


**Health and Safety
Ionising Radiation Safety**
Policy

The University of Auckland acknowledges that radioactive material and irradiating equipment are an important and invaluable tool in education and research within the University.

The purchase or acquisition of radioisotopes (both sealed and unsealed) material and irradiating equipment by University of Auckland staff will only be undertaken by holders of a current licence issued by the National Radiation Laboratory (NRL).

The University reaffirms the primary responsibility of licence holders to ensure safe use, storage, transport and disposal of isotopes. Licence holders must meet the statutory requirements of the Radiation Protection Act, its associated Regulations and Safe Codes of Practice promulgated by the National Radiation Laboratory.

Licence holders must ensure that they are able to provide adequate supervision and instruction of staff and students using radioisotopes. The licence holder will also ensure that risk of incurring exposure from any isotopic source is kept As Low As Reasonably Achievable (ALARA)

The University will assist the licence holders and the NRL to monitor work with isotopes to ensure that ALARA principals are adopted. The University will also assist licence holders by providing training on safe use of isotopes and irradiating equipment.

The University will ensure that its responsibilities with regard to irradiating equipment as well as sealed and unsealed radio-isotopic sources are met by the establishment of:

1. Internal auditing and reporting systems.
2. Radiation safety training
3. Systems for document retention
4. Management oversight of isotope work

As line managers for their respective areas, Deans and Heads of Department are an integral part of the management of safe use of isotopes. The Deans, Heads of Department and Hazards and Containment Manager will work with licence holders to ensure that all users of radioisotopes are aware and follow statutory obligations, IAEA protocols, National Radiation Laboratory Codes of Safe Practice and the University of Auckland Radiation Protection Plan.

Related Documents

The following manual, Act and Codes are related to this policy:

University of Auckland Radiation Protection Plan

Radiation Protection Act, 1961

Radiation Protection Regulations, 1982

Safe Codes of Practice promulgated by the National Radiation Laboratory.

Procedure
A. University/Faculty Administration

University/Faculty Administration will:

- provide overall management oversight, in conjunction with licence holders, on the safe use of isotopes in their respective areas of responsibility and satisfy themselves that statutory obligations have been fulfilled with regard to purchase, use, storage and disposal of radioisotopes as well as irradiating equipment. To this end they will receive reports from the Hazards and Containment Manager.
- inform the Deputy Vice Chancellor (Research) of any Corrective Action Report (see section 3.5) with significant health and safety implications.

- direct the Hazards and Containment Manager and the University Health and Safety Coordinator to disseminate information and ensure all licence holders are fully informed of all developments with regard to policy.
- provide appropriate courses in the safe handling of radioactive materials/irradiating equipment.

Where licence holders leave employment at the University of Auckland, the University will ensure provision is made for storage of documents relating to the statutory obligations of those licence holders (see Section 4.1). It will be the responsibility of licence holders to deposit records with the Health and Safety office.

Faculties may support the provision of appropriate facilities for shared use of isotopes (such as Category C laboratories).

B. Heads of Department

Heads of Department will:

- provide management oversight, in consultation with licence holders, on the safe use of isotopes in their respective areas of responsibility and satisfy themselves that statutory obligations have been fulfilled with regard to purchase, use, storage and disposal of radioisotopes as well as irradiating equipment. To this end they will receive reports from the Hazards and Containment Manager.
- authorise applications for licences and licence renewal conditional on agreed compliance with statutory obligations and the Radiation Protection Plan.
- inform the Hazards and Containment manager of any new application for a licence to use radioisotopes submitted to the National Radiation Laboratory

C. University of Auckland Health and Safety Advisor

The University of Auckland Health and Safety Advisor is responsible for advising on all aspects of health and safety within the University of Auckland and is responsible for receipt of all accident and incident reports. The Hazards and Containment Manager will ensure that the Health and Safety Advisor receives copies of any reports, audits and recommendations concerning the use of isotopes and irradiating equipment.

In the event of accidental radiation exposure, the Health and Safety Office will ensure that the individual receives appropriate medical assistance and will ensure appropriate follow-up monitoring of the individual is coordinated and appropriately documented.

D. Licence Holders

Licence holders are responsible for:

1. The safe use, storage and disposal of unsealed radioisotope or irradiating equipment purchased or otherwise obtained under their respective licences. Licence holders will follow the relevant NRL Code of Safe Practice
2. Ensuring that adequate records of purchase, transfer, use and disposal specified in Sections 3.8 to 3.10 are maintained and available for inspection by the Hazards and Containment Manager and the NRL. Documentation will include a Standard Use Protocol as specified in Appendix 7 of the *University of Auckland Radiation Protection Plan*.
3. Ensuring that the safe receipt, use, storage and disposal of radioisotopes and irradiating equipment is in accordance with University of Auckland policy and is in compliance with the Radiation Protection Act and associated Regulations and NRL policy (which includes the NRL Safe Codes of Practice). The guiding principal will be to ensure that all exposures are kept As Low As Reasonably Achievable (ALARA).
4. Ensuring that all staff and students attend training provided by the Centre for Professional Development (CPD) before commencing work with isotopes. If this is not practical, the licence holder will ensure that the new staff/student will attend the course as soon as possible. In such cases the licence holder will be responsible for ensuring that, in the interim, the untrained staff/student is made aware of the hazards, is trained adequately to ensure safe handling of the isotope concerned and is given specific instructions on how to handle the isotope.

5. Ensuring, where isotopes are to be used by undergraduate students, that students are given detailed instructions which include information about the hazards and steps required to ensure potential exposure is kept to a minimum.
6. Ensuring that the Hazards and Containment Manager is notified of the purchase of isotopic sealed sources (above exempt levels) or irradiating equipment. Licence holders must also notify the Hazards and Containment Manager of any transfers or disposal of the above isotope or equipment.
7. Undertaking lawful disposal or transfer of isotopes under their control prior to leaving the University of Auckland. This will include completing any statutory notification to the NRL and notification to the Hazards and Containment Manager.
8. Ensuring a copy of the Radiation Protection Act and the Safe Code of Practice is readily available to all staff/students under their supervision.
9. Ensuring adequate monitoring procedures are established and documented.
10. Ensuring that adequate survey meters are available for monitoring work and work areas in which radioisotopes are held and used.
11. Ensuring that adequate safety equipment is available for the safe use of isotopes.
12. Ensuring that there is no transfer of radioisotopes to unauthorised individuals.
13. Ensuring that exposure of employees is maintained as low as reasonably achievable (ALARA).
14. Distributing, collecting and collating results of personnel monitoring devices for any staff where recommended or required by the NRL Safe Code of Practice
15. Ensuring that any exposure of female staff/students is kept well within the NRL guidelines for ionising radiation.
16. Reporting any incidents involving accidental exposure immediately to the University Health and Safety Coordinator. Any overexposure (as defined in Safe Codes of Practice) must be reported to the Director of the NRL within 24 hours. Licence holders must inform the Health and Safety Coordinator and Head of Department at the same time.
17. Ensuring that radiation emission data and/or calculated doses that staff are likely to be exposed to in the course of conducting experiments is recorded and retained for inspection.

E. Users of Exempt Quantities of Radioisotope

Exempt quantities of Radioisotope as defined by the NRL will be used in accordance with the NRL Safe Code of Practice. Users of exempt quantities of radioisotope will be responsible for:

1. The safe use, storage and disposal of exempt unsealed radioisotope or irradiating equipment. The relevant NRL Safe Code of Practice will be followed.
2. Ensuring that accurate records of purchase and use are maintained. Documentation of will include a Standard Use Protocol as specified in Appendix 7 of the *University of Auckland Radiation Protection Plan*.
3. Ensuring the safe receipt, use, storage and disposal of radioisotopes and irradiating equipment is in accordance with the NRL Safe Codes of Practice and the *University of Auckland Radiation Protection Plan*.
4. Ensuring that ALARA principles are followed at all times.
5. Ensuring that all staff and students attend training provided by CPD before commencing work with isotopes. If this is not practical, the licence holder will ensure that the new staff/student will attend the course as soon as possible. In such cases the licence holder will be responsible for ensuring that, in the interim, the untrained staff/student is made aware of the hazards, is trained adequately to ensure safe handling of the isotope concerned and is given specific instructions on how to handle the isotope.
6. Ensuring adequate monitoring procedures are established and documented.

7. Ensuring that adequate survey meters are available for monitoring work and work areas in which radioisotopes are held and used.
8. Ensuring that adequate safety equipment is available for the safe use of isotopes.
9. Ensuring that the exposure of employees is maintained as low as reasonably achievable (ALARA).
10. Ensuring that any exposure of female staff/students is kept well within the NRL guidelines for ionising radiation.

F. All Users of Irradiating Equipment and Unsealed Sources of Radiation

All users of Irradiating Equipment and Unsealed Sources of Radioisotopes (both staff and students) must comply with the *Radiation Protection Act* and associated Regulations, NRL policy (which includes the NRL Safe Codes of Practice) and the *University of Auckland Radiation Protection Plan*. The guiding principal will be to ensure that all exposures are kept As Low As Reasonably Achievable (ALARA).

Users must comply with the directives concerning use of Irradiating Equipment and Unsealed Sources of Radioisotopes issued by the Licence Holder. Where exempt quantities of isotope are used, directives issued by the Principal Investigator will be followed.

G. Hazards and Containment Manager

The Hazards and Containment Manager will work with Faculty Administrations and Licence Holders and Radiation Safety Officers and is responsible for:

1. Providing advice on all aspects of the safe use of radioisotopes and irradiating equipment in the University with particular reference to safe practice in Category C laboratories.
2. Providing routine training classes of personnel on all aspects of radioisotope use, storage and disposal via CPD programs.
3. Overseeing the purchasing/processing of transfer of sealed sources of isotope/irradiating equipment.
4. Maintaining the inventory of sealed sources and handheld survey meters
5. Undertaking periodic audits of all facilities and irradiating equipment. Audits will ensure adequate documentation is in place. The Hazards and Containment Manager will report to and make recommendations to Registry and licence holders in the University.
6. Ensuring radiation disposal facilities are maintained in a safe and secure manner for University licence holders.
7. Ensuring licence holders and all isotope and irradiating machine users are kept informed of University and NRL policy directives.
8. Ensuring Faculty Administrations and Directors of Institutes are kept fully informed of all reports, audits and recommendations.

Approved:

Vice Chancellor