# **Massey University Radiation Safety Plan**

### **Version 2007.4**

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# **Radiation Safety Policy**

#### **Purpose:**

To provide for safe and responsible use of radiation at Massey University.

### Policy:

Massey University acknowledges that radioisotopes and irradiating apparatus use is essential for research and teaching activities at the University. However, there are risks from radioisotopes and irradiating apparatus, and as such Massey University will, by complying with current radiation legislation, protect from hazards arising from ionising radiation, as far as reasonably practicable, the health and safety of its employees, students, contractors and visitors to premises under the University's control.

Massey University and its staff will ensure that:

 The risk of exposure to radiation from any radioisotopes and irradiating apparatus is kept As Low As Reasonably Achievable (ALARA).

- Requirements of New Zealand radiation protection legislation, regulations, associated Codes and guidance material are followed.
- Radiation safety will be coordinated and monitored through the implementation of a Radiation Safety Plan.

The Radiation Safety Plan consists of this policy along with Radiation Responsibilities and Authorisation. The Radiation Responsibilities and Authorisations are promulgated under the authority of the Vice–Chancellor. The Radiation Responsibilities and Authorisations document sets out the structure, responsibility and requirements on Licensees and management for radiation use at Massey University.

#### Audience:

Unit managers, and all users of radiation.

### **Relevant legislation:**

Radiation Protection Act 1965 Associated Regulations and Codes of Practice Health and Safety in Employment Act 1992

#### **Related Polices and Procedures:**

Radiation responsibilities and authorisation
Environmental policy
Genetically Modified Organisms policy
Hazardous Substances use, synthesis, purchase and importation policy
Health and Safety policy
New, infectious, or pathogenic organisms and biological products policy
Research practice policy

#### **Document Management Control:**

Prepared by: Manager- Health and Safety, Licensee experts, and Chair of Radiation

**Advisory Committee** 

Authorised by: Vice Chancellor.

Approved by: Deputy Vice Chancellor Academic and Research.

Date Issued: November 2007. Review Date: November 2009.

# Radiation responsibilities and authorisation

This section, with the policy constitutes the Massey University radiation safety plan. It is set out in numbered statements for audit purposes.

#### 1. Definitions

<u>Applicant</u>: A Massey University employee intending to apply for a licence to use materials or equipment that emit ionising radiation and which are subject to the legislative requirements of the Radiation Protection Act 1965 and its Regulations 1982.

<u>Audit</u>: Process of verifying performance to a pre-prepared plan or statement of action/s.

<u>Audit records</u>: Includes; NRL checks against Code of Practice, self audits, RAC audit, and peer reviews.

<u>Clinic</u>: A facility where radiation-emitting materials or equipment are used for medical or veterinary diagnosis or treatment.

<u>Corrective action</u>: A course of action to correct a deficiency identified during an audit.

<u>Critical non-compliance</u>: A deficiency identified during an audit process that has critical impact on the "quality" of the process being audited (in this case the maintenance of radiation safety) which either requires immediate remedial action or cessation of the activity until it is corrected.

<u>Delegated User</u>: A person specifically delegated under the authority of a radiation licence to use materials and equipment that emit ionising radiation.

<u>Delegation</u>: Reassignment of responsibilities held by the Licensee to another suitably trained person.

<u>Department, Institute, Section, School</u>: Organisational units within the University that may be responsible for facilities in which sources of radiation are used or stored.

External: Outside the structure of the University.

<u>External audit</u>: An independent (non-partial) verification of performance undertaken by a party not employed by the University (e.g. NRL or other independent auditor).

<u>Facility</u>: The physical location, the laboratory or clinic in which activities that pose a risk of exposure of staff and equipment to ionising radiation are being carried out.

<u>Institute</u>, <u>Department</u>, <u>Section</u>, <u>School</u>: Organisational Units within the University that may be responsible for facilities in which sources of radiation are used or stored.

<u>Internal</u>: Within the structure of the University.

<u>Internal audit</u>: An audit undertaken by University staff or appointees.

<u>Irradiating Apparatus</u>: Any apparatus that can be used for the production of x-rays or gamma rays or for the acceleration of atomic particles in such a way that it produces a dose rate equivalent to or exceeding 2.5mSv per hour at a point which could be reached by a living human being.

<u>Head of Institute, Department, Section, School</u>: A person appointed by the University to administer an organisational unit.

<u>Laboratory</u>: A facility where radiation sources are stored and used for teaching and research.

<u>Laboratory Classification</u>: The designation of a laboratory as defined by the NRL Codes of Safe Practice related to the level of risk associated with the use or storage of radiation sources in the facility.

Licence: See Radiation Protection Act 1965 Sections 17 and 18 for definition.

<u>Licensee</u>: The individual contractually responsible to the NRL for the safe use of radiation producing materials and equipment under his/her care.

<u>Massey University Radiation Safety Manual (MURSM)</u>: The accumulated records of all Licensees who use radiation-producing materials or equipment on Massey University premises.

National Radiation Laboratory (NRL): The organisation which administers the New Zealand Radiation Act 1965 and its Regulations 1982 made by Parliament to ensure the safe and controlled use of radiation-producing materials and equipment within New Zealand.

<u>Non-critical non-compliance</u>: A deficiency identified during an audit process which influences the "quality" of the process being audited (in this case the maintenance of radiation safety) but which does not require immediate remedy to maintain the integrity of the quality system.

<u>Procedure</u>: A set of prescribed steps for accomplishing a specific activity, task or objective.

<u>Public</u>: Persons who are not employed by the University to work in, or enter, facilities in which radiation-producing materials and equipment are used.

Quality: in terms of the ISO 9001 standard, Quality is "the totality of features and characteristics of a product or service that bear on its ability to satisfy stated or implied needs". In the context of this document "Quality" refers to the ability to:

 comply with Radiation Act and Regulations, Codes of Safe Practice and amendments and their objectives for the safe use of radiation.

- pass NRL external audits and the University's internal audits.
- access records of Licensee details and radiation use on MU property.

<u>Quality System</u>: An organisational structure, responsibilities, procedures, processes and resources for implementing quality management

<u>Radiation</u>: The ionising particles or waves emitted by a radioactive substance or an electronic machine.

<u>Radiation Advisory Committee (RAC)</u>: The advisory body convened to provide expert assistance to the Radiation Safety Officer and to Licensees on matters concerned with the management of potential hazards from radiation sources or radiation-emitting equipment.

<u>Radiation Safety Officer (RSO)</u>: The person appointed by the Vice Chancellor to ensure that potential hazards associated with the use of radiation-producing materials and equipment on University premises are correctly managed.

<u>Radiation safety plan</u>: The Radiation Safety Plan details the structure, organisation and responsibility of Licensees and others in minimising potential risks of exposure to radiation.

<u>Radiation Survey</u>: Includes; personal dosimeter monitoring, target organ scans, X-ray object scatter, apparatus leakage, area monitoring scan, wipe testing, etc.

<u>Radioisotope</u>: An unstable form of a chemical element which, when it decays, releases ionising radiation

Risk activity: Activities that use risk material or apparatus.

<u>Risk material</u>: Includes both sealed and unsealed sources of radioisotopes where the total radioactivity emitted exceeds 3kBq.

<u>Risk procedure</u>: Any activity that presents a potential radiation hazard.

<u>Sealed radioactive material</u>: A source of radioisotopes which is so contained that the radioactive material cannot be physically released without damage to/destruction of the container.

Supervision: Observation of the work of a person by a manager.

<u>Supervised user</u>: A person permitted to use radiation-producing materials and equipment under the direct supervision of the Licensee or Delegated User. (Responsibility for the safe use of the materials or equipment resides with the supervising Delegated User or Licensee).

<u>Unsealed radioactive material</u>: A radioactive material in a form that allows it to be readily removed from its container and subdivided or dispersed.

<u>User</u>: Any person who, through the course of their work, uses radiation-producing materials or equipment.

#### 2. Abbreviations

ALARA: "as low as reasonably achievable". The principle is applied within a particular practice to ensure that the magnitude of individual radiation doses, the number of people exposed, and the likelihood of incurring exposure shall be kept as low as reasonably achievable considering economic and social factors being taken into account.

HoI: Head of Institute

MURSM: Massey University Radiation Safety Manual:

NRL: National Radiation Laboratory RAC: Radiation Advisory Committee

RSO: Radiation Safety Officer

### 3. Radiation Safety Structure

The administrative structure and lines of responsibility for the safe use of radiation sources in the University are shown diagrammatically in Figure 1 and detailed below.

#### 3.1 National Radiation Laboratory (NRL)

The organisation, which administers the NZ Radiation Act (1965) and its Regulations (1982), established by Parliament to ensure the safe and controlled use of radiation producing materials and equipment within New Zealand.

#### 3.2 Radiation Safety Officer (RSO)

The person appointed by the Vice Chancellor to ensure that potential hazards associated with the use of radiation-producing materials and equipment on University premises are correctly managed. Management relies on the Licensees each providing the RSO with copies of the documentation required by NRL as condition of the licence. These, and all other documents relating to delegation and mitigation of radiation risk in an individual Licensee's operations, are to be collated and maintained by the RSO as the Massey University Radiation Safety Manual.

#### 3.3 Radiation Advisory Committee (RAC)

The advisory body convened under the authority of the Vice Chancellor to provide expert assistance to the Radiation Safety Officer and to Licensees on matters concerned with the management of potential hazards from radiation sources or radiation emitting equipment.

#### 3.4 Licensee

The individual contractually responsible to the NRL for the safe use of radiation producing materials and equipment under his/her care.

#### 3.5 Delegated User

A person specifically delegated under the authority of the licence (where it is permitted by NRL Codes of Safe Practice) to use radiation-producing materials and equipment.

#### 3.6 Supervised User

A person permitted to use radiation-producing materials and equipment under the direct supervision of the Licensee or Delegated User. (Responsibility for the safe use of the materials or equipment resides with the supervising Delegated User or Licensee).

#### 3.7 Licence Applicant

Person intending to apply to the NRL for a licence to use radiation-producing materials or equipment.

#### 3.8 Vice Chancellor

The Vice Chancellor is the "owner" on behalf of the Crown of the University facilities in which radiation is used, and is also the employer of University staff who are NRL licensees. Responsibilities as owner and employer are delegated through the University management structure.

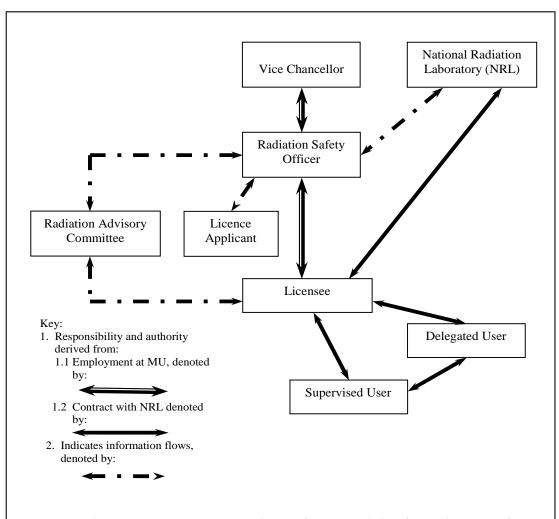


Figure 1. Administrative structure & lines of responsibility for radiation safety. Note: Responsibilities are devolved through organisation management structure.

### 4. Principles for Assignment of Responsibilities

Within this Radiation Safety Plan, assignment of responsibilities for radiation safety are based on:

- 4.1 The minimum standards for the safe use of radiation-producing materials or equipment within New Zealand being prescribed by the New Zealand Government through its Acts of Parliament, Regulations and through Codes of Safe Practice issued by its agents, the National Radiation Laboratory (NRL).
- 4.2 The requirement of the New Zealand radiation protection legislation for owners of facilities, where radiation hazards may be present, to provide safety features and ensure there are suitably licensed people responsible for the safe use of potentially hazardous materials or equipment.
- 4.3 Individual Licensees are to ensure safe care of radioactive material and apparatus on behalf of the owner.
- 4.4 Individual Licensees being bound to meet or exceed the NRL requirements for managing their particular risk material or equipment in accordance with the relevant Acts, Regulations or Codes.
- 4.5 The advantage to the University in maintaining a unified approach to the management of radioactive risk that safeguards the interests of all potentially affected parties; namely the Licensees, students and staff, the public and the "University" as a whole.
- 4.6 Involvement of the following features in all uses of radiation sources:
  - 4.6.1 a physical facility in which the radiation is used, i.e. a laboratory or clinic.
  - 4.6.2 radiation source/s (e.g. radioisotopes or irradiating sources).
  - 4.6.3 people who use and work with the radiation source/s.
  - 4.6.4 other people in the general area.

# 5. Positions of Responsibility

It is against the legislative background outlined in Section 3 that this Radiation Safety Plan (RSP) assigns responsibilities for radiation safety to the Office of the Vice Chancellor, the Radiation Safety Officer (RSO), Licensees, Delegated Users and Supervised Users. The relationships between these positions are shown diagrammatically in Figure 1 above.

#### 5.1 The Office of the Vice-Chancellor

5.1.1 Objective: Accountability for management of all occupational risk activities undertaken on University premises or performed by University staff is vested in this position. Responsibility for management is delegated by the Vice-Chancellor's Office through University management structures. Consequent upon this are the appointments of designated health and safety advisors to advise managers of workplace and safety risks and, in doing so, to limit

potential exposure of the University to claims made under Health and Safety legislation.

- 5.1.2 Management of risk associated with radiation-producing materials and equipment is to be handled in a similar way (as outlined in 5.1.1 above) with the appointment by the Vice Chancellor of a designated Radiation Safety Officer (RSO). The duties of the RSO are described in Section 5.2 below.
- 5.1.3 The Vice Chancellor shall, through the RSO, ensure that appropriate licenses are held to ensure the safe use of radiation within the University.
- 5.1.4 A Radiation Advisory Committee (RAC), to be convened under the authority of the Vice Chancellor's Office, will assist the RSO and Licensees through the provision of scientifically valid and practically sound advice on methods of mitigating radiation exposure. The duties of the RAC are described in Section 5.7 below.
- 5.1.5 The Vice Chancellor is to receive reports on the activities of the RAC and the RSO annually or more frequently in response to specific queries or in the event of incidents involving radiation hazards occurring on University premises. Reports are to be provided to other managers who are affected by, or need to be aware of the reports.

### 5.2 Radiation Safety Officer (RSO)

- 5.2.1 Objective: The RSO appointed by the Vice Chancellor is to take all reasonable steps to ensure that potential hazards associated with the use of radiation-producing risk materials and equipment on University premises are correctly managed.
- 5.2.2 The RSO shall provide information and answer queries on radiation use on Massey University premises, specifically responding to:
  - 5.2.2.1 The National Radiation Laboratory on matters relating to radiation use at Massey University as a whole.
  - (Note: The RSO shall NOT respond to the NRL on matters affecting an individual licence/Licensee unless there are Massey-wide implications and then only in cooperation with the Licensee involved).
  - 5.2.2.2 The Vice Chancellor reporting annually or more frequently in response to specific queries or in the event of incidents involving radiation hazards occurring on University premises.
  - 5.2.2.3 Licensees as an advocate for the Licensee/s to external entities; providing information regarding need for and suitability of Licensee's plans, emergency procedures and other documentation required for licensing or under this Radiation Safety Plan.
- 5.2.3 The RSO shall receive from each Licensee copies of all documentation required by NRL as a condition of the licence.

- 5.2.4 The RSO shall collate all documents relating to mitigation of radiation risk at Massey University and maintain them as the Massey University Radiation Safety Manual (MURSM).
  - 5.2.4.1 The MURSM is a collation of all radiation safety documentation applying to the use of radiation producing materials and equipment and is intended as a resource to provide information on, and promote discussion and management of, issues associated with the safe use of sources of radiation on Massey University premises.
  - 5.2.4.2 The MURSM shall be comprised of the following documents:
    - 5.2.4.2.1 The Radiation Safety Plan (this document).
    - 5.2.4.2.2 Letters of appointments of the RSO and of positions in the RAC.
    - 5.2.4.2.3 From each Licensee:
    - Details of the Licence, name and limitations
    - Full description of the Facility and its safety features (e.g. location, shielding, signage etc.)
    - Nature of the risk activities (e.g. analysis, diagnostic, treatment)
    - Operational procedures (if they relate to radiation safety)
    - Safety plans and procedures
    - Emergency procedures
    - Copies of letters of delegation issued by the Licensee
    - Training record of the Licensee and staff working within the facility
    - Audit records subject of, or participation in
    - Details of annual acquisition and usage
    - Details of disposal
    - Radiation survey records
    - Records of equipment maintenance (if they relate to radiation safety issues).
- 5.2.5 The MURSM documents will be retained for 10 years.
- 5.2.6 The RSO shall verify Licensee compliance with NRL standards, through a process of internal auditing. These audits will be based on each individual Licensee's documentation contained in the MURSM.
  - 5.2.6.1 The RSO shall develop and administer an internal audit programme to test Licensee's documented solutions to NRL's Act, Regulations & Code requirements.
  - 5.2.6.2 Perform, in conjunction with Licensees and others, internal audits to verify individual Licensee's compliance to their statement of procedures and radiation risk mitigation practices as documented in the MURSM. To ensure maximum benefit, audits should be performed in accordance with standard quality system audit practices (ISO9001)
- 5.2.7 The RSO, as Massey University's Radiation Safety representative, shall participate in NRL's external audit programme.
- 5.2.8 The RSO shall provide support, or arrange alternative expertise where required, to Licensees investigating radiation accidents and emergencies.

- 5.2.9 The RSO shall organise and administer appropriately approved radiation waste disposal systems.
- 5.2.10 The RSO shall organise and coordinate training for Licensees and other users on:
  - 5.2.10.1 Radiation risks and hazards and their management.
  - 5.2.10.2 Quality systems development, compliance and auditing techniques.
- 5.2.11 The RSO shall manage the process of application for licence by receiving collated applicant and intended use information, checking the content, verifying its compliance with this Radiation Safety Plan and coordinating the submission of documentation to NRL for their approval.
- 5.2.12 Management of administrative support staff to achieve above.

#### 5.3 Licensee

- 5.3.1 Objective: Payment of the annual licence fee contractually binds the Licensee to compliance with the requirements for maintenance of radiation safety as detailed in the appropriate Acts, Regulations & Codes. Accepting the role of "Licensee" within the University structure compels compliance with the additional reporting and documentation procedures required under this Radiation Safety Plan.
- 5.3.2 This Radiation Safety Plan requires that Licensees shall perform their responsibilities in an exemplary manner by adopting the highest standard of care appropriate to their radiation risk activities as detailed in New Zealand legislation and the appropriate NRL Code/s of Safe Practice.
- 5.3.3 Licensees are expected to maintain a programme of continuing education in radiation to ensure they are aware of current safety practices. Evidence of continuing education within the last 3 years should be retained on each Licensee's file.
- 5.3.4 To prevent possible confusion as to roles and responsibilities, each identified risk activity shall be managed by a single Licensee who will be completely responsible for management of the risks in accordance with the terms of the licence and this Radiation Safety Plan.
- 5.3.6 Where required as a condition of the NRL licence, the Licensee shall be responsible for development and documentation of all procedures, emergency standards, reporting structures, testing and quality control measures and for the incorporation of these into a radiation safety document for each individual licence.
- 5.3.7 Items to be included in radiation safety documentation 5.3.7.1 How irradiating apparatus or radioactive material is to be used, stored and disposed of.

- 5.3.7.2 Specific instructions for delegated and supervised users.
- 5.3.7.3 Control of visitors if required.
- 5.3.7.4 Radiation exposure assessment
- 5.3.7.5 A statement that "Any Delegated or Supervised female user who is possibly pregnant has a responsibility to inform the Licensee".
- 5.3.7.6 Labeling of areas where irradiating apparatus or sources are stored or used.
- 5.3.7.7 Survey techniques, instruments to be used, and calibration checks or quality control system for these instruments.
- 5.3.8 The Licensee shall provide the RSO with copies of all documentation required by the NRL as a condition of licensing and Code compliance for filing and collation into the MURSM.
- 5.3.9 The Licensee can change safety documentation but must provide a copy of the revised procedures to the RSO.
- 5.3.10 When required and where permitted by the appropriate Code of Practice, the Licensee may provide letters of delegation to other Massey staff members (Delegated User) suitably qualified to use and operate the radiation-producing materials or equipment.
  - 5.3.10.1 Such a letter must include:
    - The name and contact details of the Delegated User concerned.
    - The name, NRL licence number and contact details of the Licensee responsible for the management of the risk material or equipment.
    - The risk procedure permitted and specification of the NRL Code of Practice appropriate to the risk activity.
    - Verification of risk management plan appropriate to the procedure.
    - Temporal and spatial limitation on the activity.
    - An area for the Delegated User to sign that they have read and understood the appropriate Code, the licence-specific radiation safety measures, and that they are aware of the radiation emergency procedures detailed under the licence.
  - 5.3.10.2 A copy of this letter must be retained in the Licensee's file.
  - 5.3.10.3 A copy of the letter of delegation must be forwarded to the RSO for filing and collation within the MURSM.
  - 5.3.10.4 The Licensee is responsible for arranging induction, training, and if required continuing education of Delegated Users and Supervised Users. A record of the training, including assessment that the training has been understood and demonstrated in practice, must be retained by the Licensee.
- 5.3.11 The Licensee shall advise the RSO of any incidents involving any:
  - 5.3.11.1 loss of control of radioactive sources or equipment.
  - 5.3.11.2 misuse of radioactive sources or equipment

- 5.3.11.3 non-compliance with operating procedures.
- 5.3.11.4 accidental exposure of any person/s to radiation.
- 5.3.12 The licensee is to investigate any incidents as above and make recommendations to prevent reoccurrence. The RSO will be available to assist with investigation.

#### 5.3.13 Internal audits

- 5.3.13.1 The Licensee must cooperate with and participate in the internal audit programmes administered by the RSO. This may include audit of:
  - compliance with the Licensee's own documented radiation safety and management procedures.
  - other Licensees' compliance to their radiation safety and management procedures.

To ensure maximum benefit, audits should be performed in accordance with standard quality system audit practices (ISO9001)

5.3.13.2 Licensees must comply, within the agreed time-frame, with any instructions to remedy non-compliance issues disclosed during an internal audit programme.

#### 5.3.14 External audits

- 5.3.14.1 The Licensee must cooperate with and participate in external audit programmes administered by NRL to confirm the Licensee's compliance with the terms of the licence.
- 5.3.14.2 Licensees must comply, within the specified time-frame, with any instructions to remedy non-compliance issues disclosed during an external audit.
- 5.3.15 Where special facilities and/or safety equipment are required to correct critical or non-critical compliance issues identified during the audit process the Licensee shall:
  - 5.3.15.1 Advise the HoI of these requirements, the time frame for the corrective action and the consequence(s) of non-compliance (Note: critical non-compliance implies all risk activities must cease, non-critical non-compliance may allow the activities to continue).
  - 5.3.15.2 In any issue relating to provision of safety equipment or facilities provide copies of the request to the Vice Chancellor through the office of the RSO.
- 5.3.16 Where equipment or facilities are no longer required for radiation use;
  - 5.3.16.1 The equipment and areas exposed to radiation-producing materials are to be decontaminated if required before unauthorised personnel are permitted to work in the area, and
  - 5.3.16.2 A documented final survey provided to the RSO to validate that the area or equipment is safe for general use.
- 5.3.17 Resignation of Licensee from position of responsibility.
  - 5.3.17.1 No Licensee shall resign from the position of responsibility for safe use of irradiating material or equipment without first giving to the

- RSO, in writing, at least thirty (30) days notice of his/her intention to resign.
- 5.3.17.2 Resignation from the role of Licensee will not be accepted unless either:
  - a suitably trained and qualified replacement person has been granted a new NRL license for the irradiating materials or equipment under his/her control, or
  - the irradiating material or equipment has been transferred by NRL to the licence of another current Licensee, or
  - the radioactive materials and/or equipment have been rendered risk free by being dumped or otherwise disposed of, or decommissioned in accordance with current legislation.

### 5.4 Delegated User

- 5.4.1 Objective: In many cases NRL Codes of Safe Practice allow Licensees to delegate responsibility to other suitably qualified individuals to use radiation-producing materials and equipment.
- 5.4.2 The Delegated User must hold an original and current letter of delegation from the Licensee normally responsible for the risk material or equipment.
- 5.4.3 The Delegated User carries full and total responsibility for safe use of the risk material or equipment in accordance with the Licensee's radiation safety procedures.
- 5.4.4 Delegated Users must have adequate training in the safe use of sources of radiation and, in particular:
  - 5.4.4.1 an understanding of the nature of risks associated with radiation.
  - 5.4.4.2 knowledge of the methods to minimise exposure to radiation hazards.
  - 5.4.4.3 training related to the specific radiation risk task being undertaken.
  - 5.4.4.4 working knowledge of Licensee's safety plan and emergency procedures.
  - 5.4.4.5 requirements of radiation legislation, relevant Codes of Practice and this plan.

#### 5.5 Supervised User

- 5.5.1 Objective: Supervised Users include people who need to use radiation for a short period of time or on a temporary basis. They include research scientists and students. Note: where visitors, cleaning and maintenance personnel have to work in the presence of radiation, then they should be regarded as Supervised Users.
- 5.5.2 Unlicensed users may use radiation-producing materials or equipment under the direct supervision of the Licensee or a Delegated User (if this contingency is specifically permitted in the letter of delegation of authority).

- 5.5.3 Supervised Users must have adequate training in the safe use of sources of radiation and, in particular:
  - 5.5.3.1 an understanding of the nature of risks associated with radiation.
  - 5.5.3.2 knowledge of the methods to minimise exposure to radiation hazards.
  - 5.5.3.3 training related to the specific radiation risk task being undertaken.
  - 5.5.3.4 working knowledge of the Licensee's safety plan and emergency procedures.
- 5.5.4 The Supervised User must comply with all instructions regarding the safe use of radiation-producing materials or equipment.
- 5.5.5 The responsibility for maintenance of radiation safety resides with the Licensee or Delegated User supervising the activity.

### 5.6 Licence Applicant:

- 5.6.1 All applications to obtain a new licence to use radiation-producing materials or equipment must be submitted to the RSO for content check prior to being forwarded to NRL for approval.
- 5.6.2 All applications must be accompanied by:
  - 5.6.2.1 All documentation required for compliance with the Act, Regulations and relevant Code/s administered by the NRL
  - 5.6.2.1 A letter from the Head of Institute (HoI) endorsing the application and its supporting documents and containing:
    - an undertaking to provide and maintain facilities sufficient for the safe use of the materials or equipment
    - a commitment to correcting any defects in facilities, monitoring, etc. identified during internal and external audits.

### 5.7 Radiation Advisory Committee (RAC)

- 5.7.1 Objective: The Radiation Advisory Committee is convened to supply scientifically valid and sound advice to the Licensees and the RSO on matters concerning the safe use of radiation-producing materials and equipment on Massey University premises.
- 5.7.2 The members of the committee shall be appointed under the authority of the Vice Chancellor and comprise;
  - (a) The Chairman
  - (b) An experienced irradiating apparatus Licensee or Delegated User
  - (c) An experienced unsealed radioisotope source Licensee or Delegated User
  - (d) An experienced sealed radioactive source Licensee or Delegated User
  - (e) Regional Health and Safety Advisor for campuses where radiation is used (in attendance)
  - (f) The Massey University Manager Health and Safety (in attendance)

- (g) Radiation Safety Officer
- 5.7.3 The RAC is to provide scientifically valid and sound advice on matters concerning the safe use of radiation-producing materials and equipment; specifically;
  - 5.7.3.1 when requested by the RSO, advice concerning:
    - matters relating to Massey University's radiation safety policy.
    - the adequacy, or otherwise, of Licensee's radiation safety documentation.
    - other matters relating to radiation safety as may from time to time arise.
  - 5.7.3.2 when requested by a Licensee, provide opinion on methods to mitigate radiation risks within the workplace, the adequacy (or otherwise) of Licensee's radiation safety documentation or other matters relating to radiation safety as may from time to time arise.
- 5.7.4 All advice given by the RAC shall be based on current "industry" best practice/policy and guided by the principle that University requirements in the management of radiation safety should not exceed those specified in NRL's armament of Act, Regulations and Codes.
- 5.7.5 To assist standardisation of radiation safety procedures the RAC is to develop, for each class of radiation-producing material or equipment used on Massey University premises, template documentation identifying risks, standardised procedures, emergency standards, reporting structure and licensee radiation safety plans which if completed by the Licensee will satisfy the requirements of the legislation, the appropriate Code/s of Safe Practice and further requirements of this Radiation Safety Plan.
- 5.7.4 Verify that substandard matters raised on audit are attended to by Licensees.
- 5.7.5 Requests for information and advice from the RSO and Licensees including responses and recommendations shall be given in writing.
- 5.7.6 The committee shall provide to the Vice Chancellor an annual report on its function and activities.

# 6. Irradiating Apparatus – ownership

6.1 The owner of irradiating apparatus must be indicated on the apparatus. Where apparatus is jointly owned the organisation that is responsible for the facility that provides security for the apparatus will be the controlling owner, and responsible for ensuring NRL compliance.