



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



**Quarterly Report**  
**of the**  
**Chief Executive Officer of ARPANSA**  
**October – December 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

20 August 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 October - 31 December 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 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***

ARPANSA and Monash University are supervising a PhD project that investigates occupational exposure to radio waves. In November 2024, ARPANSA and Monash University's PhD student spent 2 days on the Royal Australian Navy's MV Sycamore to collect data on the personal radio wave exposure of Navy crew members resulting from communications and navigation equipment. Military personnel are thought to have some of the highest occupational exposures to radio waves and this unique data will provide important new information on occupational exposures.

ARPANSA works closely with the Australian Communications and Media Authority, industry and the peak mobile phone consumer group, Australian Communications Consumer Action Network, to provide public health information regarding the installation or technological upgrade of wireless communications towers. As part of this work, an updated Environmental EME report was completed in November and presented in December at the Australian Mobile Telecommunications Association annual EME symposium. Alongside this, scientists also presented on our work updating the World Health Organization's assessment on the health effects from radio wave exposure.

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

In November, ARPANSA partnered with the United States' National Nuclear Security Administration for hands-on training with Spectral Advanced Radiological Computing Systems (SPARCS). SPARCS is radiation detection equipment and software that ARPANSA uses when responding to radiation emergencies. As part of this workshop, ARPANSA planned and conducted a lost source search response exercise using the SPARCS hardware and associated software platforms. This work aims to strengthen Australia's field team and incident response capabilities in radiological emergency management.

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

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

Trans-Tasman Radiation Oncology Group (TROG) Cancer Research is one of the largest Government-funded collaborative clinical trials groups in Australia and New Zealand, and aims to support Australia's capacity to develop independent, industry-led cancer clinical trials protocols. On 24 October 2024, the ACDS was formally endorsed by TROG Cancer Research for clinical trial credentialing. Independent dosimetry audits such as those performed by ACDS contribute to improved outcomes and quality of life for cancer patients.

From June to December 2024, the ACDS participated in a film dosimetry evaluation with University of Sydney, St George Hospital, Kogarah and hospital physicists in Ukraine. ACDS scientists shared knowledge and expertise in the accurate measurement of radiation dose using radiochromic film and also identified areas for improvement in the Ukrainian film dosimetry equipment. Collaborations with members of the global medical physics community help to promote best practice in radiation therapy treatments for patients.

## **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.

During the quarter, 3 licence exemptions were granted to Defence regarding the removal of an old linear accelerator (linac) and its replacement with a new, more powerful linac at Port Wakefield, South Australia. The new linac will be housed in the same facility. The exemptions granted were for decommissioning and disposal and preparing a site and construction. The declarations of exemption were published in a national daily newspaper and on the ARPANSA website.

ARPANSA received the application for siting of the Nuclear Medicine Manufacturing Facility that will be operated by the Australian Nuclear Science and Technology Organisation (ANSTO) at the Lucas Heights campus. The proposed facility will eventually replace an existing, ageing facility, and provide additional

manufacturing capacity. The facility will be a nuclear installation, and, as such, its licensing process will include a public consultation.

ARPANSA received the application for construction of the Controlled Industrial Facility (CIF) at *HMAS Stirling* in Western Australia from the Australian Submarine Agency (ASA). The siting licence for the CIF had previously been issued by ARPANSA to ASA in July 2024.

**Inspections**

ARPANSA conducted one inspection 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	50	44	0
Import of medical radioisotope	1	107	4
Export of high activity source	0	8	0

**Transport of radioactive material**

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

ARPANSA validated an overseas design of a Type B(U)F package, which will be used for transport of fresh (unirradiated) OPAL fuel assemblies and uranium target plates to be used in the manufacture of nuclear medicine. A validation certificate has been issued to ANSTO.

**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.

Two breaches were confirmed this quarter, as follows:

- ANSTO self-reported one non-compliance related to legacy sharp items held in a glovebox, the risk of which had not been appropriately assessed. This was contrary to the plans and arrangements covering this type of work that are designed to maintain a safe workplace. ARPANSA determined that this was a breach of section 57A of the regulations, which requires the licence holder to take all reasonably practicable steps to prevent and minimise human errors and organisational failure. The breach was not considered a significant risk to safety and no increased exposure occurred. No enforcement action was taken, however, ARPANSA will ensure that remediation of the breach has been implemented at the next inspection.
- During an inspection it was found that the Australian Federal Police (AFP) had not reviewed and updated its plans and arrangements for managing safety, as required under s61(1)a of the Regulations. The AFP provided plans for remediation of the breach and consequently no enforcement action was taken by ARPANSA.

## Facilities licensed under Part 5 of the ARPANS Act

There was one facility licence issued this quarter. Licence F0344 was issued to ANSTO on 4 December 2024 for Phase 1A of decommissioning of the High Flux Australian Reactor (HIFAR) facility at Lucas Heights. This is a significant milestone for ARPANSA, as it marks the commencement of the largest decommissioning project that the agency has ever regulated. Phase 1A is for decommissioning of peripheral plant and with other approvals needed for future stages, including the reactor block. Compliance monitoring will be undertaken by ARPANSA throughout this decommissioning phase to ensure it is undertaken safely, as planned.

# The operations of the Council and Committees

## Radiation Health and Safety Advisory Council

The Radiation Health and Safety Advisory Council (the Council) met on 21 November 2024 in Melbourne.

The Council discussed items referred from the Radiation Health Committee (RHC), such as a draft Dosimetry Service Provider Standard, a revised Dental Code, and a letter on national collaboration. It also discussed: radiation protection workforce issues in the context of the Department of Health and Aged Care *Scope of Practice Review*; the effects of ultraviolet radiation and ozone layer changes on human health; the outcomes of a recent emergency preparedness exercise at the Alfred Hospital (Melbourne); and an investigation into injuries arising from the use of non-ionising radiation in cosmetic applications.

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

The next Council meeting is scheduled for 26-27 March 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 at [www.arpana.gov.au/rhsac](http://www.arpana.gov.au/rhsac).

## Radiation Health Committee

The Radiation Health Committee (RHC) met on the 19-20 November 2024 in Melbourne.

The RHC discussed a range of topics, including: the proposed RHC workplan for 2025; updates to Radiation Protection Series codes for dental and radiation gauges codes, as well as a new guide on exemption and clearance, and a new code for human imaging for non-medical purposes; and the alignment of regulatory approaches on transfer of material and equipment between jurisdictions. New issues were also addressed, including: medical import permits for unsealed sources; the regulatory requirements for lead aprons; recent changes to WorkCover insurance; a Department of Health and Aged Care *Scope of Practice Review*; and an investigation into injuries arising from the use of non-ionising radiation in cosmetic applications.

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

The next meeting of the RHC is scheduled for the 5-6 March 2025.

## Nuclear Safety Committee

The Nuclear Safety Committee (NSC) met on 12 and 13 November 2024. Major topics discussed included: engineering works during a major shutdown on the ANSTO OPAL reactor to upgrade the First Reactor Protection System and to replace the Cold Neutron Source; licence applications for the initial stages to decommission the ANSTO HIFAR and for the siting of a new Nuclear Medicine Manufacturing Facility;

regulatory work during the OPAL shutdown and the OPAL Periodic Safety and Security Review; and the establishment of the Australian Naval Nuclear Power Safety Regulator.

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

The next meeting of the NSC is scheduled for 19 and 20 March 2025.

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

No reports were provided during this quarter.