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Contact officer/s:	Liu Lu x 58762, Jennifer Hartley x58288, Bob Armstrong x52912
Related documents:	UNSW Ionising Radiation Procedure (OHS601)

1. Purpose – context for development of the protocol

This document indicates how the UNSW Ionising Radiation Procedure is applied at a practical, local level in the School of Medical Sciences (SOMS).

2. Scope – to which positions/groups does the protocol apply

All persons in SoMS using, storing or purchasing radiation

3. Definitions and acronyms used

ARPANSA:	Australian Radiation Protection and Nuclear Safety Agency
Dosimeter:	a device used to measure an individual's exposure to a hazardous environment, in this instance, exposure to ionising radiation.
EPA:	Environmental Protection Authority, now part of the Department of Environment and Climate Change
Ionising Radiation:	Ionising radiation is energy in the form of waves or particles that has enough force to remove electrons from atoms. Examples include radioactive materials such as uranium and x-rays.
TLD:	Thermoluminescent Dosimeter, a type of Radiation Dosimeter

Define any key terms and acronyms used in this protocol, or provide a link to associated policy or procedure documents where the definitions are provided.

4. Protocol statement

4.1 What You Need To Know Before You Start.

4.1.1 Legislation, Rules, Code of Practice

Use Besides general Occupational Health and Safety practices, work with unsealed radioactive sources in NSW is regulated under the NSW Radiation Control Act (1990) and Australian Standard 2243.4 Safety in Laboratories Part 4: Ionizing Radiation. We have a statutory obligation to comply with the practices described in these documents. The documents can be directly accessed online through UNSW Library.

The University of New South Wales has developed an 'Ionising Radiation Procedure' which defines how the Act and associated Standard are put into practice within the University. This is accessible through the University web site (http://www.hr.unsw.edu.au/ohswc/ohs/pdf/pro_radiation_ionising.pdf). Every potential user of radioisotopes is strongly advised to read this Procedure before planning their work. Everyone working with or supervising the use of radioactive sources in UNSW has responsibilities and these are clearly outlined in the Procedure document.

4.1.2 Radiation Licensing and Training

All intending users of ionising radiation MUST:

1. Attend a suitable Radiation Protection Training Course and successfully complete the assessment at the end of the course. The OHS & Workers Compensation Unit runs such courses at regular intervals through the year. Further details can be obtained from the Training page of the UNSW OHS web site (http://www.hr.unsw.edu.au/ohswc/ohs/ohs_training_courses.html), or by

contacting the University Radiation Health and Safety Coordinator, Bob Armstrong (x52912). You can register for a course online through MyUNSW if you are a staff member, or through the above OHS Training webpage if you are a student.

2. Obtain a Radiation Licence, issued by the EPA. This applies to ALL staff (not just laboratory supervisors). The licence will indicate (i) the types and amounts of isotope for which work is permitted and (ii) where appropriate, authorisation to supervise students working under an Exemption certificate.

The only exception to this rule is for students working under the supervision of an appropriately licensed supervisor. In this case, an exemption has to be provided in writing, identifying the student, the supervisor, the details of the work to be undertaken and any conditions associated with it. This Exemption has to be signed by the Radiation Safety Supervisor. A copy of the form to be used is provided in **Appendix A**. A copy of the co-signed form should be displayed in the laboratory where the work is undertaken and a second copy given to the student.

To obtain an EPA licence, you must provide evidence that you have attended a suitable Radiation Protection Training Course.

To apply for an EPA licence, contact the SOMS Radiation Safety Supervisor or Assistants, who will provide the relevant form and information on the documentation required (**Appendix B**). This will then be sent by them to EPA together with a copy of your Radiation Protection Training Program certificate and a fee. Allow up to a month to receive your Licence. Once issued, the licence has to be renewed annually. SOMS will pay the initial and renewal fees for staff working with radioactive sources, provided that you renew it on time. Note that if you let a license expire, you will have to reapply as a new user. This costs more and SOMS will expect you to pay the difference.

4.1.3 Radiation Supervision

In SOMS, a Radiation Safety Supervisor and several deputies are available to assist and monitor work with radioisotopes. Their names and contact details are listed on the front page of this document, and also in Appendix C [List of useful contacts]. They are available as a first contact for advice on all aspects of work with unsealed sources in SOMS.

The responsibilities of the Radiation Safety Supervisor include:

- Allocation and collection of personal radiation monitors
- Assistance in radiation license issues
- Maintaining records (see below)
- Monitoring radioactive waste disposal
- Approving Standard Operating Procedures
- Identifying local radiation risk areas

4.1.4 Personal Radiation Monitors

All persons working with and/or potentially exposed to penetrating radiation are required to wear an appropriate monitoring device. In practice, this means work with any isotope except ³H. Personal dosimeters are issued by the University Radiation Health and Safety Coordinator, via the SOMS Radiation Safety Supervisor, or the deputy responsible for your area. See **Appendix D** for details of how to obtain a dosimeter.

4.1.5 Risk Assessment/Institutional Clearance

Before any new work involving radiation is undertaken, a Risk Assessment/Institutional Clearance form should be submitted to the UNSW Radiation Safety Committee. A copy of this form is provided [**Appendix E**] and is also available online at the Radiation page of the UNSW OHS Web site (http://www.hr.unsw.edu.au/ohswc/ohs/ohs_radiation.html). The completed form should be forwarded to the University Radiation Health and Safety Coordinator, Bob Armstrong (x2912).

4.2 Working With Radioisotopes

4.2.1 Ordering and Storage of Radioisotopes

UNSW policy requires that:

All purchases of radioactive materials are authorised by the School Radiation Safety Supervisor. In practice this means that all orders should be placed through:

Meredith Hatton (CVR), x52536 deth.hatton@unsw.edu.au
Or Sarika Singh (IDRU), x52494 sarika@unsw.edu.au
Or Harry Chambers (SoMS), x51382 H.Chambers@unsw.edu.au
who have current lists of all EPA licence holders.

Requisitions include the licence number of the responsible person. Records of all purchase receipts are kept by the laboratory manager. Radioactive materials are stored in a suitable locked store, separate from non-radioactive substances.

4.2.3 Record of Storage and Use of Isotopes

We have a legal obligation to maintain written records of the acquisition, storage, use and disposal of radioactive isotopes. This is the responsibility of the licence holder. In practice, this record can be effectively maintained using a log book, in which a single page records the fate of an individual bottle of isotope from the time of arrival until its complete disposal. A template for this is provided in Appendix F. You are strongly recommended to use this template or a similar document. All log sheets should be stored in a central location and should be held even when the isotope is all used and disposed. The Radiation Safety Supervisor will collect copies of these records on a regular basis.

4.2.3 Designated Radiation Areas

In SOMS, the following areas are designated for work with/storage of radioactive materials. Contact the responsible person listed for information on access and work practices within these areas.

Location	Designation	Responsible person
M311	Medium level radioisotope lab	Lu Liu (x58762)
403	Medium level radioisotope lab	Estella Sanchez-Guerrero (x51293) Sian Cartland (x51383)
410	Radioisotope waste temporary store	Estella Sanchez-Guerrero (x51293) Sian Cartland (x51383)

Medium level laboratories are graded for work with the following maximum levels of isotopes.

Radiotoxicity class	Amount	Examples
Class 1	0.2MBq-20MBq	²⁴¹ Am
Class 2	20MBq-2GBq	¹²⁵ I, ¹³³ I, ⁶⁰ Co, ⁴⁵ Ca
Class 3	2GBq-0.2TBq	³² P, ⁵⁹ Fe, ³⁵ S, ¹⁴ C
Class 4	0.2Tbq-20TBq	³ H

In general, work with radioisotopes should be performed in M311 or 403. Contact the indicated responsible person for instruction in how to obtain access and local practices for booking, work, waste disposal and monitoring.

In some cases, work with lesser amounts of specific isotopes can be performed in other laboratory areas, provided that adequate containment and shielding is provided. This should protect both the user and other individuals in the laboratory area. Before undertaking work with isotopes in general laboratory areas, the University Radiation Health and Safety Coordinator, Bob Armstrong (x2912) should be consulted for advice and approval.

4.2.5 Containment

- a. Work with radioactive sources must be segregated from other work. Where possible it should be performed in a separate room; where not, a separate work area reserved for isotopes should be identified and clearly labelled with a radiation symbol.
- b. Work with liquid sources must be performed in a double container or a large tray (plastic or steel) lined with absorbent paper to restrict the spread of any spilt liquid.
- c. All radioactive preparations should be clearly marked with the radiation symbol, details of the chemical compound, radionuclide, date and name of the responsible user.
- d. Operations that may produce vapour, spray, dust or radioactive gas should be performed in a fume hood or glove box.
- e. Where necessary, appropriate shielding must be in place to protect both the user and other staff in the laboratory at all times.
- f. Gloves, labcoat, goggles and a personal dosimeter should be worn whenever radioactivity is used. Make sure gloves are changed frequently.
- g. Always remove gloves before leaving the active area. Protective clothing worn in radioisotope laboratories should be removed before leaving and left in, or immediately outside, the 'active' area.
- h. All reagents, apparatus and tools used in the 'active' area must, where possible, be clearly labelled and normally remain in the 'active' area. Where any item needs to be taken out of this area, it must first be monitored and decontaminated where necessary. It is the responsibility of the person removing the item from the active area to ensure that the item is decontaminated.
- i. Separate waste receptacles for contaminated solid materials (e.g. gloves, paper tissues, contaminated plastic pipette tips) should be provided. They should be strong plastic lined with a plastic bag. Where necessary, these containers must be shielded. Filled waste bags should be sealed and labelled as described in Section 3.

4.2.5 Monitoring

- a. Routinely monitor the working area for contamination before, during and after radioactive use.
- b. Handheld monitors for detection of surface contamination by ^{32}P and ^{125}I are provided in SOMS. These are calibrated annually. For locations and assistance with their use and maintenance, contact the local Radiation Safety Assistant.
- c. ^3H , ^{35}S and ^{14}C are not easily detected with monitors. These are measured by performing a Wipe Test.
 - wipe area(s) with a small damp cloth or tissue.
 - place cloth into a scintillant vial containing scintillant (have a background scintillant control)
 - measure radiation in a beta-scintillant counter (located in 401 and 214)
- d. In addition to monitoring before and after experimental procedures, it is the responsibility of the Laboratory Manager to ensure that areas used for radioactive work are regularly monitored and written records of this monitoring are maintained.
- e. Worksafe or EPA may ask to inspect these records.
- f. The Radiation Safety Supervisor will perform spot checks at random – beware!

4.3 Radioactive Waste Disposal

Currently in NSW it is not possible to dispose of radioactive waste. Radioactive material must be stored at the University until the level of activity has decayed to background levels. Minimization of the amount and volume of radioactive waste is therefore imperative. Radioactive waste must be completely segregated from 'cold' waste for disposal.

4.4.3 General Procedures for Management of Radioactive Waste

Plan for waste disposal before beginning experimental work, and design experiments to minimise the amount of waste generated.

- a. Keep radioactive and non-radioactive waste separate.
- b. Keep individual radionuclides separate. If this is not possible, treat the combined waste as the more hazardous of the radionuclides.
- c. Waste (solid) should be collected into biohazard bags (doubly contained) behind appropriate shielding. Securely seal the bags with tape and clearly label with the following information: Name / Laboratory/Date/Isotope/Approximate activity in Bq (1mCi = 37MBq)
- d. Place the sealed bag into the appropriate container in your department's radioactive waste room (Room 410 – Pathology; Room M311 – Anatomy and Physiology/Pharmacology). Fill out the appropriate waste disposal record form alongside the waste container. These records may be inspected by WorkCover or EPA.
- e. For radioactive liquid waste, carefully pour into the appropriate bottles provided in the fume hoods in 410 and M311. Fill out the forms alongside the waste container.
- f. Liquid scintillant vials and contents may be disposed together if the activity is below 100 Bq per gram. Put vials into biohazard bags (doubly contained), label clearly and place into the appropriate drum in room 410. **You must fill out the form alongside the waste containers with every deposit. This is a legal obligation.**

When the drums/bottles are nearly full, inform the person responsible for the storage area and/or the Radiation Safety Supervisor, who will arrange for their collection and storage. Further details on waste disposal are provided on the Risk Management Web site.

4.4 Radioactive Spills And Incidents

Working procedures and a contingency plan taking into account every radiation spill that can reasonably be foreseen should be reviewed periodically.

A Spill Kit should be maintained in every area/laboratory where radioactive work is carried out. Details of the recommended contents of a Spill Kit are provided in **Appendix G**.

The objectives of a cleanup procedure are:

- to minimize the amount of radioactive material entering the body
- to prevent the spread of contamination from the spill area
- to remove any contamination from personnel
- to undertake area decontamination under qualified supervision. Inexperienced personnel should not attempt unsupervised decontamination.

In any case of serious injury, the person should be treated immediately, taking care to minimize spread of contamination. Emergency treatment for life-threatening injury should take precedence over treatment for contamination.

4.4.3 Spill Clean-up Procedure

Stage 1. Containment.

- a. Notify all persons in the room. Instruct them to move to an alternate area in the room until surveyed for contamination.

- b. Remove gloves, place absorbent pad over spill area. Call supervisor/Radiation Safety Supervisor/ Radiation Health and Safety Coordinator, if advice/help is required.
- c. Post a warning sign on the door.
- d. Wait for any requested help to arrive.

Stage 2. Monitor contamination.

- a. Survey all persons for contamination. If uncontaminated, allow them to leave.
- b. Survey the spill area for the extent of contamination. Record counts on a floor plan of the area affected.

Stage 3. Decontamination.

- a. Apply fresh gloves and shoe covers (if necessary).
- b. Outline spill area with a grease pencil to contain liquid spread.
- c. Kneeling on lined absorbent pad, using tongs and gauze, soak up liquid, working from the outside to the centre. Blot with paper towels.
- d. Monitor the area when no visible spilled material remains, to check progress of decontamination.
- e. Continue decontamination as necessary to reduce the levels to <2 x background. If necessary, apply detergent, solvent or scouring powder. Treat all materials used as contaminated waste.
- f. Monitor all persons involved in the decontamination process.
- g. Remove all contaminated clothing and seal into plastic bags.
- h. Replenish Spill Kit.
- i. Prepare a written report.

4.4.3 Notifiable Incidents

UNSW definition of what constitutes a notifiable 'accident' is clearly provided in the UNSW 'Radiation Safety Policy and Program (Part A, Ionising Radiation)'. If in any doubt, contact the Radiation Safety Supervisor. The standard form for this is provided in **Appendix H** and is also available on the RMU Web site.

4.4.3 Personal Exposure

Persons who may have had an accidental intake of radioactive material should be referred to the Radiation Health and Safety Coordinator as soon as possible for consideration of bioassay monitoring. Where necessary, they should also be referred to a medically qualified person with knowledge to reduce the effect of, or assist elimination of, internal radioactive contamination.

In the specific instance of suspected inhalation of ^{125}I or ^{133}I , a course of iodine tablets is provided in the Spill Kits located in M311 and 403, or from the Radiation Safety Supervisor. This course should be commenced immediately, and then further medical advice and monitoring sought.

Depending on the area of the body contaminated, the following procedures may be considered.

- a. Wash hands with soap and water, scrubbing lightly with a soft nail brush. If necessary, repeat using detergent.
- b. If the above does not remove contamination from the hands, wear cotton gloves covered by tight-fitting rubber gloves for several hours to allow perspiration to assist removal of contamination.
- c. Rub skin other than hands with a cotton wool pad soaked in complexing agent (e.g. Cetavlon).
- d. Wash out mouth several times with a hydrogen peroxide solution (1 tablespoon of 10 volume solution in a tumbler (~300ml) of water).
- e. Irrigate eyes with saline solution (1 percent common salt solution).

Continue personal decontamination until monitoring shows that it has been reduced to an acceptable level. **DO NOT CONTINUE IF THERE IS A RISK OF CONTAMINATION ENTERING THE BLOODSTREAM THROUGH BREAKS OR ABRASIONS IN THE SKIN.**

4.5 Radioisotope Record Keeping

11 radiation registers are identified in UNSW policy as the requirements to be kept by Radiation Safety Supervisors to satisfy the Radiation Control Act 1990.

These registers provide an audit trail to ensure there is an appropriate management system to control ionising radiation issues.

It is the responsibility of all radiation users and laboratory managers to assist the RSS in maintenance of these registers, by providing the information requested.

1. Register of radiation users
2. Register of personal radiation monitor users
3. Register of radiation apparatus, acquisition and disposal
4. Results of surveys of radiation apparatus
5. Register of sealed radioactive sources, acquisition, use and disposal
6. Register of unsealed radioactive sources, acquisition, use and disposal
7. Register of ionizing radiation emitting apparatus
8. Register of results of laboratory contamination monitoring
9. Register of accidents and incidents involving radiation
10. Radiation Safety Training register.
11. Register of radiation researchers and laboratories

A register of radiation researchers and laboratories identifies where equipment and work is carried out and by whom. All radiation users and their radiation safety training records must be identified, with licensing details, including exemptions under designated supervisors.

Personal radiation monitor results must be recorded for all personnel using radioactive materials/apparatus, the type of TLD's used, the periods and the dose results. This information is supplied by ARPANSA after processing TLD's.

A register of radiation apparatus/materials provides details of equipment and material from supply to disposal. This register can contain maintenance periods and survey results for calibration, as required.

Contamination monitoring appropriate to the radioactive substance used is registered. This includes personnel and laboratories for periods of radioactive work. This should also include containment surveys where appropriate.

Accidents and incidents must be recorded and results forwarded to RMU where injuries or exposure to personnel have occurred. This includes contamination and accidental exposure.

5. Roles and responsibilities

Role	Responsible Person	Responsibilities
Radiation Safety Supervisor	Liu Lu	Central conduit for Radiation Safety Information in SoMS
Radiation Purchasing Officer	Meredith Hatton	Purchasing Radiation for CVR
	Sarika Singh	Purchasing Radiation for IDRU
	Harry Chambers	Purchasing Radiation for SoMS
Laboratory/Store Manager	Lu Liu (x58762)	Wallace Wurth Room M310, Medium level radioisotope lab
Laboratory/Store Manager	Estella Sanchez-Guerrero Sian Cartland	Wallace Wurth Room 403, Medium level radioisotope lab
Laboratory/Store Manager	Estella Sanchez-Guerrero, Sian Cartland	Wallace Wurth Room 410 Radioisotope waste temporary store

Appendix A

EPA IONISING RADIATION EXEMPTION APPROVAL FOR STUDENT WORKING UNDER SUPERVISION

[This must be displayed in the relevant laboratory and a copy retained by the student]

Student Name	
Supervisor Name	
Supervisor Radiation Licence No.	
Location of work	
Isotope(s) to be used. <i>(and approx. amount per procedure)</i>	
Details of the work involving isotopes. <i>(indicate ID and location of SOPs and Hazard Assessments for these protocols where available).</i>	
Conditions of work	<ol style="list-style-type: none"> 1. The supervisor's licence must be current and valid for supervision and for the above isotopes. 2. The student must attend the RMU '<i>Radiation Protection Training Course</i>' <u>before</u> starting work with isotopes. 3. The student must be instructed in the following procedures in the laboratory <ol style="list-style-type: none"> a. location of isotope safety sheets, spill kit. b. procedures for isotope containment and disposal. c. procedures for spills and surface monitoring. d. logging of isotope use, disposal and monitoring. 4. The student must be issued with and wear a TLD.
Radiation Safety Supervisor (Lu Liu) signature Date.....
Student signature Date.....

Appendix B

How to get an EPA Radiation Licence

All staff members using radioisotopes within the UNSW are required to have an EPA radiation licence before commencing any work with radioisotopes. The following documentary evidence is required for the processing of a Radiation Licence. These documents are to satisfy both the requirements of the Environmental Protection Agency and the UNSW Risk Management Unit.

You will need;

1. A completed Environmental Protection Authority licence application form (obtainable from Radiation Safety Supervisor or Assistants).
2. A copy of your University Testamur stating qualifications*.
3. A copy of your Radiation Safety Course Certificate*.
4. A brief letter addressed *to Whom it may concern* stating what the nominated isotopes (from the application form) will be used for. i.e. *32P-dCTP will be used for labelling DNA probes for use in northern blotting*. This should be signed and dated.

* Please include a copy of your marriage certificate if your currently name differs from what is printed on these documents.

Once all the above are completed, please return three copies of each requirement (originals + 2 photocopies) each secured with a paperclip either via internal mail addressed to the appropriate Radiation Safety Assistant listed below or in the Radiation Safety Supervisor pigeon hole located in the Pathology reception area on level 4 of the Wallace-Wurth Building. It can take around 6 weeks to acquire your licence so please plan ahead accordingly.

Radiation Safety Supervisor

Dr. Lu Liu (x58762)

Radiation Safety Assistants

- **Physiology/Pharmacology /Anatomy**
- **Pathology**

Andre Serobian (x51714)
Estella Sanchez-Guerrero (x51293)
Sian Cartland (x51383)

Appendix C

Useful Contacts and Links.

SOMS Radiation Safety Supervisor

Dr. Lu Liu (x58762/ lu.liu@unsw.edu.au)

Radiation Safety Assistants

- ***Physiology/Pharmacology /Anatomy***
Andre Serobian (x51714/ serobian.a@student.unsw.edu.au)
- ***Pathology***
Estella Sanchez-Guerrero (x51293/ telasanchez@yahoo.com)
Sian Cartland (x51383/ s.cartland@unsw.edu.au)

UNSW Radiation Health and Safety Coordinator (Risk Management Unit)

Bob Armstrong (x52912/ R.Armstrong@unsw.edu.au)

UNSW Risk Management radiation safety web site

http://www.hr.unsw.edu.au/ohswc/ohs/ohs_radiation.html

UNSW Radiation Safety Committee Chair

Professor V. Murray (x52082/ v.murray@unsw.edu.au)

SOMS OHS Committee Chair

Dr. Mark Hill (x52477/ m.hill@unsw.edu.au)

SOMS OHS Coordinator Jennifer Hartley (x58288/ j.hartley@unsw.edu.au)

Appendix D

How to get a personal dosimeter

All persons using radiation are required to have and wear a TLD badge at all times whilst using radioisotopes (with the exception of those using ^3H). These badges must be stored in a safe place away from radioisotopes and be returned to the Radiation Safety Supervisor on request, usually every three months, so that your cumulative radiation exposure can be measured. On termination of employment with UNSW these badges must also be returned promptly to the Radiation Safety Supervisor. The Australian Radiation Protection and Nuclear Safety Agency (ARPNSA) issues fines for badges that are not returned at the requested time.

To be eligible for a TLD badge you must have;

1. Completed a Radiation Safety Course. Provide a photocopy of your certificate.
2. Completed a *Radioisotope Users Form**
3. Have signed the *Radiation Users Declaration** stating that you have read, understand, and will abide by the guidelines of radioisotope use and disposal of the School of Medical Sciences.

**Available from Radiation Safety Supervisor or Radiation Assistants.*

Once all the above are completed, please return two copies of each requirement (originals + 1 photocopy) each secured with a paperclip either via internal mail addressed to the appropriate Radiation Safety Assistant listed below or in the Radiation Safety Supervisor pigeon hole located in the Pathology reception area on level 4 of the Wallace Wurth Building.

Radiation Safety Supervisor

Dr. Lu Liu (x58762)

Radiation Safety Assistants

- ***Physiology/Pharmacology /Anatomy***
- ***Pathology***

Andre Serobian (x51714)
Estella Sanchez-Guerrero (x51293)
Sian Cartland (x51383)

Appendix E - Risk Assessment/Institutional Clearance Form.

OHS 695

Project/Program Approval Form



UNSW
THE UNIVERSITY OF NEW SOUTH WALES

Use of Radioactive Substances/Radiation Apparatus

Date:

Name of Chief Investigator/Licensee:			
Position:		School:	
Tel:	Fax:	Email:	
Radiation Licence No:	Type:	Expiry Date:	Signature:
Location where the work is being conducted:			

Tick appropriate boxes

Research renewal with change

Research renewal without change

Documents attached :

Standard Operating procedures Emergency procedures waste procedures risk assessment

Project/Program Collaborators

Name	Affiliation	Licence Number (Not here if exempted)	Expiry Date

Project Title/Field:

Description of Radiation Use:

Unsealed Radiation Source Details

Radionuclide	Physical Form	Chemical Form	Maximum Activity	Activity per Experiment	Purpose

Experience with radioisotope years

Storage Details:

Sealed Source/Radiation Apparatus Details

Source Type/ Activity	Apparatus – Make/Model/Serial No.	kV/mA

Risk Analysis

Identified Hazards	Control Measures
External beta	
External X/gamma	
Internal	
Environmental Contamination	
Other	

Emergency Procedures:

Monitoring

Personal	
Area	
Contamination	

Using the UNSW Risk Rating System, rate the minimum risk according to your risk assessment with controls in place:

Extreme High Medium Low

Details of Staff Training:

Details of Student Involvement:

Waste Disposal Procedures:

Radiation Safety Supervisor’s (RSS) Name:

Signed:

Dated:

Radiation Safety Committee’s Comments:

Signed:

Dated:

Appendix G

Suggested contents of Spill Kit.

Prepare at least one Spill Kit for each area where radioactive work is carried out.

Items to be included:

- Radioactive warning signs and tape
- Disposable gloves
- Disposable overshoes
- Small and large plastic bags
- Masking tape
- Grease pencil
- Forceps/Tongs
- Gauze sponges
- Decontamination detergent
- Commercial scouring powder
- Identification tags
- Filter paper wipes
- Scissors
- Disposable lined absorbent pads
- Floor plan

Include personal decontamination items as follows:

- Sponge
- Nail brush
- Bar soap
- Box tissues
- Paper towels

Appendix H - Radiation Incident Report Form

OHS005

Supplementary Radiation Incident Report Form

To be read in conjunction with related OHS001 report



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Incident number:

This form can be down-loaded from the OHS web site. It should be completed by the person involved in the accident with a radioactive source/substance or irradiating apparatus and forwarded together with form OHS001 to the Manager OHS Unit, HR, Level 1, The Chancellery, UNSW or fax to (02) 9385-2365.

INCIDENT NUMBER from Form OHS001 (office use only)

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[PLEASE PRINT DETAILS BELOW]

PART A DETAILS OF PERSONS INVOLVED (name and contact phone/email address)

Person completing this report	
Other persons involved	

PART B DETAILS OF PROJECT AND RADIATION

Project Approval No. (Radiation Safety Committee, RMU)	
Project supervisor (name and contact phone/e-mail address)	
Title of the project	
Radiation source type (sealed or unsealed radioactive source/substance; irradiating apparatus; name of isotope)	
Duration of exposure	
Distance working from source	
Amount of isotope and activity date	
Radioactivity level at time of exposure	

PART C DETAILS OF ACCIDENT relevant to radiation exposure if not already recorded on form OHS001

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PART D ACTION TAKEN TO MINIMISE EXPOSURE & PREVENT CONTAMINATION (describe steps taken)

Decontaminate yourself	
Decontaminate the work area	
Shield source adequately	
Increase working distance	
Restrict access to area	
Contact Security if evacuation required	
Shut ventilation down if radioactive gas/vapour may be spread by air con.	
Describe medical assistance, if any (first aid or other treatment, iodine tablet, etc)	

PART E REPORTING REQUIREMENTS (record date and time notification was given)

Notify project supervisor	
Notify local Safety Coordinator	
Notify Head of School or Centre Director	
Notify Radiation Health & Safety Coordinator, OHS Unit	

Signature:

Date: