



Australian Government
**Australian Radiation Protection
and Nuclear Safety Agency**



Quarterly Report

of the

Chief Executive Officer of ARPANSA

January – March 2025

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Acknowledgement of Country

The Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) respectfully acknowledges Aboriginal and Torres Strait Islander peoples, communities and their rich cultures. We pay respects to all Elders past and present. We acknowledge Aboriginal and Torres Strait Islander peoples as Australia's First Peoples and the Traditional Owners and Custodians of the lands and waters where we live and work.

We also recognise and value the ongoing contribution of Aboriginal and Torres Strait Islander peoples and communities to Australian life and how this enriches us. We embrace the spirit of reconciliation, working towards the equality of outcomes and ensuring an equal voice.

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Letter of transmittal

9 October 2025

The Hon Rebecca White MP
Assistant Minister for Health and Aged Care
PO Box 6022
House of Representatives
Parliament House
Canberra ACT 2600

Dear Minister

The *Australian Radiation Protection and Nuclear Safety Act 1998* (the Act) requires the Chief Executive Officer (CEO) of the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) to submit to the Minister, at the end of each quarter, a report on:

- the operations during the quarter of the CEO, ARPANSA, the Radiation Health and Safety Advisory Council (the Council), the Nuclear Safety Committee (the NSC) and the Radiation Health Committee (the RHC)
- details of directions given by the Minister to the CEO under section 16 of the Act
- details of directions given by the CEO under section 41 of the Act
- details of improvement notices given by inspectors under section 80A of the Act
- details of any breach of licence conditions by a licensee, of which the CEO is aware
- details of all reports received by the CEO from the Council and the NSC under Part 4, paragraphs 20(f) or 26(1)(d) of the Act
- a list of all facilities licensed under Part 5 of the Act.

I am pleased to provide you with a report, meeting the requirements of the Act, covering the period 1 January - 31 March 2025.

Please note that subsection 60(6) of the Act requires you to cause a copy of the report to be laid before each House of the Parliament within 15 sitting days of the day on which this report was given to you.

Yours sincerely



Dr Gillian Hirth AO
CEO of ARPANSA

The operations of the CEO and ARPANSA

The Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) is the Australian Government's primary authority on radiation protection and nuclear safety. Our purpose is to protect the Australian people and the environment from the harmful effects of radiation, through understanding risks, best practice regulation, research, policy, services, partnerships and engaging with the community.

ARPANSA sits within the Department of Health, Disability and Ageing portfolio and has a single outcome, as set out in the 2024-25 Portfolio Budget Statements (PBS):

Protection of people and the environment through radiation protection and nuclear safety research, policy, advice, codes, standards, services and regulation.

The Radiation Protection and Nuclear Safety Program, contained within the 2024-25 PBS, describes 4 key performance measures against which ARPANSA seeks to achieve its outcome. These measures are:

- Provide high quality advice to government and the community on health, safety and environmental risks from radiation.
- Provide emergency preparedness and response systems for a radiological or nuclear incident.
- Promote patient safety in radiotherapy and diagnostic radiology.
- Ensure protection of people and the environment through efficient and effective regulation.

The report on the operations of the CEO and ARPANSA focuses on these.

Provide high quality advice to government and the community on health, safety, and environmental risks from radiation

Enhanced Electromagnetic Energy (EME) Program

In February, ARPANSA led the second WHO-commissioned systematic review, which looked at the association between mobile phones and cancer. The research has been published in the peer-reviewed journal, *Environment International*. ARPANSA's media release about this study was picked up by Australian and international news outlets. Publishing and sharing research that investigates the potential health effects of exposure to radiofrequency electromagnetic energy are key focus areas of our EME program.

Provide emergency preparedness and response systems for a radiological or nuclear incident

Emergency Preparedness

During this quarter, ARPANSA supported visits by US nuclear-powered submarines to *HMAS Stirling* and the Port of Darwin by conducting radiation monitoring and prepared the Western Australian Emergency Management Operations Centre to prepare for the unlikely event of a radiological emergency. ARPANSA supported a Nuclear-Powered Warship (NPW) 'gap analysis' workshop conducted in Western Australia. This involved discussing a range of scenarios and providing technical advice on specific radiation emergency capabilities, including equipment and data dashboards.

Additionally, ARPANSA hosted a NPW Emergency Playbook exercise alongside other Commonwealth agencies. This exercise aims to ensure that ARPANSA has the capabilities to lead the Commonwealth response to a nuclear or radiological emergency, as outlined in the Australian Government Crisis Management Framework.

ARPANSA also provided advice to the Department of Foreign Affairs and Trade Crisis Centre on the risks posed to the Chernobyl nuclear reactor by a drone attack on 14 February 2025.

Promote patient safety in radiotherapy and diagnostic radiology

Australian Clinical Dosimetry Service (ACDS)

In the quarter, the ACDS completed 6 of 10 field trial audits of a motion management technique. Radiation oncology treatment to areas such as the liver or lung is difficult due to patient movement (breathing). This audit is being developed to verify the accuracy of treatment delivery to moving targets, with the initial results expected to be available by the end of this financial year.

ACDS staff attended the Trans-Tasman Radiation Oncology Group Annual Scientific Conference to engage with the leading clinical trial organisation in Australia and demonstrate the new motion management audit.

Primary Standards Dosimetry Laboratory (PSDL)

The second ARPANSA linear accelerator has been transferred to normal operations, after being commissioned last quarter.

Medical Imaging

The Computer Tomography (CT) Diagnostic Reference Levels (DRLs) Liaison Panel – comprising representatives of relevant professional bodies – has finalised proposals for revisions to the Australian national DRLs for adult and paediatric multi-detector CT.

A diagnostic reference level is not a regulatory limit, but rather an indicative dose that triggers a review when exceeded. Under the ARPANSA Code of Practice for *Radiation Protection in Medical Exposure* (2019) (RPS C-5), medical imaging providers are required to regularly compare typical patient doses to the national DRLs to optimise the doses delivered to patients.

Ensure protection of people and the environment through efficient and effective regulation

Significant regulatory activities

Approvals

- ARPANSA issued a licence to the Department of Defence regarding a replacement linear accelerator at a site in South Australia.
- ARPANSA approved an update to the OPAL reactor safety case regarding the consideration of multiple and simultaneous external events. It was found that existing emergency arrangements were appropriate to mitigate the events, should they arise.

- ARPANSA removed a licence condition from the ANSTO Australian Synchrotron after commissioning tests demonstrated that radiation levels adjacent to the Micro-Computed Tomography beamline were acceptably low.
- ARPANSA approved a request from the ANSTO Nuclear Medicine facility for a 6 month pause on the requirement to measure uranium concentration in a waste storage tank while it upgrades its analysis equipment. ARPANSA reviewed historical records of the storage tank, considered production levels and the worst-case process failure to confirm that there was no risk of criticality during the period.

Inspections

ARPANSA conducted 6 inspections this quarter. ARPANSA undertakes a program of scheduled inspections of licence holders to monitor compliance with the Act and the ARPANS Regulations. Finalised inspection reports assist each licence holder to meet its compliance requirements and attain high safety standards by benchmarking against international best practice.

Radioactive material import and export permits

The import and export of radioactive material to and from Australia requires permission under Regulation 4R of the Customs (Prohibited Imports) Regulations 1956 and Regulation 9AD of the Customs (Prohibited Exports) Regulations 1958. Under these regulations, ARPANSA officers are authorised to issue import and export permits.

Permits issued this quarter:

Type of permits	Urgent (Single shipment)	Standard (Single shipment)	12 months
Import of non-medical radioisotope	56	40	3
Import of medical radioisotope	1	108	9
Export of high activity source	0	9	0

Transport of radioactive material

ARPANSA endorsed no transport security plans for the transport of a security enhanced sources under the Code of Practice for the Security of Radioactive Sources (Radiation Protection Series 11). Security-enhanced source movements are assessed to ensure security considerations, including transport arrangements and route, are suitable for the shipment.

Details of directions given by the Minister under section 16 of the Act

No directions were given by the Minister under section 16 of the Act.

Details of directions given by the CEO under section 41 of the Act

No directions were given by the CEO under section 41 of the Act.

Details of improvement notices given by inspectors under section 80A of the Act

No improvement notices were issued by ARPANSA under section 80A of the Act.

Details of any breach of licence conditions by a licensee

ARPANSA publishes performance history of licence holders on the ARPANSA [website](#).

There were no breaches with significant safety or security implications during this quarter.

One breach was confirmed this quarter. The Department of Climate Change, Energy, the Environment and Water - Office of the Supervising Scientist failed to maintain an accurate inventory of radiation sources, which is a condition of its licence. The breach was administrative and does not have significant implications for safety.

Facilities licensed under Part 5 of the ARPANS Act

There was one facility licence issued this quarter for the Department of Defence for a replacement linear accelerator at their Prescribed Radiation Facility in South Australia.

The operations of the Council and Committees

Radiation Health and Safety Advisory Council

The Radiation Health and Safety Advisory Council (the Council) met on 25 – 26 March 2025 in Melbourne.

The Council discussed a number of items, including: responses from the CEO to previously provided advice regarding radiation shielding design, the national registration of keratinocyte cancers, and national preparedness for radiological emergencies; items referred from the Radiation Health Committee (RHC) regarding a guide for the exemption and clearance of radioactive material, a standard for radiation dosimetry service providers, recent guidance from SafeWork Australia on presumptive causes for disease, and the establishment of a national competency framework; the role of sustainability in radiation protection in Australia; workforce and industry challenges and emerging issues; and correspondence received from the Australasian College of Physical Scientists and Engineers in Medicine and the Peter MacCallum Cancer Centre.

Minutes of previous Council meetings are available on the [website](#).

The next Council meeting is scheduled for 31 July 2025.

Reports to the CEO from the Council under paragraph 20(f) of the Act

No reports were provided by the Council to the CEO this quarter.

Council statements are available on the [website](#).

Radiation Health Committee

The Radiation Health Committee (RHC) met on the 5 – 6 March 2025 in Adelaide.

A range of topics were discussed, including: a cost-sharing proposal for the drafting of new radiation protection series (RPS) documents; the status of ongoing drafting of RPS documents relating to radiation gauges, borehole and well-logging, non-medical human imaging, dosimetry service providers, exemption and clearance of radioactive material, and the safe use of medical radiation; the referral of items from the Environmental Health Standing Committee to the RHC; correspondence received from the Australian Radiation Protection Accreditation Board; and continued discussion on returning items such as medical import permits, collariums, WorkCover/SafeWork regulation, and the Department of Health and Aged Care Scope of Practice Review.

Minutes of previous RHC meetings are available on the [website](#).

The next meeting of the RHC is scheduled for the 25 – 26 June 2025.

Nuclear Safety Committee

The Nuclear Safety Committee (NSC) met on 19 March 2025. Major topics discussed included:

- An update on the construction licence stage of the Controlled Industrial Facility (CIF) at HMAS Stirling.
- Feedback on the need for transparency and trust-building with communities that are subject to proposals for new nuclear facilities.
- An update on the development of the ARPANSA Regulatory Assessment Principles.
- Discussion of a breach identified in 2024 for a near miss contamination incident at ANSTO. The discussion focused on similarities to previous ANSTO contamination accidents and the effectiveness of organisational learning at ANSTO.

The minutes of the meeting are available on the [website](#).

The next meeting of the NSC is scheduled for 2-3 July 2025.

Reports to the CEO from the NSC under paragraph 26(1)(d) of the Act

No reports were provided during this quarter.