



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



**Quarterly Report**  
**of the**  
**Chief Executive Officer of ARPANSA**  
**July – September 2024**

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ARPANSA  
619 Lower Plenty Road  
Yallambie VIC 3085  
email: [info@arpansa.gov.au](mailto:info@arpansa.gov.au)

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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

28 February 2025

The Hon Ged Kearney 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 July - 30 September 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



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 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 August, a joint ARPANSA and Swinburne University paper found that good quality studies show no effect from radio wave exposure on plants and animals, while poor-quality studies show an effect.

In September, ARPANSA published a review that found no association between mobile phone use and brain cancers. Commissioned by the World Health Organization, this review provides the most comprehensive and up-to-date assessment of the evidence to date.

Taken together, these 2 studies provide assurance to the community that there is no substantiated evidence that radio wave exposure below safety limits adversely affects people and the environment.

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

#### ***Emergency Preparedness***

In September, the revised Australian Government Crisis Management Framework (AGCMF) was published. Important updates include the assignment of ARPANSA as the Australian Government Coordinating Agency and the Sector Lead Agency for radiological and nuclear incidents. As part of this, ARPANSA will lead the development of an Australian Radiological and Nuclear Event Plan (AUSRNEPLAN), which will guide the

Commonwealth's support during jurisdictional or Commonwealth territorial events, or in situations where such events affect Australia or its interests.

### ***ARPANSA support to states and territories***

In July, ARPANSA was contacted by the Northern Territory (NT) Department of Health for advice on potential radiological hazards relating to an Italian Air Force aircraft incident that occurred during an exercise in Darwin. In response, ARPANSA provided detailed safety information to the NT Fire and Emergency Services regarding potential hazards, demonstrating ARPANSA's capability to support state and territory agencies during a radiological incident.

## **Promote patient safety in radiotherapy and diagnostic radiology**

### ***Australian Clinical Dosimetry Service (ACDS)***

In September, a scientific paper was published in the peer-reviewed international journal *Medical Physics* outlining the development and testing of an international framework to compare film dosimetry services. The paper was developed with input from the ACDS and coordinated by the International Atomic Energy Agency (IAEA) Dosimetry Audit Network, highlighting ARPANSA's commitment to quality improvement and international collaboration.

### ***Medical Imaging***

ARPANSA published a scientific paper in the peer-reviewed international journal *Medical Physics* about the development of an automated processing tool to categorise electronic records of imaging procedures and extract radiation dose information. Prior to this tool, there was no mechanism for benchmarking the performance of individual dosimetry audit centres in film dosimetry.

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

### ***Significant regulatory activities***

On 8 July, ARPANSA issued a licence to the Australian Submarine Agency (ASA) to prepare a site for a prescribed radiation facility (known as Controlled Industrial Facility (CIF)), located at *HMAS Stirling* at Garden Island, Rockingham, Western Australia. The proposed CIF will provide low-level waste management and maintenance services to support the Submarine Rotational Force – West program.

As part of the regulatory assessment process, the CEO of ARPANSA elected to invite public comment on the siting license application. ARPANSA received and reviewed a total of 165 public submissions. A summary of the submissions' themes and ARPANSA's responses is available on the ARPANSA website.

Following the issuance of the siting license, ARPANSA established the ASA-ARPANSA Liaison Forum (ASAALF) as a formal mechanism of communication between the Regulator (ARPANSA) and Licensee (ASA).

ARPANSA also continued engagement with key stakeholders, including the ASA, Australian Naval Infrastructure Pty Ltd, ASC Pty Ltd and BAE Systems Australia regarding a proposed licence application to prepare a site for the Osborne Nuclear-Power Submarine Construction Shipyard in South Australia.

In September, ARPANSA approved a request from the Australian Nuclear Science and Technology Organisation (ANSTO) to restart the Lucas Heights OPAL research reactor at low power after a long shutdown, during which the First Reactor Protection System was upgraded and Cold Neutron Source replaced. ARPANSA ensured that important safety measures were in place to safely restart the reactor by conducting a thorough review. ANSTO's request was approved under section 63 of the Australian Radiation Protection and Nuclear Safety Regulations 2018 (the Regulations).

On 3 September, ARPANSA approved another safety significant change under section 63 of the Regulations relating to a request to operate a new beamline at the ANSTO Australian Synchrotron. ARPANSA was required to conduct an assessment to ensure safety requirements were met before granting approval for ANSTO to begin operating the new beamline.

### ***Inspections***

ARPANSA conducted 15 inspections this quarter. ARPANSA undertakes a program of scheduled inspections of licence holders to monitor compliance with the ARPANS Act and the ARPANS Regulations. Finalised inspection reports can be found at: [www.arpansa.gov.au/regulation/inspections/reports](http://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	68	45	3
Import of medical radioisotope	5	119	7
Export of high activity source	0	5	0

### ***Transport of radioactive material***

ARPANSA approves certain plans and packages for licence holders to ensure safe transport of significant quantities of radioactive material. This quarter, ARPANSA validated one United States design for a special form encapsulation and approved a shipment of unirradiated OPAL fuel assemblies and uranium target plates.

ARPANSA endorsed 2 transport security plans for the transport of a security enhanced source under the Code of Practice for the Security of Radioactive Sources (Radiation Protection Series 11). Security-enhanced source transports 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: [www.arpansa.gov.au/regulation-and-licensing/regulation/our-regulatory-services/who-we-regulate/licence-holder-performance](http://www.arpansa.gov.au/regulation-and-licensing/regulation/our-regulatory-services/who-we-regulate/licence-holder-performance).

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

Three breaches were confirmed this quarter, one with significant implications for safety as follows:

- One breach was identified this quarter under section 60 of the Regulations 2018, “Managing Safety”. The ANSTO Health Products facility self-reported a deviation from an approved safety process that was considered to be a near miss while handling a high activity source. No contamination occurred, and there was no additional dose received by personnel. However, the non-compliance was assessed as a safety significant breach because the event had the potential for a significant extremity dose to personnel. ARPANSA maintained oversight of the ANSTO incident investigation and subsequent action plan to ensure it was appropriate. Further inspections and oversight activities have been planned to ensure that ANSTO's corrective actions minimise the risk of similar incidents in the future.
- The ANSTO Nuclear Medicine Facility self-reported a deviation from the safety process with no actual contamination or dose to personnel or the environment. This event was assessed as a breach, however it was not considered to be significant for safety.
- ANSTO failed to comply with section 59(3)(b) of the Regulations by implementing a source security plan that had not been endorsed, as per the requirements of RPS11 Security of Radioactive Sources. An inspection identified the breach, which was administrative in nature and not considered to be significant.

## Facilities licensed under Part 5 of the ARPANS Act

There was one facility licence issued this quarter:

- ASA to prepare a site for a prescribed radiation facility at Garden Island in Rockingham Western 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 31 July – 1 August 2024.

The Council endorsed a new Standard for radiation safety and performance testing of diagnostic imaging apparatus and finalised a letter of advice on sealed sources. The Council also discussed items such as: the launch of ARPANSA's Reconciliation Action Plan; the Alfred Hospital's (Melbourne) iRefer clinical decision support tool; publication of a paper on the national registration of keratinocyte cancers; radiation workforce matters; and potential future topics for Council advice (including independent regulator verification of environmental monitoring, jurisdictional collaboration, and data quality in national registers).

Minutes of previous Council meetings are available at <https://www.arpansa.gov.au/about-us/advisory-council-and-committees/radiation-health-and-safety-advisory-council/minutes>.

The next Council meeting is scheduled for 21 November 2024.

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

Council provided advice to the CEO on residual risks and loss of sealed radioactive sources in Australia. Council statements are available at [www.arpansa.gov.au/rhsac](http://www.arpansa.gov.au/rhsac).

## Radiation Health Committee

The Radiation Health Committee (RHC) met on 30 – 31 July 2024.

A range of topics were discussed, including: a gap analysis of the Radiation Protection Series (RPS); updates to the drafting of new RPS codes on Radiation Gauges, Well-Logging, and Dentistry; an accreditation pathway for a Dosimetry Service Provider Standard; a letter to the CEO on National Collaboration; and future ARPANSA guidance relating to decommissioning of controlled facilities, as well as exemption, exclusion and clearance of radioactive materials from regulatory control. New issues were also discussed, including hospital waste discharges, Medicare urgent care clinics, remote servicing of radiation equipment, and mobile Computed-Tomography (CT).

The minutes of previous meetings are published online at <https://www.arpansa.gov.au/about-us/advisory-council-and-committees/radiation-health-committee/minutes>.

The next meeting of the RHC is scheduled for 19 – 20 November 2024.

## Nuclear Safety Committee

The Nuclear Safety Committee (NSC) did not meet during this quarter.

The minutes of previous meetings are available at [www.arpansa.gov.au/nsc](http://www.arpansa.gov.au/nsc).

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

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

No reports were provided during this quarter.