



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



Quarterly Report
of the
Chief Executive Officer of ARPANSA
January – March 2024

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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

1 August 2024

The Hon Ged Kearney MP
Assistant Minister for Health and Aged Care
Assistant Minister for Indigenous Health
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 to 31 March 2024.

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 and Aged Care portfolio and has a single outcome, as set out in the 2023-24 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 2023-24 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 March, EME program scientists contributed to an International Commission on Non-Ionizing Radiation Protection (ICNIRP) statement on the effects of short-wave light exposure from indoor artificial sources, like mobile phones, on human health. ICNIRP's latest statement shows that more research is needed as to whether short-wave light exposure affects sleep quality and alertness.

During the last quarter, ARPANSA contributed to 2 systematic reviews and the World Health Organization's task group on radiofrequency fields and health effects. The systematic reviews evaluate the latest scientific evidence regarding the potential health effects from radio waves and help inform radiation protection guidelines used by health authorities.

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

This quarter, ARPANSA staff planned and coordinated the Organisation for Economic Co-operation and Development Nuclear Energy Agency's International Nuclear Emergency Exercise – Emergency recovery, with Module 1 and Module 2 being held over a single day in Hobart in late-March. The exercise focused on the long-term recovery phase following a nuclear or radiological incident, including food safety and waste management. Australia participated alongside representatives of Tasmanian and federal agencies, as well as observers invited from other states and territories. The exercise provides an opportunity for ARPANSA's participants to both learn and share our emergency preparedness and recovery approaches to improve nuclear emergency management nationally and globally. The further modules of this exercise are scheduled within the next reporting period.

Promote patient safety in radiotherapy and diagnostic radiology

Primary Standards Dosimetry Laboratory (PSDL)

In March, an audit of ARPANSA's PSDL was undertaken to assess the quality system and technical competence of PSDL against the Australian standard for calibration laboratories (ISO 17025). The audit was conducted by National Association of Testing Authorities (NATA) staff and a representative from the National Measurement Institute, Japan. The quality of APRANSA's calibration services for radiotherapy providers is supported by this accreditation. The audit also forms part of our national obligations to maintain and disseminate the Australian primary standards for radiation dosimetry measurements.

PSDL's seventh Practical Reference Dosimetry Course was delivered in March. This course teaches radiation dosimetry through a mixture of lectures and practical classes and was attended by 10 trainee medical physicists from radiotherapy facilities. Guest lecturers included the Senior Medical Physicist from GenesisCare and the Chief Medical Physicist from the Australian Bragg Centre – an expert in proton dosimetry.

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

Significant regulatory activities

ARPANSA routinely assesses licence applications and requests for approval to make changes to facilities and associated activities which may have significant implications for safety. ARPANSA's independent assessment and oversight of these changes provides assurance that the facilities are operated safely in compliance with the Act and in consideration of best practice in radiation protection and nuclear safety.

On 28 March, ARPANSA's CEO received an application from the Australian Submarine Agency (ASA) for authorisation to prepare a site for a prescribed radiation facility known as the Controlled Industrial Facility (CIF) at the existing *Stirling* Navy Base on Garden Island, Rockingham in Western Australia. The proposed CIF is a low-level radioactive waste management and maintenance facility, being established as part of the support initiative to the Submarine Rotational Force West program. Under the ARPANS Act, the CEO is not required to conduct public consultation for a licence of this type, however, because the ASA will be a new licence holder and because of anticipated interest in the application, consultation was undertaken. If the licence application meets the required criteria, a licence decision is expected in July.

Following assessment, ARPANSA approved the Australian Nuclear Science and Technology Organisation (ANSTO) OPAL submission to replace the ageing First Reactor Protection System (FRPS) on 18 March. The replacement FRPS will continue to deliver the required safety functions using modern technology, while meeting contemporary cybersecurity requirements.

Inspections

ARPANSA conducted 7 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 can be found at: www.arpansa.gov.au/regulation/inspections/reports.

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	51	41	2
Import of medical radioisotope	1	127	5
Export of high activity source	8	0	0

Transport of radioactive material

This quarter, ARPANSA validated one transport security plan. Under the Code of Practice for the Security of Radioactive Sources (RPS 11, 2019), security-enhanced sources are assessed to ensure the security considerations, including the 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: www.arpansa.gov.au/regulation-and-licensing/regulation/our-regulatory-services/who-we-regulate/licence-holder-performance.

A breach with significant safety implications is one which is important, notable, or of consequence, having regard to its context or intensity.

There were 2 breaches confirmed this quarter with minor safety implications or administrative failures to meet regulatory requirements:

- Geoscience Australia was found in breach of subsection 61(1) of the ARPANS Regulations for failing to update its plans and arrangements within the required period under their licence.
- The Department of Defence and the Australian Defence Force were found in breach of section 31(2) of the ARPANS Act for operating a controlled apparatus in a manner not authorised under the licence. This breach was self-reported.

Facilities licensed under Part 5 of the ARPANS Act

There were no facility licences issued this quarter.

The operations of the Council and Committees

Radiation Health and Safety Advisory Council

The Radiation Health and Safety Advisory Council (the Council) did not meet in the quarter.

Minutes of previous Council meetings are available at www.arpansa.gov.au/rhsac.

The next Council meeting is scheduled for 16-17 April 2024.

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

No reports were provided during this quarter.

Radiation Health Committee

The Radiation Health Committee (RHC) met on 6 March 2024. This was the first meeting of the RHC for the triennium 1 January 2024 to 31 December 2026.

The RHC discussed various topics, including an update on the activities of ARPANSA and its advisory bodies, an update on the *Australian Naval Nuclear Power Safety Bill 2023* tabled in Federal Parliament, guidance for radon exposure in the workplace, a draft radiation gauges code, emergency preparedness and response, and shielding design in diagnostic radiology and radiotherapy. It also discussed emerging issues such as mobile CT equipment and theranostics, radiotherapy auditing, and national uniformity of regulation.

The minutes of previous meetings are published online at www.arpansa.gov.au/rhc.

The next meeting of the RHC is scheduled for 30-31 July 2024.

Nuclear Safety Committee

The Nuclear Safety Committee (NSC) met on 5 March 2024. This was the first meeting of the NSC for the triennium 1 January 2024 to 31 December 2026.

Topics discussed included updates on significant regulatory activities, including the OPAL First Reactor Protection System and the replacement of the OPAL Cold Neutron Source. Feedback was also provided on the Committee's review of the draft code for the safety of reactor facilities.

The minutes of the meeting are available at www.arpansa.gov.au/nsc.

The next meeting of the NSC is scheduled for 12-13 June 2024.

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

No reports were provided during this quarter.