Trust occupational and environmental monitoring programmes. Issue departmental monitors and new staff monitors to the departmental named person.• Provide instructions to new users on appropriate care of monitors.• Ensure a programme of environmental monitoring is in place for all areas where ionising radiation is used, and provide reports on the results of the programme as required by the radiation protection assurance programme• Maintain a local database of monitored staff and dose results and from this database provide the reports / reviews detailed below• Secure dosimetry and record keeping services for Trust Classified Persons• Scrutinise dose records of all occupational exposures in The Trust on their receipt from the ADS.

- Maintain annual summaries of occupational exposure for a minimum period of 5 years.
- Provide reports as required to the Trust RPA's on occupational and environmental monitoring.
- Store written reports of any notifiable incidents until the person to whom the record relates has or would have attained the age of 75 years, or at least for a period of 50 years, and if the incident is not notifiable, store the report of the preliminary investigation for 2 years.

5 Procedure to Follow

Occupational Dosimetry

Supply of Dosimeters

The Dosimetry Service will arrange for sufficient dosimeters to be supplied by the ADS according to service line needs

Service Lines must advise of changes in requirements using appropriate process as defined by the Dosimetry Service

Issue of Dosimeters to Staff

Nominated individuals in each Service Line are responsible for issuing dosimeters to staff. Monitors from the previous period should be collected at this point and returned to the Dosimetry Service

Control of Dosimeters

Service Lines must ensure Dosimeters are subject to appropriate control at all times, whether held centrally by the Service Line or in the care of individuals.

Employees

Employees must take care of dosimeters issued to them and wear them at all times when working with Ionising Radiations

Dosimeters must be returned as required at the end of each period.

Any lost dosimeter must be reported to the Dosimetry Service as soon as possible

Return of Dosimeters

Service Lines must ensure Dosimeters are returned to the Dosimetry Service as soon as possible at the end of each monitoring period.

Action in Event of Failure of Controls

Service Lines must take appropriate action when monitors are returned late, or lost.

Where persistent issues arise Service Lines must review arrangements and if necessary implement enhanced arrangements to ensure appropriate control of dosimeters at all times.

Environmental Monitoring

The Dosimetry Service will plan and conduct a programme of environmental monitoring around designated areas

Planned basis : every 5 years or wherever a change of equipment or significant change in practice

Service Lines must cooperate with the Dosimetry Service, provide access to areas and assist with placement / retrieval of dosimeters

Exclusions

The environmental monitoring programme excludes

Radon – covered by the Radon Monitoring Programme

Monitoring area designated on the basis of contamination – this is performed routinely under service line / departmental system of work

Monitoring and quality assurance arrangements

The Dosimetry Service will produce the following reports

Report	To whom	Frequency
Personal dose results	Service line director, Area Lead / Radiation Protection Supervisor	For each monitoring period
Late /Non returns	Service line director, Area Lead / Radiation Protection Supervisor	For each monitoring period
Annual Dose Summary	RSC	Annually
Ad hoc report	Radiation Protection Adviser	As required

6 Document Ratification Process

The design and process of review and revision of this procedural document will comply with The Development and Management of Formal Documents.

The review period for this document is set as default of five years from the date it was last ratified, or earlier if developments within or external to the Trust indicate the need for a significant revision to the procedures described.

This document will be reviewed by the Radiation Safety Committee and ratified by the Executive Director for Health & Safety .

Non-significant amendments to this document may be made, under delegated authority from the Executive Director for Health & Safety, or by the nominated author. These must be ratified by the Executive Director for Health & Safety and should be reported, retrospectively, to the Radiation Safety Committee.

Significant reviews and revisions to this document will include a consultation with named groups, or grades across the Trust. For non-significant amendments, informal consultation will be restricted to named groups, or grades who are directly affected by the proposed changes.

7 Dissemination and Implementation

Following approval and ratification, this procedural document will be published in the Trust's formal documents library and all staff will be notified through the Trust's normal notification process, currently the 'Vital Signs' electronic newsletter.

Document control arrangements will be in accordance with The Development and Management of Formal Documents.

The document author(s) will be responsible for agreeing the training requirements associated with the newly ratified document with the Executive Director for Health & Safety and for working with the Trust's training function, if required, to arrange for the required training to be delivered.

8 Monitoring and Assurance

8.1 Monitoring of effectiveness of this SOP will be carried out by the Radaton Safety Committee

8.2 The Dosimetry Service will produce the following reports

Report	To whom	Frequency
Personal dose results	Service line director, Area Lead / Radiation Protection Supervisor	For each monitoring period
Late /Non returns	Service line director, Area Lead / Radiation Protection Supervisor	For each monitoring period
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9 Reference Material

9.1 Ionising Radiations Regulations 2017 (IRR17). Statutory instrument under the Health & Safety at Work etc Act 1974. Places a duty on employers to protect staff and members of the public from exposure to ionising radiations

9.2 Work with ionising radiation. Ionising Radiations Regulations 2017.Approved Code of Practice and guidance

9.3 Enforced by Health & Safety Executive