

# Radiation safety policy

POL-G-032

Version 2.2

13 October 2025

## Contents

1. Title.....	3
2. Introduction .....	3
3. Background.....	3
4. Scope.....	3
5. Commitment to radiation safety.....	3
6. Commitment to continuous improvement.....	4
7. Definition of terms .....	6
8. Definition of responsibilities.....	7
9. References.....	9
10. Implementation .....	9

<b>ID</b>	POL-G-032
<b>Version</b>	2.2
<b>Version date</b>	13 October 2025
<b>Type</b>	General operational
<b>Approval date</b>	Approved by Executive Management Group 28 October 2025
<b>File</b>	11/10, 12/16; 15/402; 19/1227
<b>Availability</b>	Public and all staff
<b>Keywords</b>	Radiation, health, safety and environment, work health and safety
<b>Responsible officer</b>	Deputy Director, Collection and Curatorial (National Museum of Australia ARPANSA License Nominee)
<b>History</b>	Version 1.0 approved 19 December 2011 Version 1.1 8 August 2013 edit to reflect change in source licence Version 1.2 approved 13 March 2018 Version 2.0 approved 28 September 2021
<b>Review date</b>	August 2028
<b>Related documents</b>	<p><b>Policies</b></p> <p>Business unit asset management guidelines Collection care and preservation policy POL-C-042 Collections development policy POL-C-005 Collections deaccessioning and disposal policy POL-C-035 Environmental management policy POL-G-021 Risk management policy POL-G-056 Protective security policy POL-C-055 Work Health and Management System</p> <p><b>Procedures and guidelines</b></p> <p>Radiation safety procedures 2025 Collections response and recovery disaster plan 2020</p> <p><b>Source licence</b></p> <p>ARPANSA Radiation Source Licence 2013</p>
<b>Contact</b>	<p>National Museum of Australia GPO Box 1901 Canberra ACT 2601</p> <p>Tel: 02 6208 5000 Email: <a href="mailto:information@nma.gov.au">information@nma.gov.au</a> Website: <a href="http://www.nma.gov.au">www.nma.gov.au</a></p>

## 1. Title

Radiation safety policy

## 2. Introduction

The National Museum of Australia (the Museum) is a major cultural institution charged with researching, collecting, preserving and exhibiting historical material of the Australian nation. The Museum is established under the *National Museum of Australian Act 1980*, which along with the *National Museum of Australian Regulations 2019*, defines the Museum's role, functions and powers.

## 3. Background

In achieving its mandate, the Museum may collect material of national significance that includes radioactive material or use equipment or plant that involves ionising radiation and non-ionising radiation as effective tools in researching, preserving or managing its collections.

To hold controlled radioactive material or apparatus, a Commonwealth entity must have a licence issued by the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) under the *Australian Radiation Protection and Nuclear Safety Act 1998* (the ARPANSA Act). The Museum holds a source licence issued by ARPANSA which permits the Museum to deal with certain controlled apparatus and controlled material, in accordance with the ARPANSA Act, the *Australian Radiation Protection and Nuclear Safety Regulations 2018* (the ARPANSA Regulations) and conditions of the licence. The Museum intends to continue to maintain an appropriate source licence as required and meet all legal and ethical obligations associated with holding source material.

The ARPANSA Regulations require the Museum to have plans and arrangements in place for:

- identifying and managing controlled material and controlled apparatus to ensure the health and safety of people and the protection of the environment
- applying international radiation principles, including showing the net benefit from carrying out work acquiring, holding and using collection artefacts with radiation hazards
- demonstrating that individual doses, number of people exposed and likelihood of exposure are as low as reasonably achievable, considering economic and societal factors
- demonstrating capacity to comply with regulatory requirements and licence conditions.

This policy sits alongside relevant procedures, records, work practices and the Museum's Risk management policy, Protective security policy and Work Health and Safety Management System, which constitute the Museum's plans and arrangements required by the ARPANSA Regulations to show effective management of any identified controlled radiation sources.

## 4. Scope

This policy provides the framework for the safe and compliant management of sources of radiation found within the Museum's collections, buildings, plant and equipment, and exhibition displays.

It provides direction to ensure that the Museum meets its legal obligations to protect the health and safety of people and the environment from the harmful effects of radiation under the ARPANSA Act and ARPANSA Regulations. The policy will be used to guide operational and business practices and procedures, as well as acquisition of collection or apparatus.

## 5. Commitment to radiation safety

The Museum is committed to:

- providing a workplace that is safe and healthy for workers and the public
- minimising environmental impacts from any Museum activities that involve radioactive materials or apparatus

- complying with the *Work Health and Safety Act 2011* (Cth), *Work Health and Safety Regulations 2011* (Cth), ARPANSA Act and ARPANSA Regulations, including source licence conditions
- implementing relevant international and national standards and codes of practice for radiation
- considering and observing the following principles of the International Commission on Radiation Protection when handling radioactive material:
  - justification: introduction of a radiation source should result in sufficient individual or societal benefit to offset the detriment it causes
  - optimisation: the magnitude of the individual exposure and the number of people exposed should be kept as low as reasonably achievable
  - dose limits: The Museum has adopted the recommended limit for public exposure for its staff of 1 mSv per year<sup>1</sup>
- replacing radioactive materials or processes with safer alternatives when practicable.

## 6. Commitment to continuous improvement

Under work health and safety (WHS) and environmental laws, the Museum is required to continually assess and improve the safety and health impact of its activities. The Museum will take reasonable steps to identify radiation hazards within the collection and further develop capability to identify and report on identified controlled sources within the Museum's licence.

The Museum is committed to continuous improvement in its radiation management through the following:

### **Risk assessment**

All potentially hazardous acquisitions, display, research, transport or operational work involving radiation shall only be undertaken after a risk assessment of the work has been done and the risk owner is satisfied that the acquisition or work is justified, that the hazards associated with the work are controlled as far as reasonably practicable and the risk is acceptable.

The risk assessment for any potential collection acquisition involving radiation is to include display, access, handling and storage safety requirements plus whole-of-life management costs.

### **Inventory**

- Maintaining an accurate source inventory of identified controlled material and apparatus as required by ARPANSA.
- NMA Radiation Safety Officers (RSOs) will seek external expert advice, including from Comcare, where necessary to determine whether an object may be a controlled source.
- Targeted auditing of existing collections to identify sources that are not currently identified as controlled sources and managing the risks appropriately.

### **Reporting, incident and compliance management**

- Reporting to ARPANSA, as required under the ARPANSA Regulations, including annual reporting about compliance for the previous 12 months, and incident reporting where there is a WHS impact.
- Internal incident reporting following the Museum WHS framework. In the event of a notifiable incident there is the requirement for dual reporting to both ARPANSA and Comcare.
  - The WHS team is responsible for managing the notification of incidents under direction of the Executive team as per POL-G-065 Incident hazard report investigation policy.
  - Notification should be made to the WHS team as soon as reasonably practical.
  - Incident and hazard notification following the Museum WHS framework including follow-up to reduce or remove any unacceptable risks revealed by the incident.

<sup>1</sup> Section 77 Australian Radiation Protection and Nuclear Safety Regulations 2018

- Reporting according to ARPANSA Regulatory Guide – Radiation Incidents ARPANSA-GDE-1749
- Identified radiation hazards and mitigation work is part of the quarterly hazard report to the quarterly WHS Committee.

### **Training**

Providing information, instruction, training and supervision for workers as applicable. Any person who deals with, or maintains, controlled material or apparatus must be appropriately trained in radiation safety identification and, where relevant, in its use or operation. Radiation safety training or refresher training delivered annually to workers likely to encounter radiative materials in their duties.

### **Safe work procedures and work practices**

- Records and practices in relation to controlled apparatus and identified controlled material are documented, approved by the RSO or WHS Manager, maintained and followed.  
Providing Collection Radiation Safety Procedures<sup>2</sup> for the management and use of identified controlled material/apparatus and work practices for routine collection-related work involving controlled radiation sources, or work with collection that may be a controlled radiation source. These procedures outline a thorough and precautionary approach to assessing unknown materials for radiation hazards, either as new collection acquisitions, or in existing collection. These are readily accessible, maintained for accuracy and relevance and reviewed concurrently with this policy, in line with the ARPANSA Regulations.
- All staff working with potentially radioactive material are trained in the appropriate and safe use of radiation monitors and have clear guidance about follow up procedures following the identification of radioactive material.
- Issuing dosimeters to staff likely to work with controlled sources and apparatus to monitor exposures.

### **Consultation**

Effective staff consultation in development and implementation of Radiation safety procedures.

- RSO regularly reports to WHS Committee and other relevant committees and working groups.

### **Acquisition, modification, transfer or disposal**

- Reviewing, and seeking approval from ARPANSA, prior to acquiring, modifying, transferring or disposing of any controlled apparatus or controlled material in accordance with the source licence and ARPANSA approved methods or processes.
- Acquisition of controlled material or controlled apparatus must be covered by the Museum's existing source licence or be considered exempt by ARPANSA.

### **Personal radiation monitoring**

- Provision of personal dosimeters to radiation workers, instruction in dosimeter use, notification of results and confidential retention of dose records.
- The International Atomic Energy Agency (IAEA) publishes international Safety Standards requiring that occupational dose records of individual workers are kept and made available to the relevant regulatory authority and the individuals concerned. The IAEA GSR Part 3 (2014) states that: "Exposure records for each worker shall be maintained during and after the worker's working life, at least until the former worker attains or would have attained the age of 75 years, and for not less than 30 years after cessation of the work in which the worker was subject to occupational exposure".  
Dose limits: The dose limit for a radiation worker is 20 millisieverts (mSv) per year. The Museum has adopted dose limit for public exposure of 1mSv per year, for staff including radiation

<sup>2</sup>Radiation Safety Procedures 2025

workers. As dosimeter data is available on a quarterly cycle, the investigation threshold is 250  $\mu\text{Sv}$  per quarter.

### **Administration and management**

- Providing an adequate, responsible budget and resources, including consideration of source licence charge, radiation monitoring and monitor calibration, specialist consultant services on technical matters, facilities, protective equipment and training.
- Paying the annual source licence charge.
- Reviewing and updating plans and arrangements for radiation safety in line with the ARPANSA Regulations at least every three years.
- Providing a positive and consistent example of work health and safety at all levels of administration and supervision.

### **Compliance**

Adhering to legislation, regulations, source licence conditions, national and international standards, codes of practice, and relevant Museum policies and procedures.

## **7. Definition of terms**

### **ARPANSA**

The Australian Radiation Protection and Nuclear Safety Agency is the Australian Government's primary authority on radiation protection and nuclear safety and regulates Commonwealth entities using radiation with the objective of protecting people and the environment from the harmful effects of radiation.

### **Controlled apparatus**

Analytical apparatus or equipment utilising either ionising or non-ionising radiation requiring licencing with ARPANSA.

### **Controlled material**

Source of either ionising or non-ionising radiation – within the Museum context this is usually associated with a collection object, plant or equipment requiring licencing with ARPANSA. For the avoidance of doubt, collections covered by this policy include the National Historical Collection, the Museum Collection, the Archive Collection, Library Collection, Education Collection and Exhibition Specialty Prop Collection.

### **Licence holder**

Director, National Museum of Australia. The person to whom the source licence is issued (see section 8 below).

### **Licence nominee**

Deputy Director, Collection and Curatorial, National Museum of Australia (see section 8 below).

### **Notifiable incident**

The Museum must notify Comcare immediately if there is the death of a person, or a serious injury or illness of a person, or a dangerous incident in the workplace.

### **Radiation Safety Officer (RSO)**

Provides advice on radiation safety matters to maintain a high standard of radiation safety (see section 8 below).

### **Radiation source**

Radioactive material, radiation apparatus or sealed source apparatus.

### **Radiation worker**

Where it is expected a worker will be exposed to radiation because of their employment, the worker must not exceed the prescribed dose limits.

### **Source licence**

Allows an entity to deal with controlled material or controlled apparatus.

### **WHS Committee**

The consultative work health and safety forum as defined in the Museum Health and Safety Management Arrangements and the *Work Health and Safety Act 2011*.

### **Worker**

Under the *Work Health and Safety Act 2011*, a worker includes any person who works, in any capacity, in or as part of the Museum. This includes employees, contractors, students and volunteers.

## **8. Definition of responsibilities**

All Museum staff must comply with the Museum's Work Health and Safety Management System.

<b>Museum position</b>	<b>ARPANSA position</b>
<b>Director</b>	<b>Licence holder</b>
<p>Holds the source licence issued by ARPANSA. The licence holder is responsible for ensuring compliance with ARPANSA regulations and any conditions set out in the source licence.</p> <p>If the applicant is sufficiently removed from the source dealing that they cannot demonstrate effective control, the name and contact details of a person more directly in control of the source dealing (the licence nominee) must be provided to ARPANSA.</p>	

<b>Museum position</b>	<b>ARPANSA position</b>
<b>Deputy Director, Collection &amp; Curatorial</b>	<b>Licence nominee</b>
<p>As delegated by the Director, the licence nominee is responsible for ensuring compliance with ARPANSA regulations and any conditions set out in the source licence.</p>	

<b>Museum position</b>	<b>ARPANSA position</b>
<b>Head, Registration &amp; Conservation</b>	<b>RSO Manager</b>
<p>Has the effective control of the dealings in controlled material and apparatus. This position is responsible for managing and reporting on the Museum's compliance with the ARPANSA Act, the ARPANSA Regulations, the special licence conditions under which the Museum holds its ARPANSA licence and the Museum's Radiation safety policy and procedures.</p> <p>The Head, Registration and Conservation is responsible for the management and maintenance of a complete and current register of all collection-related controlled sources and apparatus and is responsible for the storage, movement and tracking of the Museum's collection items.</p>	

Museum position	ARPANSA position
<b>Manager, Security and Fire Safety</b>	<b>n/a</b>
Responsible for managing the security of Museum property, including controlled source collection items and controlled ionising and non-ionising apparatus for use in analysis. These controlled collection items and controlled apparatus are managed in a manner consistent with the day-to-day duties of the Museum security officers and contractors but with consideration of the radiation policy and procedures.	
Museum position	ARPANSA position
<b>Radiation Safety Officer (RSO)</b>	<b>Radiation Safety Officer (RSO)</b>
<p>Responsible for:</p> <ul style="list-style-type: none"> <li>• providing advice on radiation safety matters to maintain a high standard of radiation safety</li> <li>• maintenance and upkeep of the inventory, including scheduled reporting and review</li> <li>• assisting with the investigation of any incident or dangerous occurrence within their jurisdiction</li> <li>• assisting with regulatory and licencing matters</li> <li>• liaising with supervisors, staff and WHS Committee on radiation safety matters</li> <li>• reviewing procedures, induction and training requirements for users dealing with radiation</li> <li>• ensuring a system of personal radiation monitoring is in place and results are available to workers</li> <li>• assisting and providing advice on potential radiation exposures</li> <li>• inspecting radiation monitoring devices and arranging testing and calibration as required</li> <li>• inspecting areas where radiation is used or stored and providing reports and recommendations to management</li> <li>• contributing to the safe management of radioactive wastes and equipment</li> <li>• facilitating and reporting on radiation incidents, exposures or hazards within their jurisdiction</li> </ul> <p>providing training to staff and contractors.</p>	
Museum position	ARPANSA position
<b>Radiation worker</b>	<b>Radiation worker</b>
<p>The legislation sets out annual radiation limits for the public and higher occupational limits for exposure to ionising radiation. Where it is expected a worker will be exposed to radiation because of their employment, the worker must not exceed the prescribed occupational dose limits. Depending on the situation workers who are 'occupationally exposed' may need to wear a personal dosimeter to track their exposure.</p> <p>Museum radiation workers must:</p> <ul style="list-style-type: none"> <li>• receive additional training in radiation identification and mitigation, including familiarity with any relevant safe work procedures</li> <li>• be issued a personal dosimeter and follow the procedures for use and reporting</li> <li>• minimise any exposure through good design of facilities, equipment, operating procedures and training (optimisation of radiation protection)</li> <li>• limit all ionising radiation exposure to the public exposure limit unless a risk assessment has been signed at the appropriate risk level</li> </ul>	



if pregnant, or may be pregnant, minimise any ionising radiation exposure keep all exposure to the public exposure limit

- follow any relevant Safe Work Method Statement including use of appropriate PPE.

## 9. References

### Legislation

- *Australian Radiation Protection and Nuclear Safety Act 1998 (Cth)*
- *Australian Radiation Protection and Nuclear Safety Regulations 2018*
- *Work Health and Safety Act 2011 (Cth)*

### Codes and standards

- RPS F-1 Fundamentals for Protection Against Ionising Radiation (2014)
- RPS C-1 Code for Radiation Protection in Planned Exposure Situations (Rev.1) 2020
- RPS C-2 Code for the Safe Transport of Radioactive Material (2019)
- RPS 11 Code of Practice for the Security of Radioactive Sources (2019)
- RPS 12 Radiation Protection Standard for Occupational Exposure to Ultraviolet Radiation (2006)
- RPS C-6 Code for Disposal of Radioactive Waste by the User (2018)
- Australian/New Zealand Standard: Safety in laboratories Part 4: Ionizing Radiations (AS/NZ 2243.4:2018)
- Australian/New Zealand Standard: Safety in laboratories – Non-ionising Radiations – Electromagnetic, Sound and Ultrasound (AS/NZ 2243.5:2004)
- ARPANSA Regulatory Guide UV emitting apparatus case studies 2023
- ARPANSA Regulatory Guide – Radiation Incidents ARPANSA-GDE-1749
- [Australian/New Zealand Standard: Photobiological safety of lamps and lamp systems \(AS/NZS IEC 62471:2011\)](#)

## 10. Implementation

### 10.1 Coverage

This policy applies to all radiation sources that are considered controlled material or apparatus by ARPANSA held by the Museum or used on Museum premises.

### 10.2 Exclusions

There are a range of radiation examples that ARPANSA do not consider as controlled sources and therefore do not require licensing. Some examples include:

- items with radiation levels below exemption limits set in the ARPANSA Regulations
- a smoke detector designed and made in accordance with AS 3786:2014
- an optical source emitting UV-A (315-400nm)
- radiation emitted by welding
- some laser equipment (laser product with an accessible emission that does not exceed the accessible emission limits of a Class 3R laser product, as set out in AS/NZS IEC 60825.1:2014)
- radiofrequency equipment used for communications
- a biological safety cabinet (laminar flow or biohazard) with a failsafe interlocking system
- a geological sample that is being used for teaching or display as a geological specimen.

Where material is considered exempt, the Museum will aim to follow appropriate practice of radiation principles for the management of the exempt material.

This policy will be reviewed within a 3-year period in accordance with the ARPANSA Regulations.