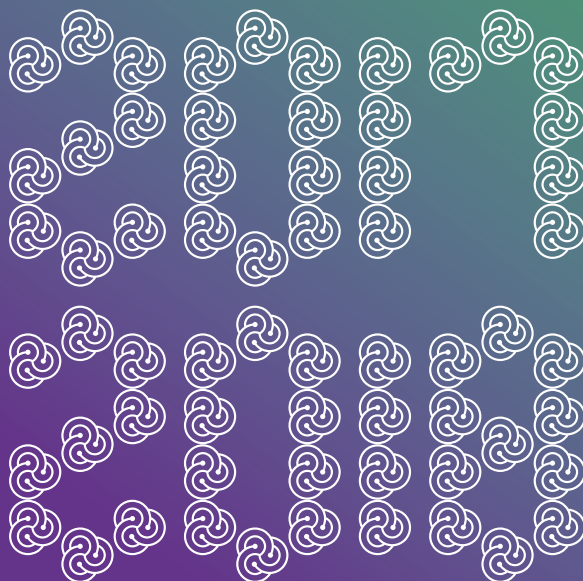


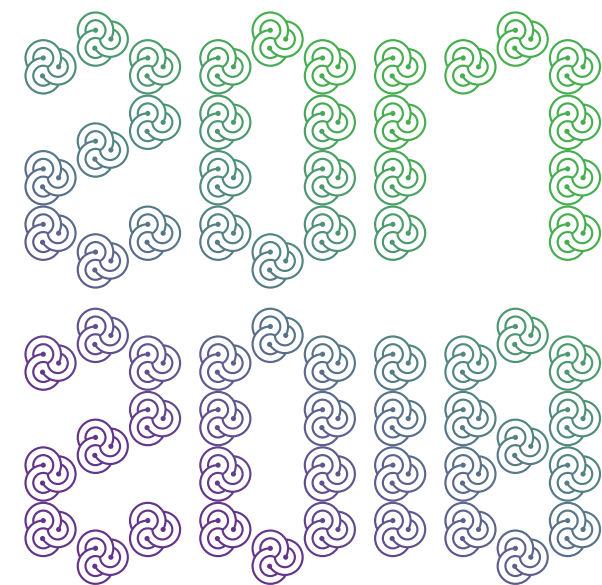


**Australian Government**

**Australian Radiation Protection  
and Nuclear Safety Agency**



**ANNUAL REPORT**



**ANNUAL REPORT**

# Australian Radiation Protection and Nuclear Safety Agency

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## Distribution

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## Acknowledgements

Thank you to all ARPANSA employees who have contributed to this report.

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Australian Government  
Australian Radiation Protection  
and Nuclear Safety Agency



20 September 2018

Senator the Hon Bridget McKenzie  
Minister for Regional Services, Sport, Local Government and Decentralisation  
Senate Parliament House  
CANBERRA ACT 2600

Dear Minister McKenzie

Pursuant to section 59 of the *Australian Radiation Protection and Nuclear Safety Act 1998* (ARPANS Act), I am pleased to present to you the Annual Report of the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) for the period 1 July 2017 to 30 June 2018.

As required by the ARPANS Act, the Annual Report provides details on:

- the operations of the Chief Executive Officer, ARPANSA and the council and committees
- any direction given by the Minister to me under section 16 of the ARPANS Act and any breach of licence conditions by a licensee, of which I am aware
- all reports received from the Radiation Health and Safety Advisory Council on matters related to radiation protection and nuclear safety or the Nuclear Safety Committee on matters related to nuclear safety and the safety of controlled facilities.

I certify that I am satisfied that ARPANSA has in place appropriate fraud risk assessment and fraud control plans, fraud prevention, detection, investigation, reporting and data collection procedures and processes, in accordance with the Australian Government Fraud Control Guidelines. ARPANSA has taken all reasonable measures to minimise the instance of fraud, investigate fraud and recover the proceeds of fraud against it.

Yours sincerely

Carl-Magnus Larsson  
CEO of ARPANSA

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## Reader's guide

The Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) Annual Report 2017–18 has been prepared in accordance with the Department of the Prime Minister and Cabinet's *Resource Management Guide No.135, Annual reports for non-corporate Commonwealth entities* updated in May 2018.

This year's annual report has been prepared to inform Parliament about ARPANSA's performance and activities in 2017–18. The report is available in hard copy and online at [arpansa.gov.au/annual-reports](http://arpansa.gov.au/annual-reports).

The report is divided into seven parts.

### PART 1: CEO foreword

CEO Carl-Magnus Larsson's foreword.

### PART 2: Agency overview

An overview of ARPANSA including its role and functions, organisational structure and outcome and program structure.

### PART 3: Report on performance

ARPANSA's Annual Performance Statement, report on financial performance and key performance highlights.

### PART 4: Management and accountability

Information about ARPANSA's governance, external scrutiny, fraud and risk management arrangements, workforce planning and human resources. Part 4 also contains other annual report requirements including information about workplace health and safety and freedom of information.

### PART 5: Financial statements

Contains ARPANSA's audited financial statements and a report by the Auditor-General.

### PART 6: Appendices

This section includes the *Australian Radiation Protection and Nuclear Safety Act 1998* Annual Report requirements and details of our council and committees.

### PART 7: Index

Comprises of an alphabetical index, glossary and abbreviations.

## Acknowledgement of Country

ARPANSA proudly acknowledges Australia's Aboriginal and Torres Strait Islander community and their rich culture and pays respect to their Elders past and present. We acknowledge Aboriginal and Torres Strait Islander peoples as Australia's first peoples and as the Traditional Owners and custodians of the land and water on which we rely.

We 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.

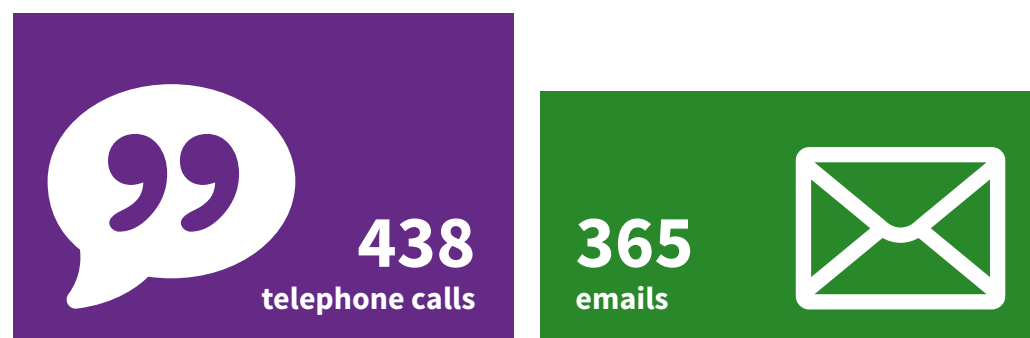
## STAKEHOLDERS



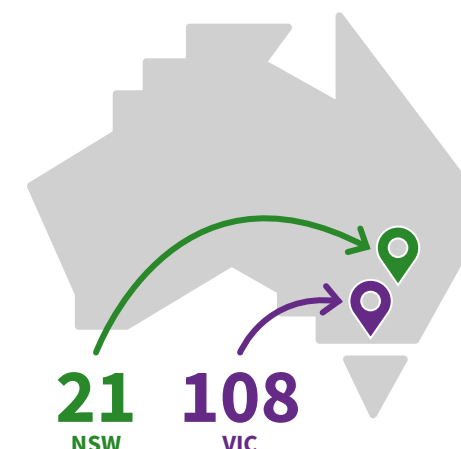
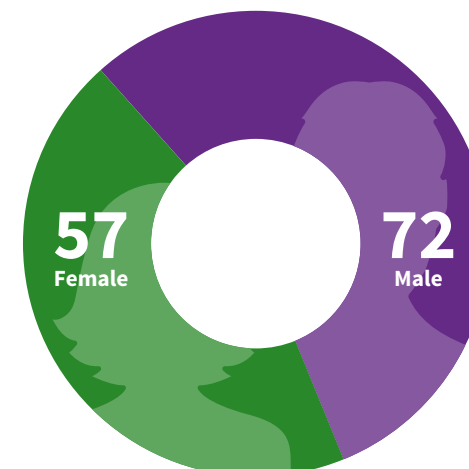
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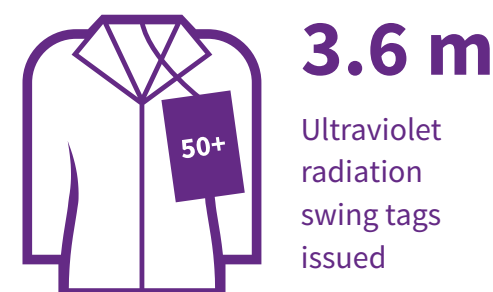
## TALK TO A SCIENTIST



## OUR WORKFORCE



## BY THE NUMBERS





PART 1  
**CEO foreword**



**I am pleased to present to you the 2017–18 Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) Annual Report.**

ARPANSA continues to deliver high quality services and advice to the Australian Government and community on radiation protection and nuclear safety. Some of these services are delivered on an ongoing basis while others are based on new initiatives, such as review and assessment of major licence applications, new scientific information, or the specific needs of stakeholders.

In April 2018, I issued a licence to the Australian Nuclear Science and Technology Organisation (ANSTO) to operate the new ANSTO Nuclear Medicine Facility at the Lucas Heights Science and Technology Centre. This was the culmination of several years of review and assessment by ARPANSA staff through the different licensing stages: including siting, construction and operation. The operating licence allows ANSTO to commence ‘hot commissioning’ and extract molybdenum-99 from uranium target plates that have been irradiated in the OPAL research reactor. A number of licence conditions need to be satisfactorily addressed by ANSTO, before I can make a decision on whether to authorise ANSTO to move to routine production for national and international markets.

In the 2017–18 budget, ARPANSA received an equity injection of \$5 million to install a new state-of-the-art medical linear accelerator. This will supplement and eventually replace the existing linear accelerator, which was installed at ARPANSA’s Melbourne laboratory almost ten years ago. The construction works for a new bunker have started and the supplier of the equipment has been selected. The new linear accelerator will support research and calibrations, and ensure continued delivery of ARPANSA’s auditing service for linear accelerators used by radiotherapy service providers in Australia. Almost all radiotherapy service providers in Australia have signed up to ARPANSA’s audit program. This represents a major contribution to the safety of patients undergoing cancer treatments using radiation.

We have also performed over 2700 diagnostic reference level surveys, which is an increase by almost 80 per cent from last year. Clinics use reference levels to benchmark their diagnostic procedures to ensure the radiation exposure of patients during medical imaging procedures is appropriately managed, while achieving the desired diagnostic outcome. This promotes good practice in diagnostic imaging — the largest contributor to radiation exposure of the Australian population.

Plans for a National Radioactive Waste Management Facility (NRWMF) are progressing under the Department of Industry, Innovation and Science. ARPANSA, as the independent regulator, is responsible for the licensing of any future NRWMF. During the year, ARPANSA continued its engagement with interested parties to explain the role of ARPANSA and the licencing process. While ARPANSA has no advocacy role in the establishment of a NRWMF, we contribute to the rigour and integrity of the process by providing early visibility of the regulator.

ARPANSA continues to promote radiation protection of workers and the public through our services. This year we processed close to 150 000 optically stimulated dosimeters that measure radiation exposures in occupational settings; tested over 2000 sun protective materials; and issued over 3.5 million ‘swing tags’ on consumer products, with information on their sun protection properties. The Australian National Radiation Dose Register, which holds dose records for uranium mining and milling workers, is now receiving dose records from ARPANSA’s licence holders and has also expanded into the medical sector.

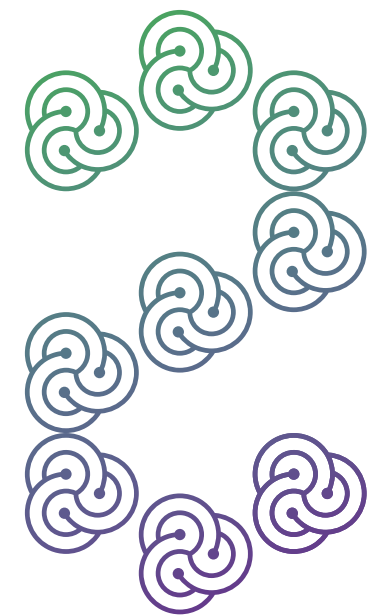
We undertake significant international engagement, including with international organisations that carry out risk assessments and set standards. This year, ARPANSA led the Australian delegation to the 6th Review Meeting under the terms of the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management. Australia’s report went through a process of international peer-review and received positive feedback, including receiving recognition in four areas of ‘good performance’.

During the year, we performed a self-assessment in preparation for an IAEA Integrated Regulatory Review Service (IRRS) of the Australian system for radiation protection and nuclear safety. It is highly satisfying that all states and territories participate in the IRRS, making this the first international review of our national system for radiation protection and nuclear safety. The IRRS will culminate in November 2018 with a two-week mission to Australia. It will be comprised of 19 international experts, nominated and coordinated by the IAEA. The mission will verify the self-assessment and supporting material provided by ARPANSA and the states and territories. The findings and recommendations will be delivered in a report prepared by the mission and published on our website during the 2018–19 financial year.

As we move in to 2018–19, we will continue our NRWMF engagement activities and prepare ourselves for the review and assessment of a possible site licence application. We also look forward to commissioning the new linear accelerator during the year. We will continue to develop and enhance our systems, capabilities and assets to sustain and improve our services, and leverage our scientific and stakeholder networks to deliver radiation protection and nuclear safety to the Australian community.

Our dedicated staff will continue to demonstrate that we are Australia’s leading authority on radiation protection and nuclear safety.

**Carl-Magnus Larsson**  
CEO of ARPANSA



PART 2

**Agency overview**

## ARPANSA at a glance



### Our vision

A safe radiation environment for the Australian community.



### Our purpose

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.

### Authority

Established by the *Australian Radiation Protection and Nuclear Safety Act 1998* (ARPANS Act), ARPANSA commenced operations on 5 February 1999. ARPANSA replaced the Nuclear Safety Bureau and Australian Radiation Laboratory.

### Responsible ministers and portfolio

ARPANSA sits within the Department of Health portfolio. The CEO, Dr Carl-Magnus Larsson, is the accountable authority of ARPANSA.

As at 30 June 2018, Dr Larsson reported to the Minister for Rural Health, Sport and Regional Communications.

### Our outcome

ARPANSA has a single outcome as set out in the Portfolio Budget Statement:

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

### Our staff

As at 30 June 2018, ARPANSA had 119 ongoing staff, ten non-ongoing staff and one statutory appointment.

### Location

ARPANSA has offices in Victoria (Yallambie) and New South Wales (Miranda). Eighty-four per cent of staff are located in the Victorian office.

## Role of ARPANSA

ARPANSA, on behalf of the Australian Government, aims to protect the Australian people and environment from the harmful effects of radiation.

The ARPANSA program of work entails six key strategic objectives that guide our priorities and contribute to delivering radiation protection and nuclear safety outcomes to the Australian community:

1. Protect the public, workers and the environment from the harmful effects of radiation
2. Promote radiological and nuclear safety and security, and emergency preparedness
3. Promote the safe and effective use of ionising radiation in medicine
4. Ensure risk informed and efficient regulation
5. Strengthen engagement with community and government
6. Enhance organisational innovation, capability and resilience

## What we deliver

ARPANSA is the Australian Government's primary authority on radiation protection and nuclear safety

We are an:

### Independent regulator

We are the independent regulator of Commonwealth entities that use or produce radiation. Using a risk-informed regulatory approach, we ensure that licensees take responsibility for protection of people and the environment from the harmful effects of radiation. We:

- deliver regulatory services
- administer and maintain the Australian Radiation Incident Register
- assess and issue import and export permits and licensing
- provide approval and advice on the transport of radioactive material
- promote national uniformity
- work to achieve the security of radioactive material.

### Health advisor

We build and maintain expertise in the measurement of radiation and assessment of health impacts, including the assessment of risk and response to radiation incidents. We provide high quality advice to the government and the community. We:

- provide radiation health advice
- deliver the Talk to a Scientist program
- provide advice on emergency preparedness and response in the events of a radiological emergency

- administer and maintain an ultraviolet radiation monitoring network
- maintain and monitor seven Australian stations according to the comprehensive Nuclear-Test-Ban Treaty
- administer the Australian primary standard for absorbed dose.

### Service provider

We offer high quality services for the purpose of protection against the harmful effects of radiation. These include:

- ultraviolet radiation services
- radioanalytical services
- the Radiofrequency Calibration Service
- the Australian Clinical Dosimetry Service
- the National Diagnostic Reference Level Service
- the Personal Radiation Monitoring Service.

We also administer and maintain the Australian National Radiation Dose Register, and operate one of only two radon chambers in Australia.

## ARPANSA service charter

Our service charter outlines who ARPANSA is and what we do, the standards of service expected from ARPANSA, and how our stakeholders can help us to improve our service. We review this charter on a regular basis in consultation with clients, stakeholders and staff. The charter is available in full on the ARPANSA website at [arpansa.gov.au/service-charter](https://arpansa.gov.au/service-charter).

## Organisational structure

### Chief Executive Officer

Dr Carl-Magnus Larsson has held the position of CEO since 2010.

The CEO's functions (as set out in the ARPANS Act) include:

- regulating Commonwealth radiation sources and facilities
- promoting uniformity of radiation protection and nuclear safety policy and practices across jurisdictions of the Commonwealth, the states and the territories
- providing advice on radiation protection, nuclear safety and related issues
- undertaking research in relation to radiation protection, nuclear safety and medical exposures to radiation
- providing services relating to radiation protection, nuclear safety and medical exposures to radiation
- monitoring the operations of ARPANSA, the Radiation Health and Safety Advisory Council (the Council), the Radiation Health Committee (RHC) and the Nuclear Safety Committee (NSC)
- reporting on the operations of ARPANSA, the Council, RHC and NSC.

### Executive Group

The CEO is supported by the Executive Group, which is comprised of branch and office heads. This group provides the CEO with high-level policy and strategic advice and reports on matters relating to their individual business groups. Together the CEO and the Executive Group form the leadership team responsible for the day-to-day management of ARPANSA.

In 2017–18 one change was made to the membership of the Executive Group:

- Mr James Scott was appointed Chief Regulatory Officer on 13 April 2018.

### ARPANSA business groups

ARPANSA has six business groups that deliver components of the agency's strategies and services. Figure 1.1 shows ARPANSA's organisational structure at 30 June 2018.

#### Office of the CEO

The Office of the CEO (OCEO) facilitates, coordinates and supports the activities of the CEO. The OCEO comprises the Communications section and the Government and International Relations section. The office leads collaboration and communication with the public and government, coordinates international engagement and provides advice to the agency and government on emerging and strategic issues.

#### Corporate Office

The Corporate Office comprises four sections; Finance, People and Culture, Digital Technology, and Performance and Governance. The internal systems for maintaining an effective public service that meets the needs and expectations of the community requires a competent and motivated workforce and effective management systems for internal information exchange, accountability and performance reporting. The Corporate Office plays an important role in this regard.

The Digital Technology Section (DTS) came into effect on Monday 13 November 2017 following a period of consultation centred on strengthening the existing Information Management section.

#### Office of the General Counsel

The Office of the General Counsel provides legal advice and strategic support to the agency with regard to all aspects of the agency's operations and assists the CEO to achieve his statutory mandate. The General Counsel also provides legal advice and support to all ARPANSA staff to assist them in performing their functions and to ensure that in doing so they are compliant with relevant government policy and legislation.

#### Radiation Health Services Branch

The Radiation Health Services Branch comprises three sections; Monitoring and Emergency Response, Assessment and Advice, and Radiation Protection Services. The branch conducts hazard identification and exposure analysis of ionising and non-ionising radiation sources, evaluates the health risk to public, workers and the environment and mitigates the health and environmental risks through provision of advice, assessments and services.

It operates services on a fee-for-service basis including the Personal Radiation Monitoring Service, the ultraviolet radiation fabric testing service and a radiofrequency equipment calibration service. The branch undertakes a number of national initiatives including an ultraviolet radiation monitoring network, the Australian National Radiation Dose Register and the radiation monitoring network established under the terms of the Comprehensive Nuclear-Test-Ban Treaty. Emergency preparedness and response systems for field, network and laboratory measurements, and information management and decision support systems are maintained and aligned with national planning.

#### Medical Radiation Services Branch

The Medical Radiation Services Branch provides safety and quality advice on the use of radiation in medicine to all Australians. The branch has three sections. The Medical Imaging section is responsible for dose data collection and advice on patient safety within diagnostic imaging. The Radiotherapy section maintains the Australian primary standard for absorbed dose and, by calibrating hospitals' radiation detectors against the primary standard, ensures that a provider's equipment is accurate. The Australian Clinical Dosimetry Service audits linear accelerators used by radiotherapy providers in Australia, verifying that the radiation exposure of patients under treatment is correct.

#### Regulatory Services Branch

Regulatory Services Branch has main carriage of regulation of the safety and security of Commonwealth radiation sources and facilities.

Comprising four sections (Facility Safety, Source Safety and Security, Safety Systems, and National Codes and Standards), the branch is ARPANSA's principal driver for promoting a uniform regulatory framework across all jurisdictions. The costs for direct regulatory activities are recovered from application fees and annual licence charges.

During the year, a realignment took place in the Regulatory Services Branch to facilitate and enhance the holistic safety approach and national uniformity initiatives. This was also designed to improve coordination across the Branch, ARPANSA and other APS agencies.

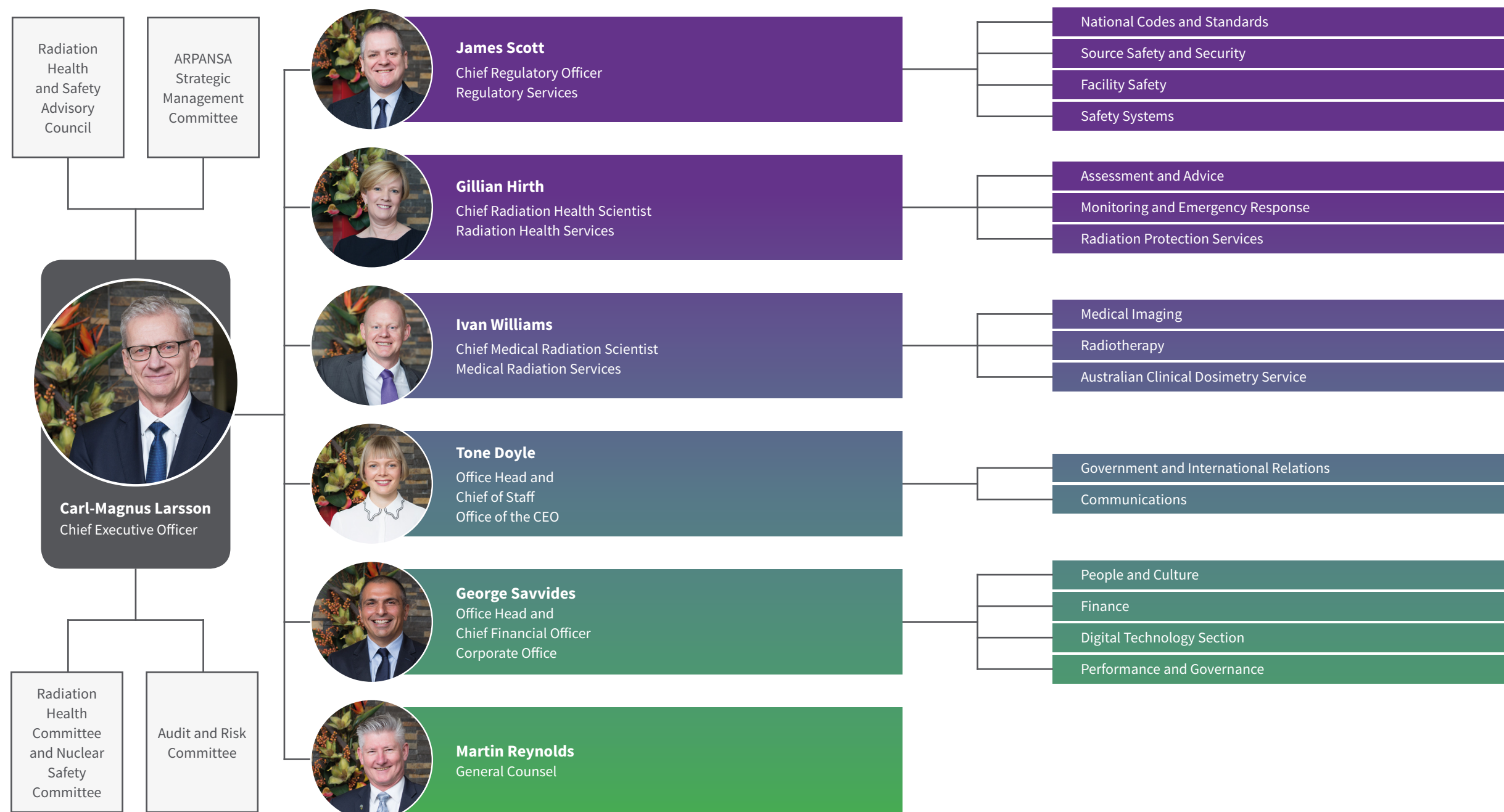


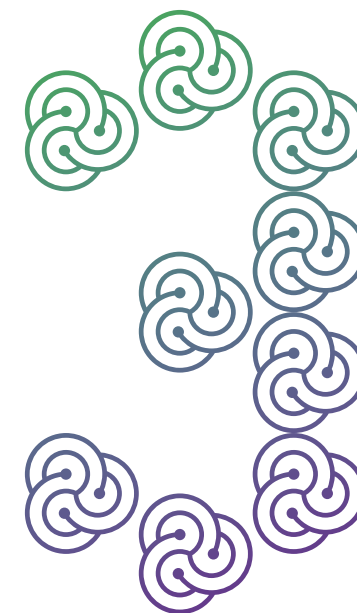
**ARPANSA'S Executive Group (L TO R):**

George Savvides, Martin Reynolds, James Scott, Tone Doyle,  
Carl-Magnus Larsson, Ivan Williams and Gillian Hirth.

## Organisational chart

Figure 1.1





PART 3

**Report on performance**

## Annual Performance Statement

### Introductory statement

I, as the accountable authority of the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA), present the 2017–18 Annual Performance Statement of ARPANSA, as required under paragraph 39(1)(a) of the *Public Governance, Performance and Accountability Act 2013* (PGPA Act). In my opinion, this annual performance statement is based on properly maintained records, accurately reflects the performance of the entity, and complies with subsection 39(2) of the PGPA Act.



**Carl-Magnus Larsson**

Accountable Authority

7 September 2018

### Purpose

ARPANSA's vision and purpose are supported by our commitment to achieve our six strategic objectives. Our vision, purpose and strategic objectives can be found in [Part 2 - agency overview](#).

### Overarching analysis of performance against ARPANSA's purpose

The *ARPANSA Corporate Plan 2017–2021* provides the underlying framework for our annual performance statement. The corporate plan brings together the measures and projects supporting the achievement of our purpose and strategic objectives.

Over the course of the 2017–18 reporting period, ARPANSA achieved or partially achieved 38 measures and completed three projects. One measure was not achieved. However, alternative actions had been implemented that made it possible to achieve the objective captured under that measure. We took many steps forward in contribution to delivering enhanced radiation protection and nuclear

safety outcomes to the Australian community and environment. Highlights include:





- We published the *Guide for Radiation Protection in Existing Exposure Situations* (RPS G-2). We also published associated radon advisories informing nationally uniform approaches to radiation protection in existing exposure situations in Australia.








- We made significant progress to implement the International Atomic Energy Agency (IAEA) General Safety Requirements (GSR)–Part 7 on *Preparedness and Response for a Nuclear or Radiological Emergency* (GSR Part 7). This included ARPANSA hosting a regional workshop on GSR Part 7 in cooperation with the IAEA and a national workshop for stakeholders in Australia. This work was followed by the release of the draft *Guide for Radiation Protection in Emergency Exposure Situations* (RPS G-3). The draft RPS G-3 facilitated the national hazard assessment which was extended to the public for comment in April 2018. All of these actions support progress towards national uniformity in emergency preparedness across Australia.
  - ARPANSA was awarded a \$5 million capital injection to install a modern advanced linear accelerator. This represents the largest cash injection into the agency in a decade. It will ensure we can continue to provide dosimetric certainty for patients undergoing advanced radiation therapies.
  - We issued a licence to the Australian Nuclear Science and Technology Organisation (ANSTO) in April 2018 to operate the ANSTO Nuclear Medicine Molybdenum-99 (Mo-99) facility. This was issued after a year-long assessment process. The application for the facility was assessed against international best practice in radiation protection and nuclear safety, to assure protection of people and the environment from the harmful effects of radiation.
  - We have now gone through two years of planning and self-assessments, and we are now poised to receive an Integrated Regulatory Review Service (IRRS) mission from the International Atomic Energy Agency (IAEA). This is the first full mission since 2007. The IRRS will review Australia's legal and regulatory framework for radiation safety against the IAEA's General Safety Requirements.
  - We undertook a sustainability and funding project to deliver a diversified revenue generation model. This included strategies that preserve the agency's financial position and delivery on its statutory obligations.
- We have made the following progress despite some challenges along the way:
- We delivered rapid changes in digital technologies. This included cloud services, data and analytics, and the renovation of legacy systems which are currently presenting digital transformation issues for the agency.
  - We prioritised the investment in projects that will deliver long-term benefits in our sustainability capacity. These were approved against a backdrop of managing further efficiency dividends.
  - We flat-lined revenue generation within our fee-for-service activities.
  - We developed a cost recovery model for our regulatory licence charges. These will not come into effect until the 2019–2020 financial year.

## Summary of results

A summary snapshot of ARPANSA's non-financial performance results are provided in the table below. Our detailed performance measures, results and analysis of performance are presented in the following pages.

### Key to symbols

-  target achieved or exceeded, project on track
-  target partially achieved, minor issues with project
-  target not achieved, major issues with project, or significant reprioritisation made to achieve the objective
-  project complete

No.	Measure	Result	Page
1.1	Ultraviolet (UV) radiation monitoring network data availability to public		36
1.2	Monitor radiation doses to occupationally exposed workers including uranium mining workers		36
1.3	Number of organisations submitting worker exposure records to the Australian National Radiation Dose Register (ANRDR)		36
1.4	Publication of existing exposure guide		36
1.5	Publication of National Radon Action Plan		37
1.6	Publication of study on brain cancer in relation to mobile phone use		37
1.7	Strengthen national partnerships in relation to skin cancer programs		37

No.	Measure	Result	Page
2.1	ARPANSA is prepared for a radiological or nuclear incident or emergency		40
2.2	Publication of national hazard assessment for emergency management		40
2.3	Publication of emergency exposure guide		40
2.4	CTBTO <sup>1</sup> monitoring stations		40
3.1	Number of Diagnostic Reference Level surveys per annual survey period		42
3.2	Percentage of Australian radiotherapy providers subscribing to the national dosimetric auditing program		42
3.3	Percentage of Australian radiotherapy providers covered by ARPANSA dose calibration services		42
3.4	Installation of a new linear accelerator		43
3.5	Publication of medical code		43
4.1	Reduced radiation exposures of workers at licensed Commonwealth facilities		46
4.2	Inspections are conducted in accordance with established inspection schedule		46
4.3	Applications are assessed within agreed timeframes		46

<sup>1</sup> The Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO) monitors for nuclear explosions on the Earth's surface, in the atmosphere, underwater and underground.

No.	Measure	Result	Page
4.4	Information sharing meetings are held with licence holders	✓	46
4.5	Inspection schedule is risk informed and reviewed annually	✓	47
4.6	A graded approach is applied to compliance monitoring and enforcement actions	✓	47
4.7	Actions are initiated within three months of the identification of an area for improvement	✓	47
4.8	Information is shared with collaborating regulatory agencies	✓	47
4.9	ARPANSA's risk framework, the basis for regulatory decisions, and the outcomes of compliance monitoring are published on the web	✓	47
4.10	Stakeholders, including the public, are consulted on the development of codes and guidance publications	✓	48
4.11	Feedback from licence holders is encouraged and feedback received is positive, constructive and drives improvement	✓	48
4.12	Improvements identified through internal or external reviews, self-assessment or feedback, are implemented effectively	✓	48
4.13	Promote the use of international best practice across Australia	✓	48
4.14	Integrated Regulatory Review Service mission	✗	49
		✓	49
5.1	Provide timely advice and reporting	✓	52

No.	Measure	Result	Page
5.2	Compliance with reporting under the terms of international conventions	✓	52
5.3	Percentage increase in social media interactions annually	✓	52
5.4	Undertake NRWMF <sup>2</sup> stakeholder engagement activities	✓	52
6.1	Employee engagement score achieved in annual Australian Public Service (APS) employee census	✗	54
6.2	Number of ARPANSA breaches <sup>3</sup> identified in radiation safety and security compliance assessments	✗	54
6.3	Develop a learning solutions framework	Ⓒ	55
6.4	Develop and implement an Integrated Management System	✓	55
6.5	Review and update the Digital Strategy	✗	56
6.6	Develop and implement a Research and Innovation Strategy	✗	56
6.7	Develop a cost recovery model for Commonwealth licensing activities	Ⓒ	56

<sup>2</sup> The NRWMF refers to the Department of Industry, Innovation and Science (DIIS) proposed establishments of a National Radioactive Waste Management Facility. ARPANSA is responsible for the licencing of any future NRWMF.

<sup>3</sup> Breaches identified under the ARPANS Act and Protective Security Policy Framework (PSPF).

## Objective 1

Protect the public and workers from harmful effects of radiation				
No.	Measure	Target or estimated completion	Source	Annual result
1.1	UV monitoring network data availability to the public	>95%	Portfolio Budget Statements (PBS) 2017–18, page 234	✓
1.2	Monitor radiation doses to occupationally exposed workers including uranium mining workers	Annual reporting of trend in radiation doses received by workers, determined from quantitative dose measurement, provides evidence of optimisation of radiation protection	PBS 2017–18, page 234	✓
1.3	Number of organisations submitting worker exposure records to the Australian National Radiation Dose Register (ANRDR)	10	ARPANSA Corporate Plan 2017–21, page 13	✓
1.4	Existing exposure guide	Develop national uniform guidance for radiation protection of occupationally exposed persons, the public and the environment in existing exposure situations December 2017	ARPANSA Corporate Plan 2017–21, page 13	C

Protect the public and workers from harmful effects of radiation				
No.	Measure	Target or estimated completion	Source	Annual result
1.5	National Radon Action Plan	Develop the National Radon Action Plan outlining the framework for hazard identification and risk mitigation to reduce radon-induced lung cancer in Australia June 2018	ARPANSA Corporate Plan 2017–21, page 13	⊖ Draft plan completed but not yet published. This measure has been carried over to the new reporting period
1.6	Mobile phones	Study on mobile phone use prevalence and time trends in brain tumour incidence in Australia June 2018	ARPANSA Corporate Plan 2017–21, page 13	⊖ Study completed but not yet published
1.7	Skin cancer programs	Build partnerships with national non-governmental organisations to develop multi-component programs to influence the behaviour of the Australian public in order to reduce the incidence of skin cancer in Australia June 2019	ARPANSA Corporate Plan 2017–21, page 13	✓ See <a href="#">case study 1</a>

## Analysis of performance against purpose and program objective

In 2017–18 ARPANSA continued to provide advice, specialised resources and services to support protection of the public, workers and the environment from the harmful effect of ionising and non-ionising radiation.

ARPANSA achieved this by:

- upgrading the ultraviolet radiation (UVR) network hardware and software, including a new monitoring site on the Gold Coast, and redesign of the ***UVR index on our website***
- publishing ***Australian National Radiation Dose Register (ANRDR) in Review***, the annual report of the ANRDR (August 2017)
- increasing the number of organisations submitting worker exposure records to the ANRDR from eight organisations to ten
- responding to 461 Talk to a Scientist program phone call enquiries during the program hours and 392 emails within five working days
- publishing the ***Guide for Radiation Protection in Existing Exposure Situations*** (RPS G-2) (September 2017)
- developing the Draft National Radon Action Plan outlining the framework for hazard identification and risk mitigation to reduce radon-induced lung cancer in Australia
- preparing the research paper: *Mobile phone use has not increased the incidence of brain tumour histological types, grading or anatomical location: A population-based study*, which has been submitted for publication
- strengthening partnerships with national non-governmental organisations to develop multi-compartment programs to influence the behaviour of the Australian public in order to reduce the incidence of skin cancer in Australia, including becoming a SunSmart workplace endorsed by the Cancer Council Victoria and Victoria Health
- processing 145 034 dose monitors; issuing 14 008 dose reports; calibrating 1122 electromagnetic radiation monitors; testing 2267 sun protective materials; and issuing 3 606 000 swing tags on consumer products with information on their sun protection properties
- releasing the draft *Code for Disposal of Solid Radioactive Waste* (RPS C-3) for public comment, to be tabled at Radiation Health Council for consideration and approval for publishing in July 2018.

## Objective 2

Promote radiological and nuclear safety and security, and emergency preparedness				
No.	Measure	Target or estimated completion	Source	Annual result
2.1	ARPANSA is prepared for a radiological or nuclear incident or emergency	Emergency preparedness and response systems for field, network and laboratory measurements, and information management and decision support systems are available, calibrated, tested and aligned with national planning	PBS 2017–18, page 234 ARPANSA Corporate Plan 2017–21, page 15	✓
2.2	National hazard assessment	Deliver a report that will identify and assess hazards associated with facilities, activities or sources and the potential consequences of an emergency June 2018	ARPANSA Corporate Plan 2017–21, page 15	⊖
2.3	Emergency exposure guide	Develop national uniform guidance for radiation protection in emergency exposure situations providing a tool for preparedness and response June 2018	ARPANSA Corporate Plan 2017–21, page 15	⊖
2.4	CTBTO monitoring stations	Deliver, in cooperation with the CTBTO, upgrades to the Darwin radionuclide monitoring station June 2020	ARPANSA Corporate Plan 2017–21, page 15	✓

## Analysis of performance against purpose and program objective

ARPANSA's commitment to test the adequacy of our emergency preparedness arrangements and capability by participating in exercises both internally and with other agencies has remained strong in the 2017–18 reporting period. Our commitment was demonstrated and our capabilities tested through participation in a number of exercises and proficiency tests including:

- IAEA Convention Exercises: ConvEx-1b (August 2017), ConvEx-2b (December 2017), ConvEx-1a (April 2018) and ConvEx-2a (March 2018). These convention exercises vary in complexity and are designed to test that National Warning Points are available continuously, that National Competent Authorities can promptly respond to received notifications and complete required reporting forms in response to a simulated emergency. The ConvEx-2b focused on specific aspects of the practical implementation of Article 2 of the Convention on Assistance in Case of a Nuclear Accident or Radiological Emergency (Assistance Convention)
- Proliferation Security Initiative Exercise Pacific Protector 2017 (September 2017), part of Asia Pacific Exercise Rotation. ARPANSA provided training to regional partners and participated in a whole-of-government demonstration with Department of Defence, Australian Border Force and ANSTO
- IAEA Response and Assistant Network Joint Assistance Team deployment exercise to Japan. This included testing field measurements teams from ARPANSA and ANSTO (October 2017)


- an agency-wide telephone exercise activation of ARPANSA's Incident Management Plan was undertaken Approximately 30 staff members were contacted (June 2018)



- meeting performance targets in five proficiency testing programs, designed to assess our performance in conducting radioanalytical test methods against other laboratories that participate worldwide in the same programs

Other ARPANSA activities that promoted radiological and nuclear safety and security and emergency preparedness included:

- jointly hosting a regional workshop with the IAEA on the IAEA General Safety Requirements (GSR) Part 7: Preparedness and Response for a Nuclear or Radiological Emergency (October 2017)
- releasing the draft Emergency Exposure Guide (RPS G-3), including National hazard assessment for public comment (April 2018)
- commencing a project to establish an automated radiological monitoring system, which will remotely monitor gamma dose at nuclear powered warships ports and ANSTO
- promoting the Australasian Radioanalytical Laboratory Network resulting in increased collaboration and methodological harmonisation
- operating seven particulate radionuclide monitoring stations and two noble gas monitoring stations that form part of the Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO) International Monitoring System with >95 per cent data availability

## Objective 3

Promote the safe and effective use of ionising radiation in medicine				
No.	Measure	Target or estimated completion	Source	Annual result
3.1	Number of Diagnostic Reference Level surveys per annual survey period	1200	PBS 2017–18, page 235 ARPANSA Corporate Plan 2017-21, page 17	 2757
3.2	Percentage of Australian radiotherapy providers subscribing to the national dosimetric auditing program provided by the Australian Clinical Dosimetry Service	50%	PBS 2017–18, page 235 ARPANSA Corporate Plan 2017-21, page 17	 98%
3.3	Percentage of Australian radiotherapy providers covered by ARPANSA dose calibration services	70%	PBS 2017–18, page 235 ARPANSA Corporate Plan 2017-21, page 17	 72%

Promote the safe and effective use of ionising radiation in medicine				
No.	Measure	Target or estimated completion	Source	Annual result
3.4	New linear accelerator	Delivery and installation of a new linear accelerator to ensure that ARPANSA and Australia have the tools required to ensure the safe delivery of radiation therapy to the Australian population June 2018	ARPANSA Corporate Plan 2017–21, page 17	 ARPANSA has contracted a company to deliver a modern linear accelerator and associated building works. The commissioning of the new linear accelerator is expected to be delivered by 30 June 2019. This measure has been carried over to the new reporting period
3.5	Medical code	Develop a national uniform medical code for acceptance by the Radiation Health Committee June 2018	ARPANSA Corporate Plan 2017–21, page 17	 The Radiation Health Committee approved the release of the medical code for public comment. The code has not been finalised and therefore this measure has been carried over to the new reporting period

## Analysis of performance against purpose and program objective

In 2017–18, ARPANSA promoted the safe and effective use of ionising radiation in medicine. The main work programs, Diagnostic Reference Level (DRL) surveys, dosimetry auditing by the Australian Clinical Dosimetry Service (ACDS) and the maintenance and dissemination of the primary standard for ionising radiation are all designed to proactively mitigate patient risk.

All programs have been developed with and operate successfully through ongoing interaction and engagement with the medical professionals and clinical staff who perform and supervise the treatment and imaging procedures. During the reporting period, there were a number of activities that promoted the safe and effective use of ionising radiation in medicine:

- a liaison panel with representatives from relevant professional bodies and industry associations was formed during the reporting period to consider revised recommendations to the adult computed tomography (CT) DRLs based on analysis conducted by ARPANSA
- revised DRLs for adult CT being published on the ARPANSA website in June 2018 and coming into effect from 1 July 2018. This work is achieving the aim of improving the health and safety of patients as evidenced by the reduction in doses for the surveyed procedures over the period 2011–17
- a user-pays funding model for the ACDS with more than 98 per cent of clinics across Australia participating in service level agreements for the provision of dosimetric audit services
- ACDS performing 110 audits resulting in 38 recommendations to Australian clinics. This has led to changes in equipment and clinical practices and audits of new radiotherapy technologies have been developed and deployed
- International benchmarking for the national standard being maintained through membership of and active engagement with the International Committee for Weights and Measures - Consultative Committee for Ionizing Radiation
- publication of such articles as *Survey of 5 mm small-field output factor measurements in Australia*<sup>4</sup> and *Dosimetric end-to-end tests in a national audit of 3D conformal radiotherapy*<sup>5</sup>. This has ensured that ARPANSA has become the recognised national authority on small field and advance therapy dosimetry
- facilitating the annual Practical Reference Dosimetry Course for external beam radiotherapy in March 2018
- engagement with stakeholders to develop, jointly with the Radiation Health Committee, an updated Code for Radiation Protection in Medical Exposures (RPS C-5) which was released for public comment. The new code is intended to replace the existing *Code for Radiation Protection in the Medical Applications of Ionizing Radiation* (RPS 14)
- tendering and finalising the contract for the building and installation works for a new linear accelerator.





In turn, ARPANSA has seen an increase in stakeholder engagement, in the form of:






- seventy-two per cent of Australian radiotherapy providers being covered by ARPANSA dose calibration services carried out by the radiotherapy section
- DRL surveys of radiation exposures in medical imaging greatly exceeding the target with 2757 DRL surveys collected in 2017–18 compared with 1550 in the previous reporting period
- national demand and participation in ARPANSA's calibration services exceeding the target during the reporting period recognising its fundamental contribution to high quality and safe patient treatment.

<sup>4</sup> <http://doi.org/10.1002/acm2.12259>

<sup>5</sup> <https://doi.org/10.1016/j.phro.2018.03.006>

## Objective 4



Ensure risk informed and efficient regulation				
No.	Measure	Target or estimated completion	Source	Annual result
4.1	Monitor doses to radiation workers at licensed Commonwealth facilities and influence doses in a downward manner	The radiation doses of the 100 most exposed workers at licensed Commonwealth facilities trend downwards over time	PBS 2017–18, page 236 ARPANSA Corporate Plan 2017–21, page 19	 Only three data points have been able to be collected up to the present time. Whilst the general trend has been downwards, the last data point exhibited a slight increase
4.2	Inspections are conducted in accordance with established inspection schedule	>85%	PBS 2017–18, page 236 ARPANSA Corporate Plan 2017–21, page 19 Regulator Performance Framework (RPF) KPI 1	 72% (31 of 43) The Inspection schedule adherence target was met in three of four quarters (Q2 - 100%, Q3 - 92%, Q4 - 88%). The first quarter results (46%) were impacted by the transition to a new source inspection program
4.3	Applications are assessed within agreed timeframes	>75%	ARPANSA Corporate Plan 2017–21, page 19 RPF KPI 1	 84% <i>See case study 2</i>
4.4	Information sharing meetings are held with licence holders	>20 meetings	ARPANSA Corporate Plan 2017–21, page 19 RPF KPI 2	 38

Ensure risk informed and efficient regulation				
No.	Measure	Target or estimated completion	Source	Annual result
4.5	Inspection schedule is risk informed and reviewed annually	Risk-based scheduling of inspections	ARPANSA Corporate Plan 2017–21, page 19 RPF KPI 3	
4.6	A graded approach is applied to compliance monitoring and enforcement actions	Graded approach to monitoring and enforcement	ARPANSA Corporate Plan 2017–21, page 19 RPF KPI 3	
4.7	Actions are initiated within three months of the identification of an area for improvement	>50%	ARPANSA Corporate Plan 2017–21, page 20 RPF KPI 4	 57%
4.8	Information is shared with collaborating regulatory agencies	Collaboration with regulatory agencies	ARPANSA Corporate Plan 2017–21, page 20 RPF KPI 4	
4.9	ARPANSA's risk framework, the basis for regulatory decisions, and the outcomes of compliance monitoring are published on the web	Transparency in dealings with regulated entities	ARPANSA Corporate Plan 2017–21, page 20 RPF KPI 5	

## Ensure risk informed and efficient regulation

No.	Measure	Target or estimated completion	Source	Annual result
4.10	Stakeholders, including the public, are consulted on the development of codes and guidance publications	Consultation with stakeholders	ARPANSA Corporate Plan 2017–21, page 20 RPF KPI 5	
4.11	Feedback from licence holders is encouraged and feedback received is positive, constructive and drives improvement	Score >75% and qualitative data	ARPANSA Corporate Plan 2017–21, page 21 RPF KPI 6	 87% overall satisfaction recorded from 43 post inspection surveys
4.12	Improvements identified through internal or external reviews, self-assessment or feedback, are implemented effectively	Identify and implement improvements	ARPANSA Corporate Plan 2017–21, page 21 RPF KPI 6	
4.13	Promote the use of international best practice across Australia	Promote international best practice	ARPANSA Corporate Plan 2017–21, page 21 RPF KPI 6	

## Ensure risk informed and efficient regulation

No.	Measure	Target or estimated completion	Source	Annual result
4.14	Integrated Regulatory Review Service Mission	<p>Benchmark Australia's radiation and nuclear safety framework against the International Atomic Energy Agency (IAEA) safety requirements, by participating in an Integrated Regulatory Review Service (IRRS) mission to Australia.</p> <ul style="list-style-type: none"> <li>Complete self-assessment of ARPANSA's and participating states' and territories' framework for radiation and nuclear safety, and prepare draft action plan. June 2018</li> <li>Receive IRRS mission coordinated by IAEA, finalise action plan and commence implementation. 2018–19 (and beyond)</li> </ul>	PBS 2017–18, page 236 ARPANSA Corporate Plan 2017–21, page 21	 <p>The IRRS self-assessment module responses were not fully complete by the end of the reporting period. Three modules are currently outstanding but are expected to be completed by August 2018.</p> 

## Analysis of performance against purpose and program objective

Many of the performance measures above are also reported under the Regulator Performance Framework (RPF), a Commonwealth-wide initiative that helps regulators report objectively on their efforts to administer regulation fairly, effectively and efficiently. As such it also helps regulators to identify opportunities for improvement and to better target regulatory resources for greater impact. RPF performance indicators cover issues like communication, risk-based and proportionate approaches, transparency, avoiding unnecessary regulatory burden and continuous improvement. Although the RPF measure for conducting inspections in accordance with the established inspection schedule was not met, the change in the source inspection program in the first quarter of the reporting period allowed for more educational and safety awareness activities to occur. The safety objective of the program was thus met.

ARPANSA first obtained ministerial approval and implemented our RPF measures and targets for 2015–16, and subsequently each year performs a self-assessment against the targets. This year ARPANSA met or exceeded 11 out of the 12 RPF measures, and made significant progress towards achieving the final one.

In addition to regulatory activities as reported under the RPF, ARPANSA has undertaken a number of projects and activities that will further improve our performance, including:

- extensively preparing for the IRRS mission planned for November 2018 by conducting self-assessments and drafting an action plan for ARPANSA's framework for radiation and nuclear safety
- developing the background security checking protocol in partnership with the Radiation Health Committee (RHC). A new working group has been formed to report on progress against this initiative in particular and establish what legislative actions may be required for such a framework to exist
- actively engaging in the international sphere including attending meetings on safety standards, incident and trafficking, nuclear security, leadership for safety and safety culture
- revising and reissuing guides including:
  - **Regulatory Guide: How to apply for a source licence** (October 2017)
  - **Regulatory Guide: How to determine whether a UV source is controlled apparatus** (October 2017)
  - **UV emitting apparatus – Case studies** (October 2017).
- issuing a limited operating licence to the Australian Nuclear Science and Technology Organisation (ANSTO) to operate the ANSTO Nuclear Medicine Facility, allowing commissioning tests to be performed using irradiated target plates and extracting molybdenum-99 from them

## Objective 5

Strengthen engagement with community and government				
No.	Measure	Target or estimated completion	Source	Annual result
5.1	Timely advice and reporting	Advice and reports provided in accordance with requirements and schedule	ARPANSA Corporate Plan 2017–21, page 23	✓
5.2	Compliance with international conventions	Compliance through international conventions and codes through submitting national reports to review meetings as per schedule	ARPANSA Corporate Plan 2017–21, page 23	✓
5.3	Percentage increase in social media interactions annually	>20%	ARPANSA Corporate Plan 2017–21, page 23	✓
5.4	NRWMF stakeholder engagement	Undertake stakeholder engagement activities for the proposed NRWMF. This will include at least three community outreach visits prior to the receipt of a potential licence application.	ARPANSA Corporate Plan 2017–21, page 23	✓ See <i>case study 3</i>

## Analysis of performance against purpose and program objective



ARPANSA has strengthened engagement with community and government during the reporting period through a number of activities and initiatives, including:



- undertaking two visits to Kimba, Hawker and Quorn communities in South Australia in December 2017 and March 2018. Both visits were comprised of a combination of one-on-one meetings with interested individuals and groups and a community drop-in meeting in each town. Due to the number of visits ARPANSA has undertaken to date (five in Hawker and two in Kimba) we have been able to establish effective relationships that enables contact outside of face-to-face visits. Through these phone and email interactions, we have been able to respond to requests for information, generally within 24 hours and to the satisfaction of our stakeholders
- performing a holistic review of all memoranda of understanding (MoU) with domestic and international partners that led to the development of a MoU register
- leading the preparation of the Australian National Report and delegation to the Sixth Review Meeting under the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management that was held in Vienna, 21 May – 1 June 2018. The Australian National Report ([arpansa.gov.au/joint-convention](http://arpansa.gov.au/joint-convention)) included input from the States and Territories, as well as other Commonwealth agencies with an interest in radioactive waste, such as ANSTO, the Australian Safeguards and Non-Proliferation Office, the Department of Industry,

Innovation and Science, and the Department of Environment and Energy. Our report went through a process of international peer-review and received positive feedback when presented at the Review Meeting. Australia received recognition in four areas of 'good performance'. ARPANSA also provided staff as a Vice-President of the Review Meeting and as the Rapporteur of a Country Group




- participating in a range of Australian Government inter-departmental committees on topics of direct relevance to ARPANSA, that allow the agency the opportunity to participate in the shaping of whole-of-government policy and remain informed of new developments. During the reporting period, these included management of the Australian Antarctic Territory and exploration of possible nuclear verification scenarios on the Korean Peninsula
- tabling all quarterly reports on the activities of the agency in Parliament, as required by legislation, and in line with legislative timeframes
- exponentially increasing engagement through our social media pages. Specifically, our Facebook likes have increased 328 per cent. Our Twitter followers have also increased by 141 per cent.
- responding to 95 per cent of media inquiries within two days.

## Objective 6

Enhance organisational innovation, capability and resilience				
No.	Measure	Target or estimated completion	Source	Annual result
6.1	Employee engagement score achieved in annual Australian Public Service (APS) employee census	>6.0	ARPANSA Corporate Plan 2017–21, page 25	 <p>73%</p> <p>During the reporting period the Australian Public Service Commission (APSC) revised the unit of measurement for the employee engagement score and as a result our annual result cannot be compared to the annual target.</p> <p>This target will be amended in future reporting periods.</p>
6.2	Number of ARPANSA breaches identified in radiation safety and security compliance assessments	0	ARPANSA Corporate Plan 2017–21, page 25	 <p>One minor breach</p> <p>A radiation safety inspection found ARPANSA to be in breach of subsection 31(2) of the ARPANS Act. The regulator considered the breach to be administrative in nature as there were no significant safety or security implications. ARPANSA has rectified the non-compliance to the satisfaction of the regulator.</p>

Enhance organisational innovation, capability and resilience				
6.3	Learning solutions framework	Develop a learning solutions framework to provide ARPANSA employees with learning and development programs that clearly link to our objectives and to support employees in developing and refining skills critical to succeeding in their role as they progress within the Agency	ARPANSA Corporate Plan 2017–21, page 25	 <p>See <a href="#">case study 4</a></p>
6.4	Integrated Management System (IMS)	Develop and implement a framework to establish an IMS. The IMS project will support ARPANSA to deliver products and services to the Australian community and Government in the most effective and efficient way.	ARPANSA Corporate Plan 2017–21, page 25	

## Enhance organisational innovation, capability and resilience

6.5	Digital Strategy	The Digital Strategy will be updated to reflect the results from proof of concept and pilot initiatives and in consideration of agency and technology needs to ensure continual alignment with ARPANSA's strategic objectives June 2018	ARPANSA Corporate Plan 2017–21, page 25	 Draft completed but not finalised within the reporting period
6.6	Research and Innovation Strategy	Develop and implement a research and innovation strategy. This strategy will provide a framework for ensuring high quality research and innovation within ARPANSA to support its radiation protection and nuclear safety programs, as well as its regulatory activities June 2019	ARPANSA Corporate Plan 2017–21, page 25	 During the reporting period the Research and Innovation Strategy was released. Implementation of this strategy will take place in the next reporting period. This measure has been carried over to the new reporting period
6.7	Cost recovery of Commonwealth licensing activities	Develop a funding model to achieve appropriate cost recovery of Commonwealth licensing activities June 2019	ARPANSA Corporate Plan 2017–21, page 25	

## Analysis of performance against purpose and program objective

ARPANSA's supporting functions provide insight and expertise to the agency on a daily basis. By integrating this expertise with developing practices and approaches and aligning these with the strategic objectives of the agency, we provide the internal capability needed to successfully build and deliver innovative and streamlined programs and services.

During the reporting period ARPANSA has enhanced organisational innovation, capability and resilience through a number of activities and initiatives:

- ARPANSA is on track to implement the Integrated Management System (IMS) project by October 2018. Once implemented, the IMS will connect all of our systems and processes into one complete framework to support achievement of our strategic objectives. It will capture all regulatory processes as well as processes that support regulatory activities, such as quality, safety, security, risk, compliance and corporate governance. Key components of the IMS delivered this reporting period include implementing an overarching framework to integrate ARPANSA's governance, compliance and risk functions, and achieve harmonisation of our quality management systems. Furthermore, our new project management framework that was delivered in the last reporting period has been embedded across the agency in 2017–18 and integrated into the annual planning and budget cycle to inform project investment and support improved governance of agency projects
- In line with the Energy Efficiency in Government Operations, ARPANSA commenced the implementation of recommendations identified in the 2017–18 energy audit in the Yallambie site. In the 2017–18 financial year ARPANSA undertook seven projects that optimised opportunities relating to electricity and natural gas.
- The APS employee census is an annual employee perception survey of the APS workforce. In 2018, over 140 000 employees from 101 agencies were invited to participate. In the 2018 APS Employee Census held in May and June, 83 per cent of ARPANSA staff participated, compared with an overall APS participation rate of 74 per cent. While the census reports on a number of topics, one of the key figures reported is the employee engagement score. The APSC defines employee engagement as the extent to which employees are motivated, inspired and enabled to improve an organisation's outcomes. In 2018, the ARPANSA employee engagement score was 73 per cent, compared with the APS overall average of 71 per cent.
- A new learning strategy was launched in November 2017. The objectives of the learning strategy are to:
  - enable the capability, productivity and performance required to achieve ARPANSA strategic objectives
  - enable high quality, purposeful and application-ready learning and knowledge sharing experiences
  - leverage a wide range of leading practice learning and knowledge sharing methodologies.

- ARPANSA implemented a new online learning management system (LMS) in February 2018. The new LMS, LearnHub, includes access to APS courses, 'ARPANSA Knowledge' and other resources such as SkillSoft and Lynda.
- A new Regulatory Cost Recovery model has been developed. In 2018–19 reporting period, ARPANSA will engage with licence holders and communicate the proposed changes. The first opportunity to undertake this engagement and communication will be at the ARPANSA licence holder forum in Canberra in September 2018.
- The ARPANSA Research and Innovation Strategy 2017–2021 was released in January 2018.
- ARPANSA has developed a strategy for growing its financial position for the purposes of continuously improving delivery against its statutory obligations. This strategy has specifically invested in enhancing the agency's revenue-generating activities including but not limited to regulatory cost recovery models and strategies for increasing both revenue and profitability of services provided to external stakeholders.
- A revision of the Digital Strategy 2017–2021 was created incorporating feedback received from external and internal committees and proof of concept initiatives. The document was redrafted in natural and engaging language and was slightly delayed due to staff absences. In addition to the revision of the Digital Strategy, the Digital Technology section made progress in a number of other areas including:
  - development of a three-year Digital Technology Plan that provides technology roadmaps and investment schedules to help the agency meet future capability requirements
  - migration of UV legacy data to data.gov.au which is progressing well
  - replacement of end of service life multi-function device and video conferencing equipment which has been completed.

## Financial performance

For the financial year ending 30 June 2018, ARPANSA reported an operating deficit of \$2.407m. This deficit relates to depreciation and amortisation expenses not requiring appropriation.

Revenue for the year totalled \$24.303m, of which government appropriated 53 per cent of this total. The remaining 47 per cent related to regulatory licence fees and charges and the sale of goods and provision of services.

ARPANSA's expenses totalled \$26.710m. Employee benefits account for 62 per cent of this total, supplier's expenses 27 per cent and depreciation and amortisation expense 11 per cent.

The Agency will continue to review the efficiency and effectiveness by which it delivers its program, to ensure it operates within available resourcing.

## Assets management

The Agency manages non-financial assets totalling \$38.3 million and its asset management strategy emphasises whole-of-life asset management. The capital investment plan is reviewed annually to ensure appropriate prioritisation of building infrastructure and renovation investment and that laboratory equipment purchases and IT infrastructure upgrades meet future research and operational requirements.

## Purchasing

The Agency's procurement policies and practices reflect the principles set out in the *Commonwealth Procurement Rules* (CPRs), and focus on encouraging competition, value for money, transparency and accountability as well as the efficient, effective and ethical use of Commonwealth resources. During 2017–18, ARPANSA procurement activities complied with the CPRs.

## Consultants

During 2017–18, ten new consultancy contracts were entered into involving total actual expenditure of \$259 767. In addition, six ongoing consultancy contracts were active during the 2017–18 year, involving total actual expenditure of \$184 159.

The Agency policy on selection and engaging consultants is in accordance with the CPRs, based on the core rule of value for money and underpinned by:

- encouraging competitive and non-discriminatory processes
- using Commonwealth resources in an efficient, effective, economical and ethical manner that is not inconsistent with the policies of the Commonwealth
- making decisions in an accountable and transparent manner
- considering the risks
- conducting a process commensurate with the scale and scope of the procurement.

ARPANSA engaged consultants where there was a requirement for specialist expertise that was not available within the Agency, or where an independent assessment was required. The selection process included selection from a panel or direct engagement of a recognised or pre-eminent expert.

The annual report contains information about actual expenditure on contracts for consultancies. Information on the value of contracts and consultancies is available on the AusTender website [www.tenders.gov.au](http://www.tenders.gov.au).

## Procurement initiatives to support small business

ARPANSA supports small business participation in the Commonwealth Government procurement market. Small and Medium Enterprises (SME) and Small Enterprise participation statistics are available on the Department of Finance website: [finance.gov.au/procurement/statistics-on-commonwealth-purchasing-contracts/](http://finance.gov.au/procurement/statistics-on-commonwealth-purchasing-contracts/)

ARPANSA's engagement with SMEs is predicated on communicating in clear, simple language and presenting information in an accessible format. Additionally, ARPANSA has adopted the use of the Commonwealth Contracting Suite for low risk procurements valued under \$200 000 to reduce the burden on SMEs entering into contractual relations with the Commonwealth.

## Advertising and market research

Under Section 311A of the *Commonwealth Electoral Act 1918* ARPANSA is required to disclose details of paid advertising and market research.

During 2017–18, expenditure on media advertising and public notices was below the threshold and ARPANSA did not undertake market research, conduct any advertising campaigns nor purchase any services from creative advertising agencies, polling or direct mail organisations.

## ARPANSA resource statement 2017–18

	Actual available appropriation for 2017–18 \$'000 (a)	Payments made 2017–18 \$'000 (b)	Balance remaining 2017–18 \$'000 (a)-(b)
<b>Ordinary annual services<sup>1</sup></b>			
<b>Departmental appropriation</b>			
Prior year departmental appropriation <sup>2</sup>	751	751	-
Departmental appropriation <sup>3</sup>	14,794	13,320	1,474
<b>Total</b>	<b>15,545</b>	<b>14,071</b>	<b>1,474</b>
<b>Total ordinary annual services</b>	<b>15,545</b>	<b>14,071</b>	
<b>Other services</b>			
<b>Departmental non-operating</b>			
Equity injections	5,000	1,200	3,800
<b>Total</b>	<b>5,000</b>	<b>1,200</b>	<b>3,800</b>
<b>Total other services</b>	<b>5,000</b>	<b>1,200</b>	
<b>Special Accounts<sup>4</sup></b>			
Opening balance	1,143		
Appropriation receipts <sup>5</sup>	15,271		
Non-appropriation receipts to Special Accounts	12,393		
Payments made		27,707	
<b>Total Special Account</b>	<b>28,807</b>	<b>27,707</b>	<b>1,100</b>
<b>Total resourcing</b>	<b>49,352</b>	<b>42,978</b>	
Less departmental appropriations and equity injections drawn from the above and credited to special accounts	(15,271)	(15,271)	
<b>Total net resourcing for ARPANSA</b>	<b>34,081</b>	<b>27,707</b>	

1 Appropriation Bill (No.1) 2017–18

2 Balance carried forward from previous year for annual appropriations

3 Includes an amount of \$1.955 million in 2017–18 for Departmental Capital Budget. For accounting purposes this amount has been designated as 'contributions by owners'

4 Does not include 'Special Public Money' held in accounts like Other Trust Monies accounts (OTM). Services for other Government and Non-agency Bodies accounts (SOG), or Services for Other Entities and Trust Moneys Special accounts (SOETM).

5 Appropriation receipts from ARPANSA's annual and special appropriations for 2017–18 included above.

## ARPANSA expenses for outcome 1

Outcome 1:	Budget* 2017–18 \$'000 (a)	Actual expenses 2017–18 \$'000 (b)	Variation 2017–18 \$'000 (a)-(b)
<b>Protection of people and the environment through radiation protection and nuclear safety research, policy, advice, codes, standards, services and regulation</b>			
<b>Program 1.1: (Radiation protection and nuclear safety)</b>			
Departmental expense			
Ordinary annual services			
(Appropriation Bill No. 1) <sup>1</sup>	12,839	12,420	419
Special Accounts	9,712	11,382	(1,670)
Expenses not requiring appropriation in the budget year	2,570	2,908	(338)
<b>Subtotal for Program 1.1</b>	<b>25,121</b>	<b>26,710</b>	<b>(1,589)</b>
<b>Total for outcome</b>	<b>25,121</b>	<b>26,710</b>	<b>(1,589)</b>
	2016–17	2017–18	
<b>Average staffing level (number)</b>	<b>131</b>	<b>128</b>	

\* Full year budget including any subsequent adjustment made to the 2017–18 budget

1 Appropriation Bill (No.1) 2017–18



## Case study 1

### ARPANSA leads the way as a SunSmart workplace

ARPANSA has committed to workplace sun protection and presenting best practice for solar ultraviolet radiation (UVR) safety in the workplace by becoming a SunSmart workplace.

Australia has one of the highest rates of skin cancer in the world, with two out of three Australians developing some form of skin cancer. The majority of skin cancers in Australia are caused by exposure to solar UVR. This makes them highly common but also highly preventable.

On 23 November 2017, ARPANSA was recognised as a 'SunSmart workplace' and celebrated the occasion with a family day at the Yallambie office. The then Assistant Minister for Health, the Honourable David Gillespie, the Chair of Cancer Council Australia Public Health Committee Craig Sinclair and ARPANSA's CEO Dr Carl-Magnus Larsson, were present to make the official announcement. The day's celebration included sun-safe show bags and the SunSmart mascot, Sid the Seagull.

The SunSmart workplace agreement was officially signed by Dr Carl-Magnus Larsson in December 2017.

Being a SunSmart workplace requires meeting Cancer Council Victoria guidelines for sun protection policies and practices. ARPANSA's SunSmart workplace initiatives include:

- provision of personal protective equipment including UPF 50+ hats, SPF 30+ sunscreen and EPF 10 rated sunglasses
- provision of appropriate shade for outdoor areas
- implementation of flexible and considered working arrangements to prevent staff working outside during peak solar UVR periods of the day.

As the Australian authority on radiation protection, it is important ARPANSA display best practice in solar UVR protection for our staff and the wider Australian community. Becoming a SunSmart workplace has been one of the ways ARPANSA displays its commitment to raising awareness of the risks of solar UVR and skin cancer prevention. ARPANSA provides testing services for sun protection products and issues UPF rating labels for clothing so that consumers can make informed choices. ARPANSA's real-time UV monitoring network also provides critical data for the Cancer Council SunSmart app.



## Case study 2

### ANSTO Nuclear Medicine licence to operate

April 2018 saw ARPANSA issue a licence to the Australian Nuclear Science and Technology Organisation (ANSTO) to operate the ANSTO Nuclear Medicine Facility (ANM). This is the most significant facility licensing decision made by ARPANSA since the licence to operate ANSTO's Open Pool Australian Lightwater (OPAL) reactor was granted in July 2006.

The ANM Facility is intended for the extraction and purification of molybdenum-99 (Mo-99). Mo-99 is the parent isotope of technetium-99m, a medical isotope used for diagnostic imaging of cancer tumours. It also assists in the undertaking of organ function studies such as in cardiac and renal imaging.

ARPANSA's CEO, Dr Carl-Magnus Larsson, issued the licence to operate the ANM Facility on 12 April 2018. The licence authorises ANSTO to commence 'hot commissioning' using uranium target plates that have been irradiated in the OPAL reactor. Hot commissioning is essentially a testing phase to ensure that all of the necessary systems work and allows ANSTO to extract Mo-99 from the irradiated targets to check that the product matches the quality criteria for later routine production.

Moving forward, a number of conditions still need to be fulfilled before a decision can be taken on whether to authorise routine production for domestic and international markets, including a thorough analysis of the results of the commissioning tests.

This is the third licence issued by ARPANSA for the ANM Facility. The first of these licence applications (for siting or site preparation) was received in October 2012 and a licence was issued in October 2013. This was followed by the licence to construct the facility issued in June 2014. The application from ANSTO to operate the facility was received in April 2017.

ARPANSA's extensive review process involved analysis of the safety and security of the facility, as well as our ongoing assessment of the safety of the OPAL reactor used to produce Mo-99 through nuclear fission. Other key considerations included the facility's safety features, operational limits and conditions, and radioactive waste management.



### Case study 3

#### Our role in the proposed National Radioactive Waste Management Facility project

The Department of Industry, Innovation and Science (DIIS) is responsible for the site selection process to establish a National Radioactive Waste Management Facility (NRWMF). ARPANSA is responsible for the licensing of any future national radioactive waste management facility, such as that proposed by the DIIS.

While ARPANSA's formal role in this project does not commence until the receipt of a site licence application, we have been proactive in our community engagement activities in South Australia (SA) in accordance with international best practice.

The Federal Government has shortlisted three sites as possible locations to establish a NRWMF in SA, two in Kimba and one in Hawker. The proposed NRWMF would provide a centralised location for the disposal of Low Level Waste and storage of Intermediate Level Waste generated in Australia.

During the 2017–18 financial year a number of ARPANSA staff, including CEO Dr Carl-Magnus Larsson, visited regional SA to undertake informal engagement activities with affected communities. The first visit took place in December 2017 where the team conducted their first official visit to Kimba, 158 km south-west of Port Augusta, and their fourth official visit to Hawker, a town 110 km north-east of Port Augusta. ARPANSA staff visited the region again in March 2018.

The visits included drop-in sessions and group meetings. The meetings were held to provide community members with an opportunity to raise issues and ask questions regarding the proposed NRWMF. ARPANSA staff provided

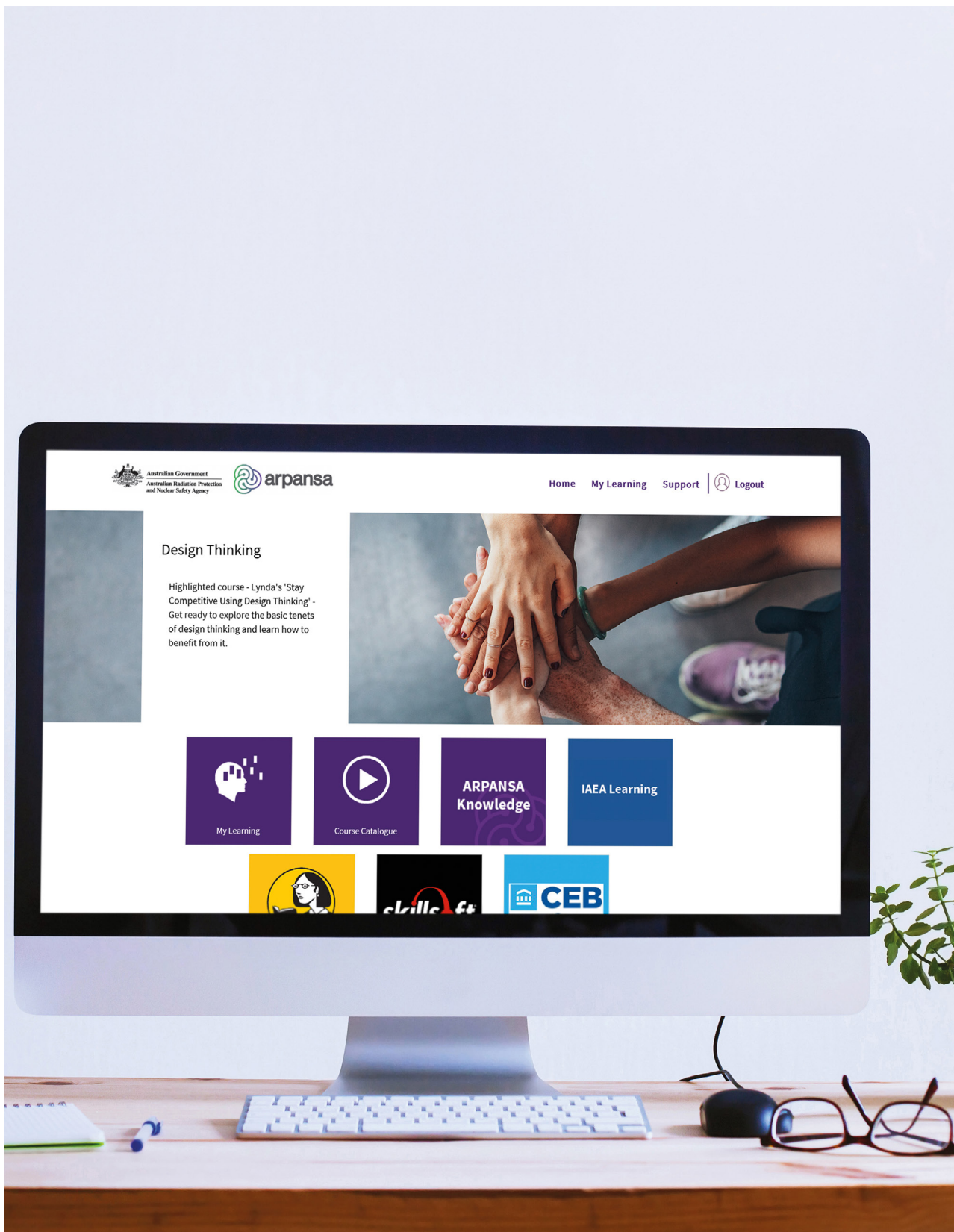
communities with information on a number of important aspects relating to the proposed NRWMF, including but not limited to:

- ARPANSA's role
- the licencing process and our requirements
- waste acceptance criteria
- transport
- elements important to the safety case.

The visits provide ARPANSA the opportunity to reiterate our purpose, that being the protection of human health and the environment from the harmful effects of radiation, and to stress that ARPANSA will only licence a facility if we are confident that it would not have an adverse impact on human health or the environment.

While ARPANSA has no formal position on the proposed NRWMF, we will continue to make ourselves available to answer questions with the intention of being open and transparent about our decision-making processes and providing assurance to the communities regarding our independence as the Commonwealth regulator.

By maintaining a visible presence in the region, ARPANSA hopes to be informally engaging community members, including finding out about any relevant site local knowledge which will be important should a licence application be received from the DIIS.



## Case study 4

### LearnHub: an innovative way to expand ARPANSA's capabilities

In February 2018, ARPANSA officially launched LearnHub, a learning management system designed to allow staff easy access to training courses and other development resources. Through the online learning portal staff can access a range of content including Australian Public Service modules, specialised radiation protection information and cross-cultural awareness training.

The introduction of LearnHub is the latest in ARPANSA's ongoing commitment to investing in the development of its staff, as this is crucial for engaging people and creating a high performing workplace.

LearnHub pulls together a range of educational resources, including content from external eLearning solutions including:

- Lynda, a leading online learning platform with extensive course catalogue
- Gartner, a research-based leadership and management resource
- SkillSoft, which focuses on business skills and IT certification.

LearnHub also creates a platform for other APS and ARPANSA-specific modules. This includes 'ARPANSA Knowledge', a curated collection of scientific and technical learning material of specific interest to ARPANSA staff. Modules in ARPANSA Knowledge include radiation training specialising in radiation protection, nuclear safety and security.

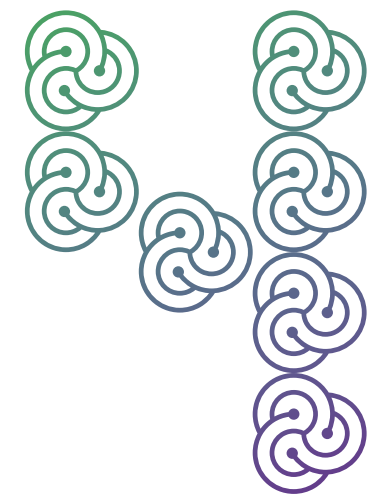
The LearnHub portal will continue to expand its content to address the learning needs of staff, such as those identified in staff development plans.

The ability for staff to learn and progress is a key element of ARPANSA's employment brand. It supports ARPANSA's strategic objective 'to enhance organisational innovation, capability and resilience' and provides staff with another way to access training and learning opportunities.

LearnHub was implemented as part of a broader initiative to support ARPANSA's Workforce Plan Learning Strategy (2017–2022). The objectives of the learning strategy are to:

- enable the capability, productivity and performance required to achieve ARPANSA's strategic objectives
- enable high quality, purposeful and application-ready learning and knowledge sharing experiences
- leverage a wide range of leading practice learning and knowledge sharing methodologies.

The Strategy prioritises continuous skill development for staff while also helping to foster people management capabilities, facilitate knowledge sharing, promote enterprise capabilities and aid career development.



PART 4

## Management and accountability

## Enabling legislation

The *Australian Radiation Protection and Nuclear Safety Act 1998* (the ARPANS Act) establishes the Office of the Chief Executive Officer (CEO) of ARPANSA. The Act also establishes ARPANSA, which is a non-corporate Commonwealth entity under the *Public Governance, Performance and Accountability Act 2013* (PGPA Act).

## Corporate governance

The ARPANS Act and the PGPA Act are the foundation of ARPANSA's governance practices.

Our corporate governance framework enables effective strategic planning, risk management and performance monitoring to support achievement of our strategic objectives. Our core governance structure includes three statutory advisory bodies and two senior committees that are supported by a number of management committees.

### Advisory bodies

The ARPANS Act establishes the Radiation Health and Safety Advisory Council (Council), the Radiation Health Committee (RHC) and the Nuclear Safety Committee (NSC) to advise the CEO of ARPANSA.

#### Radiation Health and Safety Advisory Council

The role of Council in relation to radiation protection and nuclear safety is to identify emerging issues; examine matters of major concern to the community; consider the adoption of recommendations, policies, codes and standards; advise and report to the CEO, at the CEO's request or as Council considers appropriate, on the above and any other matters. During 2017–18, the Council met on two occasions: 16–17 November 2017, and 6–7 March 2018.

#### Radiation Health Committee

The role of RHC in relation to radiation protection is to advise the CEO and the Council; develop policies and to prepare draft

publications for the promotion of uniform national standards; formulate draft national policies, codes and standards for consideration by the Commonwealth, the states and the territories; from time to time, to review national policies, codes and standards to ensure that they continue to substantially reflect world best practice; and consult publicly in the development and review of such policies, codes and standards. During 2017–18, the RHC met on two occasions: 15 November 2017 and 14 March 2018.

#### Nuclear Safety Committee

The role of NSC in relation to nuclear safety and the safety of controlled facilities is to advise the CEO and the Council; review and assess the effectiveness of standards, codes, practices and procedures; develop detailed policies and prepare draft publications to promote uniform national standards. During 2017–18, the NSC met on three occasions: 20 October 2017, 16 March 2018 and 22 June 2018.

## Senior committees

At the strategic level, the CEO is advised by two key committees:

### Audit and Risk Committee

The PGPA Act requires Commonwealth entities to establish an audit committee. ARPANSA's Audit and Risk Committee provides independent assurance and advice to the CEO on the agency's financial reporting, performance reporting, system of risk oversight and management, and system of internal control.

The Audit and Risk Committee comprises four members, three of whom are independent external members (including the Chair) and one ARPANSA member. Representatives from the Australian National Audit Office (ANAO) and the agency's internal auditor, RSM Australia Pty Ltd, also attend meetings. The CEO is an observer on the committee and other senior managers may attend meetings as observers when required to report on particular matters. The Audit and Risk Committee met five times in 2017–18.

### Strategic Management Committee

The Strategic Management Committee (SMC) considers the threats and opportunities that may influence the strategic direction of the agency and contributes at key times throughout the year to ARPANSA's planning and performance framework. The SMC met four times in 2017–18 and comprises the CEO (Chair), branch and office heads, and two external members appointed by the CEO.

## Management committees

ARPANSA has in place a number of management committees to ensure effective decision-making, management and oversight of the agency's operations and performance.

### Executive Group

The Executive Group (EG) is ARPANSA's operational management forum. The EG is responsible for monitoring the key tactics and activities used to implement agency business plans. The EG met ten times in 2017–18 and comprises the CEO (Chair), and branch and office heads.

### Work Health and Safety Committee

The Work Health and Safety (WHS) Committee provides the agency with a consultative mechanism to enable management and worker contributions to WHS improvements across all operations. The WHS Committee comprises the CEO (Chair), Health and Safety Representatives, management representatives, and the WHS Advisor/Radiation Safety Officer. Other subject matter experts may participate in meetings as required. The WHS Committee met four times in 2017–18.

### The Radiation Safety Committee

The Radiation Safety Committee operates as a sub-committee to the WHS Committee and is chaired by the Radiation Safety Officer and comprises of Radiation Protection Advisors from across the agency. The committee provides the agency with a mechanism to monitor, review and improve practices in relation to the safe management of radiation sources and associated activities. The Radiation Safety Committee met four times in 2017–18.

### Agency Security Group

The Agency Security Group (ASG) oversees the development and implementation of a protective security program across ARPANSA to ensure our policies, procedures and practices comply with the Commonwealth's Protective Security Policy Framework.

The ASG met six times in 2017–18, and comprises the Security Executive (Chair), the Agency Security Adviser, the Chief Information Officer, the IT Security Adviser, and the Facilities Manager. Other subject matter experts may participate in meetings as required.

### International Coordination Group

In 2017–18 the International Coordination Group (ICG) was established to lead the implementation of ARPANSA's International Engagement Strategy which aims to align the agency's international engagement priorities with whole-of-government priorities, sharpening our capacity to shape the broader radiation protection and nuclear security and safety environment in which we operate. The ICG met four times in 2017–18.

### Project Management Advisory Group

The Project Management Advisory Group (PMAG) provides a centralised coordination and support function to agency projects to achieve alignment of projects with ARPANSA's strategic objectives and ensure consistent application of project management practices across the agency. The PMAG comprises the Director of Performance and Governance (Chair) and six staff with project management expertise. The PMAG met six times in 2017–18.

### Staff Consultative Forum

ARPANSA's enterprise agreement continues to provide for a Staff Consultative Forum (SCF) as the key employee consultative body. The SCF comprises the CEO, nine employees elected by staff and a representative from each of the unions supporting ARPANSA staff. The SCF met on six occasions in 2017–18 to discuss a range of issues relating to management of the agency.

### Digital Transformation Advisory Group

The Digital Transformation Advisory Group (DTAG) is responsible for leading the investigation of digital transformation at ARPANSA. The DTAG has established focus area teams to research our user's experience, innovative service delivery, productivity improvement and the building of our digital capability.

The DTAG comprises the Branch Head of Medical Radiation Services (Chair), Branch Head of Radiation Health Services, Chief of Staff, Head of Corporate Office and the Chief Information Officer. The DTAG met four times in 2017–18.

The highlight of the past year was a cross-agency exercise run in March 2018, where staff from many areas were drawn together to consider innovative ways to use digital technology to improve agency outcomes. The exercise reinforced the benefit of using smart forms and workflow capabilities to not only provide improved service delivery for our customers, but also provide faster and more efficient internal services for multiple work groups within the agency.

The DTAG has engaged with the Digital Transformation Agency to exploit internal government resources to ensure all available resources are leveraged for an optimally efficient progression into the digital environment.

## Accountability and risk management

### Accountable authority

Under the PGPA Act the CEO of ARPANSA is the accountable authority. The CEO discharges their governance obligations through their involvement in ARPANSA's planning, performance reporting and risk management activities.

### Planning

ARPANSA has an integrated planning, budgeting and performance reporting process that is informed by risk. Our integrated annual planning cycle ensures alignment of our strategic priorities, operational activities, resource allocation and performance measures. This results in clear linkages between our key planning documents, including the corporate plan, portfolio budget statement and agency business plans.

The SMC oversees the planning process and preparation of the corporate plan. Progress against the measures and other commitments outlined in our key planning documents is monitored and reported to management and the Audit and Risk Committee.

### Performance reporting

Our non-financial performance measures are detailed in both our corporate plan and portfolio budget statement. They include several measures that meet our performance reporting obligations under the Regulator Performance Framework. We produce quarterly internal reports on our non-financial performance. These reports are presented to management and the Audit and Risk Committee at the end of each quarter.

In 2017–18 ARPANSA undertook a comprehensive review of our non-financial performance measures, and we will continue to make incremental changes to our measures over the next 12 months, with the aim to embed best practice performance management, leading to more meaningful and reliable reporting on our achievements against our purpose.

Financial performance is reported separately through monthly internal financial reports to management, and to the Audit and Risk Committee at the end of each quarter. Our performance reporting culminates in the publication of our annual report, inclusive of the annual performance statement (at Part 3) and financial statements (at Part 5), and our Regulator Performance Framework externally-validated self-assessment report available on the ARPANSA website.

Several other mechanisms assist management to monitor performance in a wider context:

- the Audit and Risk Committee requires management to regularly provide evidence of performance against the mandatory elements of the PGPA Act and other relevant legislation
- ARPANSA's internal audit program, informed by risk and overseen by the Audit and Risk Committee, is focused on compliance performance and systems of internal control
- ARPANSA's quality audit program, a crucial part of maintaining ISO/IEC 17025 certification for our laboratories, monitors operational performance against the requirements of the relevant standards captured in the documented management system.

## Risk management

ARPANSA has a comprehensive Risk Management Framework that aligns responsibility and accountability for risk across the agency. Risk management is integrated into our business planning processes which enables effective identification and management of risks that could impact on the agency achieving its outcomes or otherwise cause it harm.

ARPANSA's Risk Management Framework aligns with broader requirements such as the Commonwealth Risk Management Policy 2014 and the international standard on risk management (AS/NZS ISO 31000), and meets the requirements of Section 16 of the PGPA Act.

During this reporting period, ARPANSA implemented an enhanced risk management framework and risk management training program to ensure staff understand their roles and responsibilities under the PGPA Act. In 2017–18 ARPANSA achieved an 'advanced' level of maturity in the Comcover Risk Management Benchmarking Survey. This is a great achievement for ARPANSA as it indicates positive progress in building our risk management capability and it reflects how well the new fit-for-purpose framework has been implemented and embedded into business processes.

## Audit and fraud control

### External audits

#### National Association of Testing Authorities

ARPANSA has seven laboratories that maintain National Association of Testing Authorities (NATA) accreditation against the ISO/IEC 17025 standard. During 2017–18, NATA conducted two audits of the following services:

- Personal Radiation Monitoring Service (PRMS)
- Ionising Radiation Calibrations (IRC).

The audits monitored the continuing compliance of these services with the requirements for accreditation against ISO/IEC 17025, and included a review of the scope of services for both laboratories.

Of note, NATA assessed the new Optically Stimulated Luminescence (OSL) and Track Analysis System Ltd (TASL) dosimetry technology commissioned by PRMS in 2016–17. The new OSL-TASL system was deemed to meet the requirements of ISO/IEC 17025 and was certified by NATA as an accredited dosimetry service. With the new system in place, the previous thermoluminescent dosimeter technology has been phased out and will be decommissioned next financial year.

All audit findings were responded to, and deemed acceptable by NATA and accreditation of the PRMS and IRC services was continued.

### Australian National Audit Office

During this reporting period, the ANAO conducted an audit of ARPANSA and five other agencies' performance on Mitigating Insider Threats through Personnel Security. The audit findings identified two key recommendations for ARPANSA:

- ARPANSA review their policies and procedures for eligibility waivers to ensure they are compliant with Protective Security Policy Framework (PSPF) mandatory controls.
- ARPANSA implement the PSPF requirement to undertake an annual health check for clearance holders and their managers.

At the end of this reporting period ARPANSA had addressed the first recommendation. Work is continuing in order to address the second recommendation by the end of 2018. The full report findings including ARPANSA's responses are available at <https://www.anao.gov.au/work/performance-audit/mitigating-insider-threats-through-personnel-security>.

### Internal audits

Primary responsibility for internal audit arrangements within the agency rests with the Corporate Office under the broad direction of the agency's Audit and Risk Committee. ARPANSA has a robust internal governance and control framework to establish and maintain appropriate systems and internal controls for the oversight and management of risk.

In 2017–18, ARPANSA's internal auditors, RSM Australia Pty Ltd, completed four audits to assess the adequacy of processes and controls in place for the following areas:

- risk management
- privacy and freedom of information
- compliance management
- asset management.

The audit findings, which include opportunities to further strengthen ARPANSA's internal systems and controls, have informed revision of our risk management framework and the implementation of a new compliance management framework.

### Significant non-compliance issues

ARPANSA management acknowledges their responsibility for ensuring compliance with the provisions of the PGPA Act and requirements related to finance law.

ARPANSA has complied with the provisions and requirements of the:

- PGPA Act 2013
- *Public Governance, Performance and Accountability Rule 2014* (PGPA Rule)
- Appropriation Acts
- other instruments defined as finance law including relevant ministerial directions.

ARPANSA did not identify any significant non-compliances with finance law during the reporting period.

All instances of non-compliance are reported to the Audit and Risk Committee. Where insignificant non-compliances were identified, they were managed in accordance with our policies and procedures.

### Fraud minimisation strategies

During 2017–18, the agency continued a rolling program to assess fraud risks embedded in ARPANSA's overarching risk management framework. Treatment strategies are developed and monitored as part of that process in compliance with section 10 of the PGPA Rule. Results of the fraud risk assessment process are used to inform the development of the internal audit schedule. No instances of fraud were identified during 2017–18.

### Disability reporting mechanisms

Since 1994, non-corporate Commonwealth entities have reported on their performance as policy adviser, purchaser, employer, regulator and provider under the Commonwealth Disability Strategy. In 2007–08, reporting on the employer role was transferred to the Australian Public Service Commission's *State of the Service* reports and the *APS Statistical Bulletin*. These reports are available at [apsc.gov.au](http://apsc.gov.au). From 2010–11, entities have no longer been required to report on these functions.

The *Commonwealth Disability Strategy* has been overtaken by the *National Disability Strategy 2010–2020*, which sets out a 10 year national policy framework to improve the lives of people with disability, promote participation and create a more inclusive society. A high-level, two-yearly report will track progress against each of the six outcome areas of the strategy and present a picture of how people with disability are faring. The first of these progress reports was published in 2014, and can be found at [dss.gov.au](http://dss.gov.au).

### Work health and safety

ARPANSA's commitment to safety through protecting the Australian people and the environment from the harmful effect of radiation, is second to none and we are equally committed to utilising our expertise to develop a leading work health and safety (WHS) framework within the agency.

On 23 November 2017, ARPANSA was recognised as a SunSmart workplace for its commitment to protect staff from overexposure to ultraviolet (UV) radiation. As part of the SunSmart workplace initiative, ARPANSA has developed a procedure on UV radiation and provided education and training to staff, contractors and visitors to ensure workers recognise the risks of UV radiation, and most importantly to ensure our workers stay safe in the sun.

Throughout 2017–18 ARPANSA completed the corrective actions associated with the Comcare audit of our safety management system. Actions implemented included enhancing our WHS procedures and delivering in-house WHS training courses for managers to enable them to understand their responsibilities under the *Work Health and Safety Act 2011* (Cth) (WHS Act) and their role to improve WHS performance.

ARPANSA continues its program of regular WHS inspections and resulting improvements. During 2017–18 the agency completed all planned WHS inspections in accordance with the revised environmental and holistic safety inspection program.

### Hazard and incident reporting

ARPANSA has a strong commitment to preventing work health and safety incidents occurring, understanding the importance of preventative measures and applying timely and appropriate corrective actions when incidents or hazards do arise.

During 2017–18 the agency continued to foster a positive safety reporting culture which saw an increase in the number of reported hazards. A total of 36 report cards were submitted for the 2017–18 period, which was more than twice the original target for the year.

In 2017–18 there was a total of 15 incidents reported, which included seven hazards, seven minor incidents and one incident notified to Comcare with respect to the agency's statutory obligation under section 35 of the WHS Act.

### Workers compensation

One workers compensation claim was made during the 2017–18 year. No lost time was reported.

### Investigations or notices given

There were no investigations initiated or notices given in 2017–18.

## Accountability

### External scrutiny

#### Judicial review

During 2017–18, the agency was involved in one matter before the Federal Court and no matters before the Full Federal Court or the Administrative Appeals Tribunal.

#### Reports by the Auditor-General, Parliamentary Committees or Commonwealth Ombudsman

As at 30 June 2018, no reports were made by Parliamentary Committees regarding ARPANSA for the year 2017–18. During the reporting period ARPANSA was a selected agency reviewed in the Auditor-General's Performance Audit: *Mitigating Insider Threats through Personnel Security*.

During 2017–18, there were no complaints made to the Commonwealth Ombudsman against the agency. There are no earlier complaints which remain open.

### Freedom of Information

Agencies subject to the *Freedom of Information Act 1982* (FOI Act) are required to publish information to the public as part of the *Information Publication Scheme*. This requirement is in Part II of the FOI Act and has replaced the former requirement to publish a section 8 statement in an annual report. Each agency must display on its website a plan showing what information it publishes in accordance with the *Information Publication Scheme* requirements.

ARPANSA, as an Australian Government agency, is subject to the FOI Act and is required to comply with the *Information Publication Scheme* provisions. ARPANSA has developed an agency plan describing ARPANSA's compliance with *Information Publication Scheme* provisions as required by section 8(1) of the FOI Act.

Feedback on this plan can be provided by contacting the Freedom of Information (FOI) Coordinator at:

#### The FOI Coordinator ARPANSA

PO Box 655  
MIRANDA NSW 1490  
foi@arpansa.gov  
(03) 9433 2211

Documents released by ARPANSA in response to FOI requests can be found on the Disclosure Log at [arpansa.gov.au/disclosure](http://arpansa.gov.au/disclosure).

### Statistics

ARPANSA received ten FOI requests during the reporting period.

## Human resources

ARPANSA's People and Culture section is responsible for the delivery of a wide range of people services including workforce planning, recruitment, pay and conditions, performance management, learning and development and workplace diversity.

During 2017–18, key achievements in the section included:

- implementing ARPANSA's *Workforce Plan 2017–2021*
- launching the *ARPANSA Learning Strategy*, including implementation of an online learning management system.

### Workforce Plan 2017–2021

ARPANSA's *Workplace Plan 2017–2021* (the Plan) was developed during 2016–17, with implementation commencing during 2017–18. The Plan was developed to enable ARPANSA to achieve its objectives through its people. The objectives of the Plan are based around:

- **our people:** a workforce of high performing professionals
- **our managers:** leaders of engaged and agile teams
- **our employee experience:** a collaborative and innovative culture
- **our strategic alignment:** leading practice services which deliver on ARPANSA's purpose.

In the first year of the Plan, a number of initiatives and activities were undertaken in support of the six people management strategies and four supporting frameworks.

## Workforce and succession planning

ARPANSA has developed a strategic and future-focused workforce planning and succession strategy. The strategy describes the capability and capacity required to deliver ARPANSA's future strategic agenda and respond to internal and external change drivers. In the first year, a succession planning exercise was undertaken with the objective of identifying the vacancy risk and potential future successors. A key outcome of the processes undertaken to date has been the encouragement of mobility across the agency. ARPANSA has identified opportunities for collaboration and sharing of resources across branches and offices to achieve strategic objectives.

### Attraction and recruitment

The attraction and recruitment processes undertaken by ARPANSA are continually revised to ensure they allow for a standardised, effective and objective approach to all recruitment activities undertaken. During the year, 29 successful recruitment campaigns were undertaken. These campaigns included the engagement of 12 new starters. To support new starters to understand ARPANSA's purpose and the obligations of individuals employed by the APS, a new induction program has been developed and implemented.

### Learning strategy

In October 2017, ARPANSA implemented a learning strategy, with the objectives:

- enable the capability, productivity and performance required to achieve ARPANSA strategic objectives
- enable high quality, purposeful and application-ready learning and knowledge sharing experiences
- leverage a wide range of leading practice learning and knowledge sharing methodologies.

Two key activities that have been delivered as part of the learning strategy have been the implementation of an online learning management system, LearnHub and the development of 'ARPANSA Knowledge'. ARPANSA Knowledge has been developed as a resource within LearnHub to support the sharing of scientific and technical knowledge and skills. The benefits of this knowledge sharing tool include increased visibility of knowledge and capabilities between organisational units, greater collaboration across ARPANSA, and more comprehensive support to managers as they undertake staff development and enable employability. Further details are provided in case study 4.

### Diversity and inclusion

ARPANSA implemented a *Diversity and Inclusion Plan* which came into effect on 1 July 2017. This plan set out initiatives across the six key areas of inclusion: gender equity, flexibility, LGBTIQ+, people with a disability, and Aboriginal and Torres Strait Islander Peoples. Branch and office heads have taken up the opportunity to be a champion of each initiative, with a range of activities having been undertaken within ARPANSA, and more broadly across the APS. In support of the commitments that ARPANSA has made in the *Diversity and Inclusion Plan*, all employees completed a respectful workplaces online learning module in February 2018.

### Health and wellbeing

Throughout the year, ARPANSA undertakes a number of activities that aim to support the wellbeing of its staff. These activities cover aspects of psychosocial health, relationships, finance and physical protection and include onsite Employee Assistance Program sessions, and promotion of activities in support of key awareness campaigns such as R U OK? Day.

### Employment arrangements

As at 30 June 2018, ARPANSA employed 129 employees, and one statutory office holder. All ARPANSA employees are engaged under the *Public Service Act 1999*. The types of employment arrangements in operation by the agency during 2017–18 are outlined below.

#### Enterprise Agreement

The *ARPANSA Enterprise Agreement 2017–2020* (the Agreement) came into effect on 31 August 2017. The Agreement outlines the terms and conditions of employment for all non-SES staff. The Agreement contains an individual flexibility arrangement term, which enables the Agency to vary the operation of specified terms and conditions provided under the Agreement for individual non-SES staff where necessary and appropriate. At 30 June 2018, eight such arrangements were in place.

#### Individual determinations under the *Public Service Act 1999*

No employees are covered by Section 24 — all details of SES pay are covered by 'remuneration for senior officials'.

#### Australian workplace agreements

No ARPANSA employees are covered by Australian workplace agreements.

#### Common law contracts

There are five common law contracts in place across the agency.

### Non-salary benefits

Under its enterprise agreement and common law contracts, ARPANSA staff are able to seek access to a range of non-salary benefits including the following:

- flexible working arrangements, including flextime (APS levels 1 to 6 only), jobsharing, and part-time and home-based work
- generous parental/maternity leave provisions
- generous range of paid and unpaid leave options
- study assistance
- employee assistance program.

### Remuneration for senior officials

The agency maintained a remuneration position consistent with equivalent public sector entities during 2017–18. Base salaries and inclusions, such as the allowance paid in lieu of a motor vehicle, complied with Government policy and guidelines. Total remuneration for SES staff may have included non-monetary inclusions or reimbursements for mobile phones and laptops/tablets.

As a Commonwealth entity, ARPANSA publishes information detailing the scope and value of remuneration for executive and other highly paid staff on the website.

### APS census

The APS employee census is an annual employee perception survey of the APS workforce. In 2018, over 140 000 employees from 101 agencies were invited to participate. In the 2018 APS Employee Census held in May and June, 83 per cent of ARPANSA staff participated, compared with an overall APS participation rate of 74 per cent. While the census reports on a number of topics, one of the key figures reported is the employee engagement score. The Australian Public Service Commission uses the definition of employee engagement as the extent to which employees are motivated, inspired and enabled to improve an organisation's outcomes. In 2018, the ARPANSA employee engagement score was 73 per cent, compared with the APS overall average of 71 per cent.

### Performance and rewards

ARPANSA's approach to performance and reward is to create a culture of ongoing feedback to support continuous development. This enables the agency to perform even more effectively in the future, focus on those activities most critical to realising ARPANSA's strategic objectives, and provide recognition of achievements, innovative approaches and enterprise contributions.

There is no provision for the payment of performance pay in ARPANSA's EA or Common Law Contracts.

### ARPANSA award

The ARPANSA Award was first established in 2001 to recognise and celebrate significant contributions to the work of ARPANSA by an individual or team, across the following criteria:

- outstanding service to internal or external stakeholders
- an outstanding initiative which has been implemented
- significant improvements to work procedures or operations systems
- exceptional initiative/achievement involving cross-unit cooperation
- outstanding contributions to enhancing the client experience
- exemplar of the APS's code of conduct values and upholds professionalism in all capacities when interacting with clients and stakeholders.

The 2017 ARPANSA Award was presented to the UV Network Upgrade team for their excellent multi-section cross-agency teamwork and outstanding performance in the delivery of renewed UVR measurement technology. This included IT systems and website displays ensuring that the Australian community continued to have access to real-time UVR data on transition to the new ARPANSA website.

High achievement certificates were also awarded to:

- Michael Litwin for the outstanding work in ensuring that the new BeOSL and TASL-n technologies can be implemented as commercial services within Personal Radiation Monitoring Service
- the Communications team for the delivery of the new ARPANSA website, implementation of the new ARPANSA brand and the coordination of the SunSmart launch
- the 'SunSmart' team for the exceptional collaboration across ARPANSA to implement the SunSmart procedures, delivering outstanding service to internal and external stakeholders by raising their awareness of sun protection requirements, which in turn keeps stakeholders, staff and visitors safer from the harmful effects of UVR.

### The ARPANSA Social Club

The ARPANSA Social Club endeavours to create a healthy workplace and provide a range of social functions to allow all staff to be involved in events throughout the year. The social events are an opportunity for staff from different sections to meet and mingle.

The social club hosts a range of events, including morning teas, lunches and fundraising activities. None of the events would happen without the hard work of those staff who volunteer their time and effort to be a part of the social club committee to ultimately benefit all staff.

## Staffing statistics

As at 30 June 2018 ARPANSA employed 129 staff (not including the CEO). No employee identified themselves as indigenous.

Table 2.1 sets out the salary ranges as at 30 June 2018.

Table 2.2 sets out employees by location, gender and APS classification as at 30 June of the respective year. The table shows that 84 per cent of staff are located in the Victorian office.

**Table 2.1:** salary ranges as at 30 June 2018

Classification	Salary range (\$)
ARPANSA Graduate	60 280 – 67 448
APS Level 1	45 219 – 51 399
APS Level 2	52 940 – 58 117
APS Level 3	60 280 – 67 448
APS Level 4	69 472 – 72 595
APS Level 5	74 774 – 78 508
APS Level 6	80 863 – 92 494
Executive Level 1	99 897 – 114 941
Executive Level 2 lower	122 068 – 138 619
Executive Level 2 upper	144 162 – 154 839

**Table 2.2:** staff by location, gender and APS classification

Classification	SES		EL 2		EL 1	
	2017	2018	2017	2018	2017	2018
New South Wales						
Female	0	0	0	0	3	3
Male	2	1	5	3	6	7
Total	2	1	5	3	9	10
Victoria						
Female	1	1	5	4	10	8
Male	1	1	10	8	24	19
Total	2	2	15	12	34	27
Total						
Female	1	1	5	4	13	11
Male	3	2	15	11	30	26
Total	4	3	20	15	43	37

APS 6		APS 5		APS 4		APS 3		APS 2		APS 1		Graduate		Total	
2017	2018	2017	2018	2017	2018	2017	2018	2017	2018	2017	2018	2017	2018	2017	2018
New South Wales															
0	0	0	0	1	4	1	0	2	0	0	0	0	0	7	7
1	2	0	1	0	0	1	0	0	0	0	0	0	0	15	14
1	2	0	1	1	4	2	0	2	0	0	0	0	0	22	21
Victoria															
11	13	7	8	5	5	9	8	3	3	0	0	0	0	51	50
14	18	8	10	0	0	2	2	0	0	0	0	0	0	59	58
25	31	15	18	5	5	11	10	3	3	0	0	0	0	110	108
Total															
11	13	7	8	6	9	10	8	5	3	0	0	0	0	58	57
15	20	8	11	0	0	3	2	0	0	0	0	0	0	74	72
26	33	15	19	6	9	13	10	5	3	0	0	0	0	132	129

Table 2.3 shows that of the 129 employees (not including the CEO), 119 are ongoing and 10 are non-ongoing. Twelve ongoing staff are part-time and four non-ongoing employees are part time.

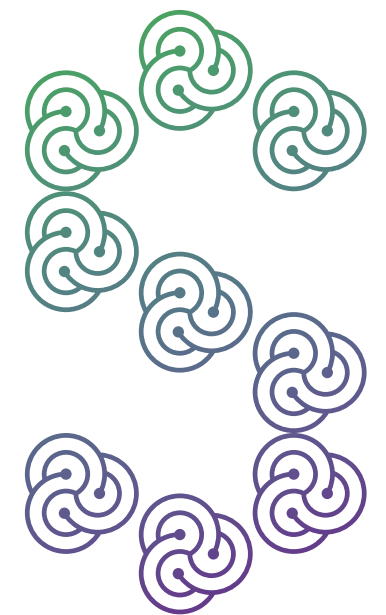
Table 2.4 shows that as at 30 June 2018 Radiation Health Services is the largest branch with 43 staff, followed by the Corporate Office (32), Medical Radiation Services (23), Regulatory Services (22) Office the CEO (8) and Legal Office (1).

**Table 2.3:** distribution of staff by full or part-time status

	Full-time ongoing		Full-time non-ongoing		Part-time ongoing		Part-time non-ongoing		Total	
	2017	2018	2017	2018	2017	2018	2017	2018	2017	2018
Female	46	41	3	3	8	10	1	3	58	57
Male	71	66	2	3	1	2	0	1	74	72
Total	117	107	5	6	9	12	1	4	132	129

**Table 2.4:** distribution of staff by branch/office

	Ongoing		Non-ongoing		Ongoing		Non-ongoing		Ongoing		Non-ongoing	
	2017	2018	2017	2018	2017	2018	2017	2018	2017	2018	2017	2018
Branch	Female				Male				Total			
Office of the CEO	4	3	0	0	6	5	0	0	10	8	0	0
Corporate Office	25	23	1	0	12	9	0	0	37	32	1	0
Legal Office	0	0	0	0	1	1	0	0	1	1	0	0
Medical Radiation Services	4	5	2	4	10	11	2	3	14	16	4	7
Radiation Health Services	14	13	1	2	27	27	0	1	41	40	1	3
Regulatory Services	7	7	0	0	16	15	0	0	23	22	0	0
Total	54	51	4	6	72	68	2	4	126	119	6	10



PART 5

## Financial statements



## INDEPENDENT AUDITOR'S REPORT

### To the Minister for Health

#### Opinion

In my opinion, the financial statements of the Australian Radiation Protection and Nuclear Safety Agency for the year ended 30 June 2018:

- comply with Australian Accounting Standards – Reduced Disclosure Requirements and the *Public Governance, Performance and Accountability (Financial Reporting) Rule 2015*; and
- present fairly the financial position of the Australian Radiation Protection and Nuclear Safety Agency as at 30 June 2018 and its financial performance and cash flows for the year then ended.

The financial statements of the Australian Radiation Protection and Nuclear Safety Agency, which I have audited, comprise the following statements as at 30 June 2018 and for the year then ended:

- Statement by the Accountable Authority and Chief Financial Officer;
- Statement of Comprehensive Income;
- Statement of Financial Position;
- Statement of Changes in Equity;
- Cash Flow Statement; and
- Notes to the financial statements, comprising a Summary of Significant Accounting Policies and other explanatory information.

#### Basis for Opinion

I conducted my audit in accordance with the Australian National Audit Office Auditing Standards, which incorporate the Australian Auditing Standards. My responsibilities under those standards are further described in the *Auditor's Responsibilities for the Audit of the Financial Statements* section of my report. I am independent of the Australian Radiation Protection and Nuclear Safety Agency in accordance with the relevant ethical requirements for financial statement audits conducted by the Auditor-General and his delegates. These include the relevant independence requirements of the Accounting Professional and Ethical Standards Board's APES 110 *Code of Ethics for Professional Accountants* to the extent that they are not in conflict with the *Auditor-General Act 1997* (the Code). I have also fulfilled my other responsibilities in accordance with the Code. I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my opinion.

#### Accountable Authority's Responsibility for the Financial Statements

As the Accountable Authority of the Australian Radiation Protection and Nuclear Safety Agency the Chief Executive Officer is responsible under the *Public Governance, Performance and Accountability Act 2013* for the preparation and fair presentation of annual financial statements that comply with Australian Accounting Standards – Reduced Disclosure Requirements and the rules made under that Act. The Chief Executive Officer is also responsible for such internal control as the Chief Executive Officer determines is necessary to enable the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the Chief Executive Officer is responsible for assessing the Australian Radiation Protection and Nuclear Safety Agency's ability to continue as a going concern, taking into account whether the entity's operations will cease as a result of an administrative restructure or for any other reason. The Chief Executive Officer is also responsible for disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the assessment indicates that it is not appropriate.

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#### Auditor's Responsibilities for the Audit of the Financial Statements

My objective is to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes my opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with the Australian National Audit Office Auditing Standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of the financial statements.

As part of an audit in accordance with the Australian National Audit Office Auditing Standards, I exercise professional judgement and maintain professional scepticism throughout the audit. I also:

- identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for my opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control;
- obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control;
- evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the Accountable Authority;
- conclude on the appropriateness of the Accountable Authority's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the entity's ability to continue as a going concern. If I conclude that a material uncertainty exists, I am required to draw attention in my auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify my opinion. My conclusions are based on the audit evidence obtained up to the date of my auditor's report. However, future events or conditions may cause the entity to cease to continue as a going concern; and
- evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

I communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that I identify during my audit.

Australian National Audit Office

Josephine Bushell

Delegate of the Auditor-General

Canberra

10 September 2018

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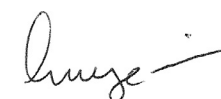
## Statement by the Accountable Authority and Chief Financial Officer

In our opinion, the attached financial statements for the year ended 30 June 2018 comply with subsection 42(2) of the *Public Governance, Performance and Accountability Act 2013* (PGPA Act), and are based on properly maintained financial records as per subsection 41(2) of the PGPA Act.

In our opinion, at the date of this statement, there are reasonable grounds to believe that the Australian Radiation Protection and Nuclear Safety Agency will be able to pay its debts as and when they fall due.



Carl-Magnus Larsson  
Accountable Authority  
7 September 2018



George Savvides  
Chief Financial Officer  
7 September 2018

## Statement of comprehensive income

for the period ended 30 June 2018

	Notes	2018 \$	Original budget 2018 \$	2017 \$
<b>Net cost of services</b>				
<b>Expenses</b>				
Employee benefits	1.1A	16,454,029	16,498,000	16,907,750
Suppliers	1.1B	7,171,373	6,053,000	8,377,116
Depreciation and amortisation	2.2A	2,907,501	2,570,000	2,625,505
Write-down and impairment of assets	1.1C	176,552	-	20,601
Foreign exchange loss	1.1D	844	-	11
<b>Total expenses</b>		<b>26,710,299</b>	25,121,000	27,930,983
<b>Own source income</b>				
<b>Own-source revenue</b>				
Sale of goods and rendering of services	1.2A	7,109,324	5,275,000	6,909,690
Licence fees	1.2B	4,300,519	4,437,000	4,342,224
Other revenue	1.2C	54,000	-	54,000
<b>Total own-source revenue</b>		<b>11,463,843</b>	9,712,000	11,305,914
<b>Gains</b>				
Reversal of write-downs	1.2D	-	-	39,810
<b>Total gains</b>		-	-	39,810
<b>Total own-source income</b>		<b>11,463,843</b>	9,712,000	11,345,724
<b>Net cost of services</b>		<b>15,246,456</b>	15,409,000	16,585,259
<b>Revenue from Government</b>				
Revenue from Government	1.2E	12,839,000	12,839,000	13,049,000
<b>Deficit on continuing operations</b>		<b>(2,407,456)</b>	(2,570,000)	(3,536,259)
<b>Other comprehensive income</b>				
<b>Items not subject to subsequent reclassification to net cost of services</b>				
Changes in asset revaluation surplus		2,291,410	-	2,576,857
<b>Total other comprehensive income</b>		<b>2,291,410</b>	-	2,576,857
<b>Total comprehensive income attributable to the Australian Government</b>		<b>(116,046)</b>	(2,570,000)	(959,402)

The above statement should be read in conjunction with the accompanying notes.

## Statement of comprehensive income (continued)

for the period ended 30 June 2018

### Budget variances commentary

The above table provides a comparison between the 2017–18 Portfolio Budget Statements (PBS) budget and the final financial outcome in the 2017–18 financial statements. The Budget is not audited and does not reflect additional budget estimates provided in the 2017–18 Portfolio Additional Estimates Statements (PAES) or the revised budget provided as part of the 2018–19 Portfolio Budget Statements (PBS). However major changes in budget have been explained as part of the variance analysis where relevant.

The actuals are prepared in accordance with Australian Accounting Standards.

Explanations have been provided where movements are greater than 10% of the line item and/or 2% of total income or expense unless the movement is clearly trivial.

### Departmental major budget variances for 2018

Explanations of major variances	Affected line items (and statement)
<b>Suppliers</b>	
Increase in suppliers expense relates in part to the provision for the rectification and remediation of a legacy radiation site, and the continuation of the Australian Clinical Dosimetry Service. These were not included in the Budget estimate. The Australian Clinical Dosimetry Service expense increase is offset by the related increase in revenue.	Suppliers expense and total own source revenue (statement of comprehensive income) operating cash used - suppliers (cash flow statement).
<b>Depreciation</b>	
Increase in building depreciation expense is a result of an increase in building valuation, not estimated at budget.	Depreciation expense (statement of comprehensive income), land and building (statement of financial position).
<b>Own source revenue</b>	
<b>Sale of good and services and licence fees</b>	
Overall, the increase in sale of goods and rendering of services revenue relates to the Australian Clinical Dosimetry Service. This increase in revenue is offset by the related increase in suppliers expense.	Total own source revenue and suppliers expense (statement of comprehensive income), operating cash received - sale of goods and rendering of services (cash flow statement).
<b>Total other comprehensive income</b>	
The variance of \$2,291,410 relates to the unbudgeted independent revaluation of land and buildings in 2018 and 2017, and leasehold improvements and plant and equipment in 2017.	Total other comprehensive income (statement of comprehensive income), land and building (statement of financial position).

## Statement of financial position

as at 30 June 2018

	Notes	2018 \$	Original budget 2018 \$	2017 \$
<b>Assets</b>				
<b>Financial assets</b>				
Cash and cash equivalents	2.1A	1,100,443	1,210,000	1,142,627
Trade and other receivables	2.1B	6,639,882	933,000	1,924,699
Other financial assets	2.1C	130,686	83,000	82,593
<b>Total financial assets</b>		<b>7,871,011</b>	2,226,000	3,149,919
<b>Non-financial assets</b>				
Land and buildings	2.2A	28,294,740	24,223,000	26,760,433
Leasehold improvements	2.2A	152,936	-	233,675
Plant and equipment	2.2A	6,870,375	10,894,000	6,489,230
Intangibles	2.2A	1,011,347	1,483,000	1,351,980
Inventories	2.2B	1,389,190	1,533,000	1,480,107
Other non-financial assets	2.2C	586,169	436,000	578,328
<b>Total non-financial assets</b>		<b>38,304,757</b>	38,569,000	36,893,753
<b>Total assets</b>		<b>46,175,768</b>	40,795,000	40,043,672
<b>Liabilities</b>				
<b>Payables</b>				
Suppliers	2.3A	878,827	-	1,306,761
Other payables	2.3B	1,577,193	1,159,000	1,670,398
<b>Total payables</b>		<b>2,456,020</b>	1,159,000	2,977,159
<b>Provisions</b>				
Employee provisions	4.1	4,564,755	4,545,000	4,750,474
<b>Total provisions</b>		<b>4,564,755</b>	4,545,000	4,750,474
<b>Total liabilities</b>		<b>7,020,775</b>	5,704,000	7,727,633
<b>Net assets</b>		<b>39,154,993</b>	35,091,000	32,316,039
<b>Equity</b>				
Contributed equity		28,561,000	28,561,000	21,606,000
Reserves		19,477,693	14,609,000	17,186,283
Retained surplus/(accumulated deficit)		(8,883,700)	(8,079,000)	(6,476,244)
<b>Total equity</b>		<b>39,154,993</b>	35,091,000	32,316,039

The above statement should be read in conjunction with the accompanying notes.

## Statement of financial position (continued)

as at 30 June 2018

### Budget variances commentary

The above table provides a comparison between the 2017–18 Portfolio Budget Statements (PBS) budget and the final financial outcome in the 2017–18 financial statements. The Budget is not audited and does not reflect additional budget estimates provided in the 2017–18 Portfolio Additional Estimates Statements (PAES) or the revised budget provided as part of the 2018–19 Portfolio Budget Statements (PBS). However major changes in budget have been explained as part of the variance analysis where relevant.

The actuals are prepared in accordance with Australian Accounting Standards.

Explanations have been provided where movements are greater than 10% of the line item and/or 2% of total assets or liabilities unless the movement is clearly trivial.

### Departmental major budget variances for 2018

Explanations of major variances	Affected line items (and statement)
<b>Trade and other receivables</b> The variance relates to the difference in actual and budgeted appropriation receivable, resulting from lower than budgeted fixed asset expenditure.	<i>Trade and other receivables (statement of financial position), operating cash received - appropriations (cash flow statement), investing cash used - purchase of property plant and equipment and financing cash received - contributed equity (cash flow statement).</i>
<b>Land and buildings</b> The variance relates to the independent revaluation of land and buildings in 2018 and 2017, since the budget was prepared.	<i>Land and buildings and reserves (statement of financial position).</i>
<b>Leasehold improvements</b> Leasehold improvement are not separately identified in the budget, and were subject to independent revaluation at 30 June 2017.	<i>Leasehold improvements and reserves (statement of financial position).</i>
<b>Plant and equipment</b> The variance relates to lower than budgeted fixed asset expenditure, primarily relating to the medical linear accelerator project. Project completion is now expected in 2018/19.	<i>Plant and equipment and trade and other receivables (statement of financial position) and investing cash used - purchase of property plant and equipment and financing cash received - contributed equity (cash flow statement).</i>
<b>Intangibles</b> The variance relates to a reprioritisation of digital investment away from software toward refreshing the core infrastructure.	<i>Intangibles and trade and other receivables (statement of financial position) and investing cash used - purchase of property plant and equipment (cash flow statement).</i>
<b>Other non-financial assets</b> Actual prepaid expenses were higher than budgeted, and relate primarily to the Integrated Regulatory Review Service (IRRS) mission.	<i>Non-financial assets (statement of financial position).</i>
<b>Payables</b> <b>Suppliers and other payables</b> The increase in payables relates in part to the rectification and remediation of a legacy radiation site, and to unearned revenue associated with the Australian Clinical Dosimetry Service.	<i>Payables (statement of financial position), suppliers expense and total own source revenue (statement of comprehensive income).</i>

## Statement of changes in equity

for the period ended 30 June 2018

	2018 \$	Original budget 2018 \$	2017 \$
<b>Contributed equity</b>			
<b>Opening balance</b>			
Balance carried forward from previous period	21,606,000	21,606,000	19,482,000
<b>Adjusted opening balance</b>	21,606,000	21,606,000	19,482,000
<b>Transactions with owners</b>			
<b>Contributions by owners</b>			
Departmental capital budget	1,955,000	1,955,000	2,124,000
Equity injection - appropriation	5,000,000	5,000,000	-
<b>Total transactions with owners</b>	6,955,000	6,955,000	2,124,000
<b>Closing balance as at 30 June</b>	28,561,000	28,561,000	21,606,000

## Retained earnings

<b>Opening balance</b>			
Balance carried forward from previous period	(6,476,244)	(5,509,000)	(2,939,985)
<b>Adjusted opening balance</b>	(6,476,244)	(5,509,000)	(2,939,985)

## Comprehensive income

Deficit for the period	(2,407,456)	(2,570,000)	(3,536,259)
<b>Total comprehensive income</b>	(2,407,456)	(2,570,000)	(3,536,259)
<b>Closing balance as at 30 June</b>	(8,883,700)	(8,079,000)	(6,476,244)

## Asset revaluation reserve

<b>Opening balance</b>			
Balance carried forward from previous period	17,186,283	14,609,000	14,609,426
<b>Adjusted opening balance</b>	17,186,283	14,609,000	14,609,426

## Comprehensive income

Other comprehensive income	2,291,410	-	2,576,857
<b>Total comprehensive income</b>	2,291,410	-	2,576,857
<b>Closing balance as at 30 June</b>	19,477,693	14,609,000	17,186,283

## Statement of changes in equity (continued)

for the period ended 30 June 2018

	2018 \$	Original budget 2018 \$	2017 \$
<b>Total equity</b>			
<b>Opening balance</b>			
Balance carried forward from previous period	32,316,039	30,706,000	31,151,441
<b>Adjusted opening balance</b>	32,316,039	30,706,000	31,151,441
<b>Comprehensive income</b>			
Other comprehensive income	2,291,410	-	2,576,857
Deficit for the period	(2,407,456)	(2,570,000)	(3,536,259)
<b>Total comprehensive income</b>	(116,046)	(2,570,000)	(959,402)
<b>Transactions with owners</b>			
<b>Contributions by owners</b>			
Departmental capital budget	1,955,000	1,955,000	2,124,000
Equity injection - appropriation	5,000,000	5,000,000	-
<b>Total transactions with owners</b>	6,955,000	6,955,000	2,124,000
<b>Closing balance as at 30 June</b>	39,154,993	35,091,000	32,316,039

The above statement should be read in conjunction with the accompanying notes.

## Accounting policy

### Equity injections

Amounts appropriated which are designated as 'equity injections' for a year (less any formal reductions) and departmental capital budgets (DCBs) are recognised directly in contributed equity in that year.

### Restructuring of administrative arrangements

Net assets received from or relinquished to another Government entity under a restructuring of administrative arrangements are adjusted at their book value directly against contributed equity.

## Statement of changes in equity (continued)

for the period ended 30 June 2018

### Budget variances commentary

The above table provides a comparison between the 2017–18 Portfolio Budget Statements (PBS) budget and the final financial outcome in the 2017–18 financial statements. The Budget is not audited and does not reflect additional budget estimates provided in the 2017–18 Portfolio Additional Estimates Statements (PAES) or the revised budget provided as part of the 2018–19 Portfolio Budget Statements (PBS). However major changes in budget have been explained as part of the variance analysis where relevant.

The actuals are prepared in accordance with Australian Accounting Standards.

### Departmental major budget variances for 2018

#### Explanations of major variances

##### Asset revaluation reserves

Increase relates to the actual independent revaluation of land and buildings in 2018 and 2017, and leasehold improvements and plant and equipment in 2017, since the budget was prepared.

#### Affected line items (and statement)

*Land and buildings, leasehold improvements and plant and equipment and reserves (statement of financial position).*

## Cash flow statement

for the period ended 30 June 2018

	Notes	2018 \$	Original budget 2018 \$	2017 \$
<b>Operating activities</b>				
<b>Cash received</b>				
Appropriations		12,420,000	12,839,000	13,049,000
Sales of goods and rendering of services		7,901,916	4,790,000	7,398,691
Other cash received		4,300,519	4,437,000	4,342,224
Net GST received		191,132	485,000	100,988
<b>Total cash received</b>		<b>24,813,567</b>	22,551,000	24,890,903
<b>Cash used</b>				
Employees		(17,049,713)	(16,498,000)	(16,127,761)
Suppliers		(8,403,685)	(5,370,000)	(8,213,497)
Net GST paid		-	(683,000)	-
<b>Total cash used</b>		<b>(25,453,398)</b>	(22,551,000)	(24,341,258)
<b>Net cash (used by)/from operating activities</b>		<b>(639,831)</b>	-	549,645
<b>Investing activities</b>				
<b>Cash used</b>				
Purchase of property, plant, equipment and intangibles		(2,253,353)	(6,955,000)	(1,990,320)
<b>Total cash used</b>		<b>(2,253,353)</b>	(6,955,000)	(1,990,320)
<b>Net cash (used by) investing activities</b>		<b>(2,253,353)</b>	(6,955,000)	(1,990,320)
<b>Financing activities</b>				
<b>Cash received</b>				
Contributed equity - Departmental capital budget		1,651,000	1,955,000	1,373,000
Contributed equity - Equity injection		1,200,000	5,000,000	-
<b>Total cash received</b>		<b>2,851,000</b>	6,955,000	1,373,000
<b>Net cash from financing activities</b>		<b>2,851,000</b>	6,955,000	1,373,000
<b>Net (decrease)/increase in cash held</b>		<b>(42,184)</b>	-	(67,675)
Cash and cash equivalents at the beginning of the reporting period		1,142,627	1,210,300	1,210,302
<b>Cash and cash equivalents at the end of the reporting period</b>	2.1A	<b>1,100,443</b>	1,210,300	1,142,627

The above statement should be read in conjunction with the accompanying notes.

Cash flow statement (continued)  
for the period ended 30 June 2018

Budget variances commentary

The above table provides a comparison between the 2017–18 Portfolio Budget Statements (PBS) budget and the final financial outcome in the 2017–18 financial statements. The Budget is not audited and does not reflect additional budget estimates provided in the 2017–18 Portfolio Additional Estimates Statements (PAES) or the revised budget provided as part of the 2018–19 Portfolio Budget Statements (PBS). However major changes in budget have been explained as part of the variance analysis where relevant.

The actuals are prepared in accordance with Australian Accounting Standards.

Explanations have been provided where movements are greater than 10% of the line item and/or 2% of total cash received or used unless the movement is clearly trivial.

Departmental major budget variances for 2018

Explanations of major variances

Variances relating to cash flows occur because of the factors detailed under expenses, own source income, assets or liabilities.

Contributed equity

Variance of \$4,104,000 for the current year relates to the undrawn Appropriations. These funds remain available to ARPANSA to utilise in future years.

Affected line items (and statement)

Operating, investing, financing activities (cash flow statement)

Financing activities (cash flow statement), trade and other receivables (statement of financial position)

Overview

Objectives of the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA)

ARPANSA is an Australian Government-controlled not-for-profit entity. It is a non-corporate Commonwealth entity under the Public Governance Performance and Accountability Act 2013. The objectives of ARPANSA are to: protect people and the environment from the harmful effects of radiation.

The entity is structured to meet one outcome:

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

The continued existence of the entity in its present form and with its present programs is dependent on Government policy and on continuing funding by Parliament for the entity’s administration and programs.

ARPANSA’s activities contributing toward the outcome are classified as departmental. Departmental activities involve the use of assets, liabilities, income and expenses controlled or incurred by the entity in its own right.

Basis of preparation of the financial report

The financial statements are general purpose financial statements and are required by section 42 of the Public Governance Performance and Accountability Act 2013.

The financial statements and notes have been prepared in accordance with:

- a) Public Governance, Performance and Accountability (Financial Reporting) Rule 2015 (FRR); and
- b) Australian Accounting Standards and Interpretations - Reduced Disclosure Requirements issued by the Australian Accounting Standards Board (AASB) that apply for the reporting period.

The financial statements have been prepared on an accrual basis and are in accordance with historical cost convention, except for certain assets and liabilities at fair value. Except where stated, no allowance is made for the effect of changing prices on the results or the financial position. The financial statements are presented in Australian dollars.

Accounting judgements and estimates

In the process of applying the accounting policies listed in this note, ARPANSA have made the following judgements that have the most significant impact on the amounts recorded in the financial statements:

- the fair value of land and buildings is taken to be the market value and depreciated replacement cost respectively as determined by an independent valuer
- the long service leave liability is calculated using the shorthand method developed by the Australian Government Actuary. This method is impacted by fluctuations in the Commonwealth Government 10 year Treasury Bond rate and the Entity’s estimated salary growth rates.

No accounting assumptions or estimates have been identified that have a significant risk of causing a material adjustment to carrying amounts of assets and liabilities within the next accounting period.

### Future Australian Accounting Standard requirements

The following new standards, revised or amending standards and interpretations that were issued prior to the signing of the statement by the Accountable Authority and Chief Financial Officer and are applicable to the future reporting period are expected to have an effect on the Entity's financial statements.

Standard/ interpretation	Application date for entity	Nature of impending changes in accounting policy and likely impact on initial application
AASB 9 <i>Financial Instruments</i>	1 July 2018	Incorporates the final requirements for all three phases of the financial instruments project: classification and measurement, impairments and hedge accounting.  Likely impact - the classification of financial assets.
AASB 15 <i>Revenue from contracts with customers</i>	1 July 2019	Specifies the accounting treatment for all revenue arising from contracts with customers.  Likely impact - the timing of revenue recognition
AASB 16 <i>Leases</i>	1 July 2019	Requires lessees to recognise almost all leases as assets and liabilities.  Likely impact - recognition of lease on the statement of financial position

### Taxation

The entity is exempt from all forms of taxation except Fringe Benefits Tax (FBT) and the Goods and Services Tax (GST).

Revenues, expenses and assets are recognised net of GST, except:

- a) where the amount of GST incurred is not recoverable from the Australian Taxation Office
- b) for receivables and payables.

### Events after the reporting period

There have been no significant subsequent events after the reporting period that impact on the financial statement for the year ended 30 June 2018.

## Notes to and forming part of the financial statements

for the period ended 30 June 2018

### Financial performance

This section analyses the financial performance of ARPANSA for the year ended 2018

	2018 \$	2017 \$
--	------------	------------

### NOTE 1.1: EXPENSES

#### Note 1.1A: Employee benefits

Wages and salaries	11,788,021	12,019,559
Superannuation - defined contribution	1,809,559	1,890,724
Superannuation - defined benefit	484,235	464,577
Leave and other entitlements	2,207,378	2,303,767
Separation and redundancies	164,836	229,123
Total employee benefits	16,454,029	16,907,750

### Accounting policy

Accounting policies for employee-related expenses are contained in the people and relationships section.

## Notes to and forming part of the financial statements

for the period ended 30 June 2018

	2018 \$	2017 \$
<b>Note 1.1B: Suppliers</b>		
<b>Goods and services supplied or rendered</b>		
Audit fees - ANAO	54,000	54,000
Audit fees - outsourced	93,196	116,426
Advisory council and committees	118,960	101,789
Communications	320,964	450,991
Construction and maintenance - Comprehensive nuclear test ban treaty	655,133	601,719
Contractors/consultants	591,938	1,081,764
Demolition and remediation	153,433	698,105
Information technology	861,259	806,620
Postage and freight	212,277	189,808
Reference material & subscriptions	353,875	320,454
Repair and maintenance	578,315	599,530
Training and conferences	219,188	332,105
Travel	1,070,486	1,163,179
Utilities	544,539	436,541
Other goods and services	1,051,650	1,145,000
<b>Total goods and services supplied or rendered</b>	<b>6,879,213</b>	<b>8,098,031</b>
Goods supplied	1,394,857	1,821,560
Services rendered	5,484,356	6,276,471
<b>Total goods and services supplied or rendered</b>	<b>6,879,213</b>	<b>8,098,031</b>
<b>Other supplier expenses</b>		
Operating lease rentals	250,721	246,161
Workers compensation premiums	41,439	32,924
<b>Total other supplier expenses</b>	<b>292,160</b>	<b>279,085</b>
<b>Total supplier expenses</b>	<b>7,171,373</b>	<b>8,377,116</b>

## Notes to and forming part of the financial statements

for the period ended 30 June 2018

	2018 \$	2017 \$
<b>Leasing commitments</b>		
ARPANSA in its capacity as lessee:		
<b>Lease for office accommodation</b>		
- Four year office accommodation lease with two further extension options of two years each. Lease payments are subject to an annual CPI increase.		
<b>Agreement for the provision of motor vehicle to senior executive officers.</b>		
- No contingent rentals exist. There are no renewal or purchase options available to the agency		
<b>Commitments for minimum lease payments in relation to non-cancellable operating leases are payable as follows:</b>		
Within 1 year	249,374	243,622
Between 1 to 5 years	168,898	390,542
<b>Total operating lease commitments</b>	<b>418,272</b>	<b>634,164</b>

### Accounting policy

A distinction is made between finance leases and operating leases. Finance leases effectively transfer from the lessor to the lessee substantially all the risks and rewards incidental to ownership of leased assets. An operating lease is a lease that is not a finance lease. In operating leases, the lessor effectively retains substantially all such risks and benefits.

Operating lease payments are expensed on a straight-line basis which is representative of the pattern of benefits derived from the leased assets.

### Note 1.1C: Write-down and impairment of assets

Impairment on financial assets	10,429	1,173
Property, plant and equipment - write-off	30,710	18,468
Computer software - write-off	112,472	-
Inventories - write-off	22,941	960
<b>Total write-down and impairment of assets</b>	<b>176,552</b>	<b>20,601</b>

### Note 1.1D: Foreign exchange losses

Non-speculative	844	11
<b>Total foreign exchange losses</b>	<b>844</b>	<b>11</b>

### Accounting policy

Gains and losses from foreign currency are recognised when incurred.

## Notes to and forming part of the financial statements

for the period ended 30 June 2018

	2018 \$	2017 \$
<b>NOTE 1.2: OWN-SOURCE REVENUE AND GAINS</b>		
<i>Own-source revenue</i>		
<b>Note 1.2A: Sale of goods and rendering of services</b>		
Scientific services - Personal Radiation Monitoring Service	<b>2,428,366</b>	2,284,252
Construction and maintenance - Comprehensive Nuclear-Test-Ban Treaty	<b>1,848,859</b>	1,769,831
Australian Clinical Dosimetry Service	<b>1,290,003</b>	1,468,514
Other scientific services	<b>1,542,096</b>	1,387,093
<b>Total sale of goods and rendering of services</b>	<b>7,109,324</b>	6,909,690

### Accounting policy

Revenue from the sale of goods is recognised when:

- the risks and rewards of ownership have been transferred to the buyer
- the entity retains no managerial involvement nor effective control over the goods
- the revenue and transaction costs incurred can be reliably measured
- it is probable that the economic benefits associated with the transaction will flow to the entity.

Revenue from rendering of services is recognised by reference to the stage of completion of contracts at the reporting date.

The revenue is recognised when:

- the amount of revenue, stage of completion and transaction costs incurred can be reliably measured
- the probable economic benefits associated with the transaction will flow to the entity.

The stage of completion of contracts at the reporting date is determined by reference to the proportion that costs incurred to date bear to the estimated total costs of the transaction.

Receivables for goods and services, which have 30 day terms, are recognised at the nominal amounts due less any impairment allowance account. Collectability of debts is reviewed at end of reporting period. Allowances are made when collectability of the debt is no longer probable.

### Note 1.2B: Licence fees

Application fees	<b>12,677</b>	150,704
Annual charges	<b>4,287,842</b>	4,191,520
<b>Total licence fees</b>	<b>4,300,519</b>	4,342,224

### Accounting policy

Under paragraph 34(b) of the *Australian Radiation Protection and Nuclear Safety Act 1998*, an application for a licence must be accompanied by a fee prescribed in the regulations. Revenue for licence applications is recognised when an application for a licence is received.

## Notes to and forming part of the financial statements

for the period ended 30 June 2018

	2018 \$	2017 \$
<b>Note 1.2C: Other revenue</b>		
Resources received free of charge - ANAO	<b>54,000</b>	54,000
<b>Total other revenue</b>	<b>54,000</b>	54,000

### Accounting policy

Resources received free of charge are recognised as revenue when and only when a fair value can be reliably determined and the services would have been purchased if they had not been donated. Use of those resources is recognised as an expense.

Resources received free of charge are recorded as either revenue or gains depending on their nature.

### Gains

#### Note 1.2D: Reversal of write-downs

Revaluation increments	-	39,810
<b>Total gains</b>	-	39,810

### Accounting policy

Revaluation adjustments are made on a class basis. Any revaluation increment is credited to equity under the heading of asset revaluation reserve except to the extent that it reverses a previous revaluation decrement of the same asset class that was previously recognised in the surplus/deficit. Revaluation decrements for a class of assets are recognised directly in the surplus/deficit except to the extent that they reverse a previous revaluation increment for that class (note 2.2 refers).

### Revenue from Government

#### Note 1.2E: Revenue from government

##### Appropriation:

Departmental appropriation	<b>12,839,000</b>	13,049,000
<b>Total revenue from government</b>	<b>12,839,000</b>	13,049,000

### Accounting policy

Amounts appropriated for departmental appropriations for the year (adjusted for any formal additions and reductions) are recognised as revenue from Government when the entity gains control of the appropriation, except for certain amounts that relate to activities that are reciprocal in nature, in which case revenue is recognised only when it has been earned.

Section 56 (3) of the *Australian Radiation Protection and Nuclear Safety Act 1998*, requires that money appropriated by the Parliament be transferred to the special account (notes 2.1A and 3.2 refer).

Appropriations receivable are recognised at their nominal amounts.

## Notes to and forming part of the financial statements

for the period ended 30 June 2018

### Financial position

This section analyses ARPANSA's assets used to conduct its operations and the operating liabilities incurred as a result for the year ended 2018. Employee related information is disclosed in the people and relationships section.

	2018 \$	2017 \$
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### NOTE 2.1: FINANCIAL ASSETS

#### Note 2.1A: Cash and cash equivalents

Cash in special accounts	1,094,061	1,132,041
Cash on hand or on deposit	6,382	10,586
<b>Total cash and cash equivalents</b>	<b>1,100,443</b>	<b>1,142,627</b>

#### Accounting policy

Cash is recognised at its nominal amount. Cash and cash equivalents includes:

- a) cash on hand
- b) cash at bank
- c) cash in special accounts.

#### Note 2.1B: Trade and other receivables

##### Goods and services receivables

Goods and services	1,332,951	1,039,796
<b>Total goods and services receivables</b>	<b>1,332,951</b>	<b>1,039,796</b>

##### Appropriations receivable:

For existing program	419,000	-
Undrawn equity injection	3,800,000	-
Departmental capital budget	1,055,000	751,000
<b>Total appropriations receivable</b>	<b>5,274,000</b>	<b>751,000</b>

##### Other receivables

Statutory receivables - GST	52,925	148,363
<b>Total other receivables</b>	<b>52,925</b>	<b>148,363</b>
<b>Total trade and other receivables (gross)</b>	<b>6,659,876</b>	<b>1,939,159</b>

## Notes to and forming part of the financial statements

for the period ended 30 June 2018

	2018 \$	2017 \$
<b>Less impairment allowance account</b>		
Goods and services	(19,994)	(14,460)
<b>Total trade and other receivables (net)</b>	<b>6,639,882</b>	<b>1,924,699</b>

Goods and services receivable was with entities external to the Australian Government.  
Credit terms are net 30 days (2017: 30 days)

#### Accounting policy

##### Receivables

Trade receivables, and other receivables that have fixed or determinable payments that are not quoted in an active market are classified as 'receivables'. Receivables are measured at amortised cost using the effective interest method less impairment. Interest is recognised by applying the effective interest rate.

#### Reconciliation of impairment allowance

##### Goods and services

<b>Opening balance</b>	<b>14,460</b>	15,576
Amounts recovered and reversed	974	-
Amounts written off	(5,869)	(2,289)
Increase/decrease recognised in net cost of services	10,429	1,173
<b>Closing balance</b>	<b>19,994</b>	<b>14,460</b>

#### Note 2.1C: Other financial assets

Accrued revenue	130,686	82,593
<b>Total other financial assets</b>	<b>130,686</b>	<b>82,593</b>

Total other financial assets are expected to be recovered in no more than 12 months.

#### Accounting policy

Financial assets are assessed for impairment at the end of each reporting period.

## Notes to and forming part of the financial statements

for the period ended 30 June 2018

### NOTE 2.2: NON-FINANCIAL ASSETS

#### Note 2.2A: Reconciliation of the opening and closing balances of property, plant and equipment

Reconciliation of the opening and closing balances of property, plant and equipment for 2018

	Land \$	Buildings \$	Leasehold improvements \$	PP & E \$	Computer software <sup>1</sup> \$	Other intangibles - trademarks \$	Total \$
<b>As at 1 July 2017</b>							
Gross book value	9,000,000	17,760,433	233,675	6,489,230	3,899,186	4,620	37,387,144
Accumulated depreciation and impairment	-	-	-	-	(2,547,206)	(4,620)	(2,551,826)
<b>Net book value 1 July 2017</b>	<b>9,000,000</b>	<b>17,760,433</b>	<b>233,675</b>	<b>6,489,230</b>	<b>1,351,980</b>	<b>-</b>	<b>34,835,318</b>
Additions:							
By purchase	-	232,280	6,780	1,939,943	74,350	-	2,253,353
Revaluations and impairments recognised in other comprehensive income	1,500,000	791,410			-	-	2,291,410
Depreciation and amortisation	-	(989,383)	(87,519)	(1,528,088)	(302,511)	-	(2,907,501)
Disposals:							-
Write-offs	-	-	-	(30,710)	(112,472)	-	(143,182)
<b>Net book value 30 June 2018</b>	<b>10,500,000</b>	<b>17,794,740</b>	<b>152,936</b>	<b>6,870,375</b>	<b>1,011,347</b>	<b>-</b>	<b>36,329,398</b>
<b>Net book value as of 30 June 2018 represented by:</b>							
Gross book value	10,500,000	17,794,740	240,455	8,383,573	3,804,154	4,620	40,727,542
Accumulated depreciation and impairment	-	-	(87,519)	(1,513,198)	(2,792,807)	(4,620)	(4,398,144)
<b>Net book value 30 June 2018</b>	<b>10,500,000</b>	<b>17,794,740</b>	<b>152,936</b>	<b>6,870,375</b>	<b>1,011,347</b>	<b>-</b>	<b>36,329,398</b>

1 The carrying amount of computer software included \$483,225 purchased software and \$528,121 internally developed software.

There were no indicators of impairment found for property, plant and equipment.

No property plant and equipment or intangibles are expected to be sold or disposed of within the next 12 months.

#### Revaluations of non-financial assets

All revaluation were conducted in accordance with the revaluation policy as stated in this note. On 30 June 2018, an independent valuer conducted revaluations of land and buildings.

## Notes to and forming part of the financial statements

for the period ended 30 June 2018

### Accounting policy

Assets are recorded at cost on acquisition except as stated below. The cost of acquisition includes the fair value of assets transferred in exchange and liabilities undertaken.

Assets acquired at no cost, or for nominal consideration, are initially recognised as assets and income at their fair value at the date of acquisition, unless acquired as a consequence of restructuring of administrative arrangements. In the latter case, assets are initially recognised as contributions by owners at the amounts at which they were recognised in the transferor's accounts immediately prior to the restructuring.

### Asset recognition threshold

Purchases of property, plant and equipment are recognised initially at cost in the Statement of Financial Position, except for purchases costing less than \$2,000, which are expensed in the year of acquisition (other than where they form part of a group of similar items which are significant in total).

### Revaluations

Following initial recognition at cost, property plant and equipment is carried at fair value. Valuations are conducted with sufficient frequency to ensure that the carrying amounts of assets do not differ materially from the assets' fair values as at the reporting date. The regularity of independent valuations depends upon the volatility of movements in market values for the relevant assets.

Revaluation adjustments are made on a class basis. Any revaluation increment is credited to equity under the heading of asset revaluation reserve except to the extent that it reverses a previous revaluation decrement of the same asset class that was previously recognised in the surplus/deficit. Revaluation decrements for a class of assets are recognised directly in the surplus/deficit except to the extent that they reverse a previous revaluation increment for that class.

Any accumulated depreciation as at the revaluation date is eliminated against the gross carrying amount of the asset and the asset restated to the revalued amount.

Fair values for each class of asset are determined as shown below:

Asset class	Fair value measures at:
Land	Market value
Buildings exc. leasehold improvement	Depreciated replacement cost
Leasehold improvements	Depreciated replacement cost
Plant and equipment	Market value

Independent valuers from the Jones Lang LaSalle Advisory Services Pty Ltd conducted a valuation of land and buildings on 30 June 2018 and of land and buildings, leasehold improvements and plant and equipment on 30 June 2017.

Revaluation increments of \$1,500,000 for land (2017: 1,500,000), \$791,410 for buildings on freehold land (2017: \$738,133), nil for leasehold improvements (2017: 29,411) and nil for plant and equipment (2017: \$309,313) were transferred to the asset revaluation reserve surplus by asset class and included in the equity section of the statement of financial position.

A revaluation increment of \$39,810 in 2017 for plant and equipment reversed a revaluation decrement of \$39,810 previously recognised in the surplus/deficit.

## Notes to and forming part of the financial statements

for the period ended 30 June 2018

### Depreciation

Depreciable property plant and equipment assets, are written-off to their estimated residual values over their estimated useful lives to ARPANSA, using the straight-line method of depreciation. Leasehold improvements are depreciated using the straight line method over the lesser of the estimated useful life of the leasehold improvements or the unexpired period of the lease.

Depreciation rates (useful lives), residual values and methods are reviewed at each reporting date and necessary adjustments are recognised in the current, or current and future reporting periods, as appropriate.

Depreciation rates applying to each class of depreciable asset are based on the following useful lives:

	2018	2017
Buildings on freehold land	17 years	18 years
Leasehold improvements	Lease term - 4 years	Lease term - 4 years
Plant and equipment	1 to 45 years	1 to 45 years

### Impairment

All assets were assessed for impairment at 30 June 2018. Where indications of impairment exist, the asset's recoverable amount is estimated and an impairment adjustment made if the asset's recoverable amount is less than its carrying amount.

The recoverable amount of an asset is the higher of its fair value less costs to sell and its value in use. Value in use is the present value of the future cash flows expected to be derived from the asset. Where the future economic benefit of an asset is not primarily dependent on the asset's ability to generate future cash flows, and the asset would be replaced if ARPANSA were deprived of the asset, its value in use is taken to be its depreciated replacement cost.

### Derecognition

An item of property, plant and equipment is derecognised upon disposal or when no further future economic benefits are expected from its use or disposal.

### Intangibles

ARPANSA's intangibles comprise purchased software, internally developed software for internal use and trade marks. These assets are carried at cost less accumulated amortisation and accumulated impairment losses.

Intangibles are amortised on a straight-line basis over their anticipated useful life. The useful lives of ARPANSA's intangibles are 5 to 15.5 years (2017: 5 to 15.5 years).

All intangibles assets were assessed for indications of impairment as at 30 June 2018.

## Notes to and forming part of the financial statements

for the period ended 30 June 2018

2018  
\$

2017  
\$

### Note 2.2B: Inventories

Inventories held for sale		
Finished goods	4,358	16,439
<b>Total inventories held for sale</b>	<b>4,358</b>	<b>16,439</b>
Inventories held for distribution	1,384,832	1,463,668
<b>Total inventories</b>	<b>1,389,190</b>	<b>1,480,107</b>

During 2017–18, \$16,439 of inventory held for sale was recognised as an expense (2016–17: \$45,729).

During 2017–18, \$55,743 of inventory held for distribution was recognised as an expense (2016–17: \$65,679).

All inventory is expected to be sold or distributed in the next 12 months.

### Accounting policy

Inventories held for sale are valued at the lower of cost and net realisable value.

Inventories held for distribution are valued at cost, adjusted for any loss of service potential.

### Note 2.2C: Other non-financial assets

Prepayments	586,169	578,328
<b>Total other non-financial assets</b>	<b>586,169</b>	<b>578,328</b>

No indicators of impairment were found for other non-financial assets.

## Notes to and forming part of the financial statements

for the period ended 30 June 2018

2018  
\$

2017  
\$

### NOTE 2.3: PAYABLES

#### Note 2.3A: Suppliers

Trade creditors and accruals	878,827	1,306,761
<b>Total suppliers</b>	<b>878,827</b>	<b>1,306,761</b>

Settlement is usually made within 30 days.

#### Note 2.3B: Other payables

Salaries and wages	147,329	418,127
Superannuation	17,819	31,986
Separation and redundancies	-	125,000
Unearned income	788,763	319,783
Demolition and remediation	618,461	767,916
Other	4,821	7,586
<b>Total other payables</b>	<b>1,577,193</b>	<b>1,670,398</b>

## Notes to and forming part of the financial statements

for the period ended 30 June 2018

### Funding

This section identifies ARPANSA's funding structure.

### NOTE 3.1: APPROPRIATIONS

In accordance with section 56 of the *Australian Radiation Protection and Nuclear Safety Act 1998*, all monies received by ARPANSA are to be paid into the ARPANSA Special Account. Pursuant to this section, all monies paid into this Account are automatically appropriated for the use of ARPANSA.

#### Note 3.1A: Annual appropriations ('recoverable GST exclusive')

Annual appropriations for 2018

	Annual appropriation <sup>1</sup> \$	Adjustments to appropriation <sup>2</sup> \$	Total appropriation \$	Appropriation applied in 2018 (current and prior years) \$	Variance <sup>3</sup> \$
<b>Departmental</b>					
Ordinary annual services	12,839,000	-	12,839,000	12,420,000	419,000
Capital budget <sup>4</sup>	1,955,000		1,955,000	1,651,000	304,000
Other services					
Equity	5,000,000	-	5,000,000	1,200,000	3,800,000
<b>Total departmental</b>	<b>19,794,000</b>	<b>-</b>	<b>19,794,000</b>	<b>15,271,000</b>	<b>4,523,000</b>

#### Notes

- 1 No funds have been withheld (Section 51 of the PGPA Act) or quarantined for administrative purposes.
- 2 No adjustments have been applied to appropriations.
- 3 The variance of \$4,523,000 reflects the appropriation receivable amount at 30 June 2018 for ordinary annual and other services, and the movement in appropriation receivable for capital budget.
- 4 Departmental capital budgets are appropriated through appropriation acts (No. 1,3,5). They form part of ordinary annual services, and are not separately identified in the Appropriation Acts.

## Notes to and forming part of the financial statements

for the period ended 30 June 2018

### Annual appropriations for 2017

	Annual appropriation <sup>1</sup> \$	Adjustments to appropriation <sup>2</sup> \$	Total appropriation \$	Appropriation applied in 2017 (current and prior years) \$	Variance <sup>3</sup> \$
<b>Departmental</b>					
Ordinary annual services	13,049,000	-	13,049,000	13,049,000	-
Capital budget <sup>4</sup>	2,124,000		2,124,000	1,373,000	751,000
Other services					
Equity	-	-	-	-	-
<b>Total departmental</b>	<b>15,173,000</b>	<b>-</b>	<b>15,173,000</b>	<b>14,422,000</b>	<b>751,000</b>

#### Notes

- No funds have been withheld (Section 51 of the PGPA Act) or quarantined for administrative purposes.
- No adjustments have been applied to appropriations.
- The variance of \$751,000 reflects the appropriation receivable amount at 30 June 2017.
- Departmental capital budgets are appropriated through appropriation acts (No. 1,3,5). They form part of ordinary annual services, and are not separately identified in the appropriation acts.

### Note 3.1B: Unspent departmental annual appropriations ('recoverable GST exclusive')

	2018 \$	2017 \$
<b>Authority</b>		
<b>Departmental</b>		
Appropriation Act (No. 1) 2017–18	1,474,000	-
Appropriation Act (No. 1) 2017–18 - cash at bank	6,382	-
Appropriation Act (No. 2) 2017–18	3,800,000	-
Appropriation Act (No. 1) 2016–17	-	751,000
Appropriation Act (No. 1) 2016–17 - cash at bank	-	10,586
<b>Total departmental</b>	<b>5,280,382</b>	<b>761,586</b>

## Notes to and forming part of the financial statements

for the period ended 30 June 2018

	2018 \$	2017 \$
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### NOTE 3.2: SPECIAL ACCOUNTS

#### ARPANSA Special Account (departmental)

Establishing Instrument: *Australian Radiation Protection and Nuclear Safety Act 1998; s56(4)*

Appropriation: *Public Governance, Performance and Accountability Act 2013; s80*

Purpose: The purpose of the Special Account is set out in the *Australian Radiation Protection and Nuclear Safety Act 1998* at section 56(4):

"The purposes of the Special Account are to make payments

(a) to further the object of this act (as set out in section 3); and

(b) otherwise in connection with the performance of the CEO's functions under this Act or the Regulations."

<b>Balance brought forward from previous period</b>	<b>1,142,627</b>	1,210,302
<b>Increases</b>		
Departmental	27,664,567	26,263,903
<b>Total increase</b>	<b>27,664,567</b>	26,263,903
<b>Available for payments</b>	<b>28,807,194</b>	27,474,205
<b>Decreases</b>		
Departmental	(27,706,751)	(26,331,578)
<b>Total decrease</b>	<b>(27,706,751)</b>	(26,331,578)
<b>Total balance carried to next period</b>	<b>1,100,443</b>	1,142,627
<b>Balance represented by:</b>		
Cash held in entity bank accounts	1,100,443	1,142,627
<b>Total balance carried to next period</b>	<b>1,100,443</b>	1,142,627

## Notes to and forming part of the financial statements

for the period ended 30 June 2018

### People and relationships

This section identifies a range of employment and post-employment benefits provided to our people and our relationships with other key people.

	2018 \$	2017 \$
<b>NOTE 4.1: PROVISIONS</b>		
<b>Employee provisions</b>		
Leave	4,564,755	4,750,474
<b>Total employee provisions</b>	<b>4,564,755</b>	<b>4,750,474</b>

### Accounting policy

Liabilities for 'short-term employee benefits' and termination benefits expected to be settled within twelve months of the end of the reporting period are measured at their nominal amounts.

The nominal amount is calculated with regard to the rates expected to be paid on settlement of the liability.

Other long-term employee benefit liabilities are measured as net total of the present value of the defined benefit obligation at the end of the reporting period minus the fair value at the end of the reporting period of plan assets (if any) out of which the obligations are to be settled directly.

### Leave

The liability for employee benefits includes provision for annual leave and long service leave. No provision has been made for sick leave as all sick leave is non-vesting and the average sick leave taken in future years by employees of the entity is estimated to be less than the annual entitlement for sick leave.

The leave liabilities are calculated on the basis of employees' remuneration at the estimated salary rates that will be applied at the time the leave is taken, including the entity's employer superannuation contribution rates to the extent that the leave is likely to be taken during service rather than paid out on termination.

The liability for long service leave is recognised and measured at the present value of the estimated future cash flows to be made in respect of employees as at 30 June 2018. The estimate of the present value of the liability takes into account attrition rates and pay increases through promotion and inflation.

### Separation and redundancy

Provision is made for separation and redundancy benefit payments. The entity recognises a provision for termination when it has developed a detailed plan for terminations and has informed those employees affected that it will carry out the terminations.

### Superannuation

The majority of staff of ARPANSA are members of the *Commonwealth Superannuation Scheme* (CSS), the *Public Sector Superannuation Scheme* (PSS) or the PSS accumulation plan (PSSap), and the Australian Government Employee Superannuation Trust (AGEST). There are a small number of staff covered under various other superannuation schemes.

The CSS and PSS are defined benefit schemes for the Australian Government. The PSSap is a defined contribution scheme. The AGEST Superannuation Trust is an industry fund which was previously the Australian Government Default Superannuation fund for non-ongoing employees.

The liability for defined benefits is recognised in the financial statements of the Australian Government and is settled by the Australian Government in due course. This liability is reported in the Department of Finance's administered schedules and notes.

ARPANSA makes employer contributions to the employees' superannuation scheme at rates determined by an actuary to be sufficient to meet the current cost to the Government. ARPANSA accounts for the contributions as if they were contributions to defined contribution plans.

The liability for superannuation recognised as at 30 June represents outstanding contributions for the final fortnight of the year.

## Notes to and forming part of the financial statements

for the period ended 30 June 2018

### NOTE 4.2: KEY MANAGEMENT PERSONNEL REMUNERATION

Key management personnel are those persons having authority and responsibility for planning, directing and controlling the activities of the entity, directly or indirectly, including any director (whether executive or otherwise) of that entity. ARPANSA has determined the key management personnel to be the Chief Executive and five branch and office heads. Key management personnel remuneration is reported in the table below:

	2018 \$	2017 \$
Short-term employee benefits	1,231,006	964,503
Post-employment benefits	186,158	140,596
Other long-term employee benefits	126,369	97,895
<b>Total key management personnel remuneration expenses<sup>1</sup></b>	<b>1,543,533</b>	<b>1,202,994</b>

The total number of key management personnel that are included in the above table are 6 individuals (2017: 5).

- The above key management personnel remuneration excludes the remuneration and other benefits of the Portfolio Minister. The Portfolio Minister's remuneration and other benefits are set by the Remuneration Tribunal and are not paid by the entity.

### NOTE 4.3: RELATED PARTY DISCLOSURES

#### Related party relationships:

The entity is an Australian Government controlled entity. Related parties to this entity are Key Management Personnel including the Portfolio Minister and Executive, and other Australian Government entities.

#### Transactions with related parties:

Given the breadth of Government activities, related parties may transact with the government sector in the same capacity as ordinary citizens. Such transactions include the payment or refund of taxes, receipt of a Medicare rebate or higher education loans. These transactions have not been separately disclosed in this note.

Giving consideration to relationships with related entities, and transactions entered into during the reporting period by the entity, it has been determined that there are no related party transactions to be separately disclosed.

## Notes to and forming part of the financial statements

for the period ended 30 June 2018

### Managing uncertainties

This section analyses how ARPANSA manages financial risks within its operating environment.

### NOTE 5.1: CONTINGENT LIABILITIES AND ASSETS

As at 30 June 2018 ARPANSA had no quantifiable or unquantifiable contingencies. (2017: Nil)

#### Accounting policy

Contingent liabilities and contingent assets are not recognised in the Statement of Financial Position but are reported in the notes. They may arise from uncertainty as to the existence of a liability or asset, or represent an asset or liability in respect of which the amount cannot be reliably measured. Contingent assets are disclosed when settlement is probable but not virtually certain and contingent liabilities are disclosed when settlement is greater than remote.

## Notes to and forming part of the financial statements

for the period ended 30 June 2018

2018  
\$

2017  
\$

### NOTE 5.2: FINANCIAL INSTRUMENTS

#### Note 5.2A: Categories of financial instruments

##### Financial assets

##### Receivables

Cash and cash equivalents	1,100,443	1,142,627
Trade and other receivables	1,312,957	1,025,336
Other financial assets	130,686	82,593
<b>Total receivables</b>	<b>2,544,086</b>	<b>2,250,556</b>
<b>Total financial assets</b>	<b>2,544,086</b>	<b>2,250,556</b>

##### Financial liabilities

##### Financial liabilities measured at amortised cost

Trade creditors	878,827	1,306,761
<b>Total financial liabilities measured at amortised cost</b>	<b>878,827</b>	<b>1,306,761</b>
<b>Total financial liabilities</b>	<b>878,827</b>	<b>1,306,761</b>

There was no interest income from financial assets nor interest expense from financial liabilities in the year ending 30 June 2018 (2017: Nil)

#### Accounting policy

##### Financial assets

ARPANSA only holds financial assets that are classified as "receivables". The classification depends on the nature and purpose of the financial assets and is determined at the time of initial recognition. Financial assets are recognised and derecognised upon trade date.

##### Impairment of financial assets

Financial assets are assessed for impairment at the end of each reporting period.

*Financial assets held at amortised cost* - if there is objective evidence that an impairment loss has been incurred for receivables held at amortised cost, the amount of the loss is measured as the difference between the asset's carrying amount and the present value of estimated future cash flows discounted at the asset's original effective interest rate. The carrying amount is reduced by way of an allowance account. The loss is recognised in the statement of comprehensive income.

##### Financial liabilities

Financial liabilities are classified as either financial liabilities or other liabilities. Financial liabilities are recognised and derecognised upon 'trade date'.

##### Other financial liabilities

Supplier and other payables are recognised at amortised cost. Liabilities are recognised to the extent that the goods or services have been received (and irrespective of having been invoiced).

## Notes to and forming part of the financial statements

for the period ended 30 June 2018

### NOTE 5.3: FAIR VALUE MEASUREMENTS

The following tables provide an analysis of assets and liabilities that are measured at fair value.

#### Accounting policy

When an asset or liability, financial or non-financial, is measured at fair value for recognition or disclosure purposes, the fair value is based on the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date; and assumes that the transaction will take place either: in the principle market; or in the absence of a principal market, in the most advantageous market.

Fair value is measured using the assumptions that market participants would use when pricing the asset or liability, assuming they act in their economic best interest. For non-financial assets, the fair value measurement is based on its highest and best use. Valuation techniques that are appropriate in the circumstances and for which sufficient data are available to measure fair value, are used, maximising the use of relevant observable inputs and minimising the use of unobservable inputs.

For recurring and non-recurring fair value measurements, external valuers may be used when internal expertise is either not available or when the valuation is deemed to be significant. External valuers are selected based on market knowledge and reputation. Where there is a significant change in fair value of an asset or liability from one period to another, an analysis is undertaken, which includes a verification of the major inputs applied in the latest valuation and a comparison, where applicable, with external sources of data.

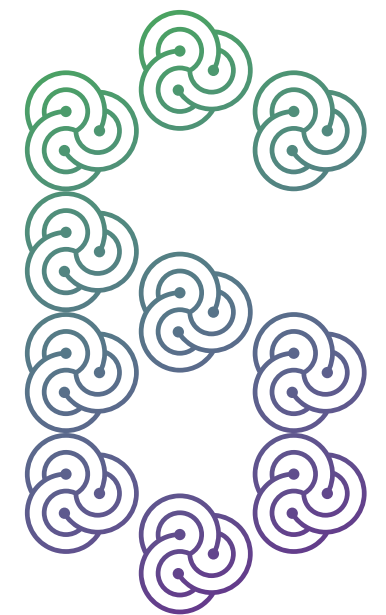
#### Fair value measurements at the end of the reporting period

	2018	2017
	\$	\$

#### Non-financial assets

Land	10,500,000	9,000,000
Buildings on freehold land	17,794,740	17,760,433
Leasehold improvements	152,936	233,675
Plant and equipment	6,870,375	6,489,230
<b>Total non-financial assets</b>	<b>35,318,051</b>	<b>33,483,338</b>

1. No change in valuation technique occurred during the period.



## Appendix 1

### ARPANSA licensing activities

#### Details of any breaches by a licensee during the financial year of which the CEO is aware

##### Breaches with significant safety implications during the year

The CEO was made aware of three breaches with significant safety implications:

- The Australian Nuclear Science and Technology Organisation (ANSTO) was found in breach of subsection 30(2) of the ARPANS Act on two counts under:
  - regulation 48 for not complying with a code or standard
  - regulation 46(1) for failing to prevent accidents involving controlled materials, apparatus or facilities.

This was related to a reported accident, categorised at International Nuclear Event Scale (INES) Level 3, which involved the contamination of the hands of a Quality Control Analyst conducting routine operations. The analyst received a radiation dose to the hands in excess of the annual statutory dose limit.

The CEO of ARPANSA consequently tabled a report in Parliament on 26 February 2018 under Section 61(1) of the Act detailing this accident.

- The Department of Defence and Australian Defence Force was found in breach of licence conditions under subsection 31(2) of the ARPANS Act by failing to comply with regulations 53(1A) and 48(3)(d) by disposing of controlled (radioactive) material without prior approval and by not following the transport code for radioactive sources.

##### Breaches with no, or minor, safety implications during the year

The CEO was made aware of twelve breaches with no, or minor, safety implications:

- A licence holder disposed of a UV sterilisation source without the required prior approval — this breach was self-identified.
- A licence holder did not follow their plans and arrangements on change management.
- A licence holder did not have a security plan that was endorsed or approved in accordance with RPS 11.
- A licence holder did not comply with a requirement in a code or standard which was a condition of licence.
- A licence holder was found in breach of a licence condition requiring review against the requirements of a code of practice; the licence holder was also found in breach of regulation 49 by failing to comply with their plans and arrangements. These breaches were found as part of an inspection based on a licence holder reported event.
- A licence holder did not comply with plans and arrangements in accordance with regulation 49, and failed to adequately notify the CEO of the breach in accordance with regulation 45(3).

- A licence holder did not maintain an accurate source inventory in accordance with licence conditions.
- A licence holder did not comply with a requirement to maintain calibrated equipment in accordance with a code or standard that was a condition of licence.
- A licence holder did not perform routine environmental monitoring in accordance with the timelines set out in a licence condition. However, the monitoring has now taken place.
- A licence holder disposed of a medical X-ray apparatus without prior approval under regulation 53(1).

In all cases appropriate corrective actions were undertaken by the licence holder.

##### Other non-safety-related breaches of the Act during the year

The CEO was made aware of one breach of the Act with no safety implications where the Department of Home Affairs took possession of a UV apparatus which was not covered by their licence. This was self-reported and the UV functionality had not been utilised.

#### Details of any improvement notices or directions issued during the year

There were no improvement notices issued under section 80A of the ARPANS Act.

One direction was issued under section 41 of the ARPANS Act.

On 29 June 2018, a direction was given to ANSTO by the CEO of ARPANSA under section 41(1A) of the Act with regards to activities carried out by ANSTO Health under licence F0262 in Building 23, Lucas Heights Science and Technology Centre, NSW.

The Direction was issued following four separate events with implications for safety, including the event described in the report tabled in Parliament under section 61(1) of the Act on 26 February 2018.

The direction required ANSTO to:

- take immediate steps to initiate an independent review of the approach to occupational radiation safety of processes and operational procedures in Building 23, in particular those associated with quality control of molybdenum-99 (Mo-99) samples
- appoint an external reviewer and, as necessary, external experts to support the reviewer in carrying out their task including providing recommendations to ANSTO with regard to relevant practices at ANSTO
  - the external reviewer and supporting experts must be considered suitable for the task by ARPANSA before being appointed by ANSTO
  - the terms of reference for the review must be approved by ARPANSA

- iii) support the review in any way necessary, including but not limited to providing access to facilities and documentation, as well as access to staff under arrangements that enable staff to interact openly with the reviewer
- iv) provide ARPANSA with a progress report 30 days after commencement of the review
- v) within 60 days after commencement of the review, provide ARPANSA with the final report, including the recommendations by the reviewer and ANSTO's response to those recommendations
- vi) at the same time, provide a plan and associated timelines for the implementation of actions responding to the report's recommendations for ARPANSA's approval.

Information regarding the direction is also available on the ARPANSA website at [arpansa.gov.au/significant-regulatory-activities](http://arpansa.gov.au/significant-regulatory-activities).

#### Other significant activities

On 12 April 2018, the CEO of ARPANSA issued a licence to operate the ANSTO Nuclear Medicine Molybdenum-99 (Mo-99) facility (see case study 2). This followed an assessment period of over one year by ARPANSA. The CEO invited public submissions on the application and sought advice from the ARPANSA Nuclear Safety Committee before issuing the licence. A detailed Statement of Reasons by the CEO on the issue of the licence can be found on the ARPANSA website at:

[arpansa.gov.au/SOR-ANM-operations](http://arpansa.gov.au/SOR-ANM-operations).

#### Facility licences as at 30 June 2018

Commonwealth entity	Licences held
Australian National University	3
Australian Nuclear Science and Technology Organisation	21
Australian Radiation Protection and Nuclear Safety Agency	2
Department of Defence/Australian Defence Forces	4
Department of Home Affairs	4
Department of the Environment and Energy	1
<b>Total</b>	<b>35</b>

#### Source licences as at 30 June 2018

Commonwealth entity	Licences held
ASC Pty Ltd and ASC AWD Shipbuilder Pty Ltd	1
Attorney-General's Department	2
Australian Transaction Reports and Analysis Centre	1
Australian Trade and Investment Commission	1
Australian Criminal Intelligence Commission	1
Australian Federal Police	1
Australian Institute of Marine Science	1
Australian National University	2

Commonwealth entity	Licences held
Australian National Maritime Museum	1
Australian Nuclear Science and Technology Organisation	3
Australian Postal Corporation	1
Australian Radiation Protection and Nuclear Safety Agency	2
Australian Securities and Investments Commission	1
Australian Sports Commission	1
Australian War Memorial	1
Commonwealth Bureau of Meteorology	1
Commonwealth Scientific and Industrial Research Organisation	9
Decipha Pty Ltd	1
Department of Agriculture and Water Resources	1
Department of Defence/Australian Defence Forces	1
Department of Foreign Affairs and Trade	1
Department of Home Affairs	3
Department of Industry, Innovation and Science	3
Department of Infrastructure, Regional Development and Cities	1
Department of Parliamentary Services	1

Commonwealth entity	Licences held
Department of the Environment and Energy	4
Department of the Prime Minister and Cabinet	1
Federal Court of Australia	1
High Court of Australia	1
Indian Ocean Territories Health Service	1
Law Courts Limited	1
National Archives of Australia	1
National Gallery of Australia	1
National Museum of Australia	1
Note Printing Australia	1
Reserve Bank of Australia	1
Royal Australian Mint	1
Silex Systems Limited	1
<b>Total</b>	<b>58</b>

## Appendix 2

### Operations of the Radiation Health and Safety Advisory Council and Committees

#### Operations of the Radiation Health and Safety Advisory Council

During 2017–18, the Radiation Health and Safety Advisory Council (the Council) met on two occasions. Summaries of the meetings can be found at: [arpansa.gov.au/rhsac-minutes](http://arpansa.gov.au/rhsac-minutes).

The membership as at 30 June 2018 was:

- **Chair**  
Dr Roger Allison\* (QLD), Radiation Oncologist (former Executive Director Cancer Care Services), Royal Brisbane and Women's Hospital
- **CEO of ARPANSA**  
Dr Carl-Magnus Larsson (Commonwealth)
- **Radiation Control Officers:**
  - Mr Keith Baldry (SA), Director, Regulation and Compliance, SA Environment Protection Authority
  - Dr Stephen Newbery (TAS), Principal Health Physicist, Tasmanian Department of Health and Human Services
- **Nominee of the Chief Minister of NT**  
Dr Hugh Heggie, Chief Health Officer, Department of Health of the NT

- **Person to represent the interests of the general public**  
Ms Geraldine Robertson\* (ACT), an experienced consumer advocate with a working knowledge of the consumer-related radiation protection issues addressed by the Council
- **Other Members:**
  - Mr Niall Byrne\* (VIC), Creative Director of Science in Public
  - Dr Jane Canestra\* (VIC), Medical practitioner and emergency physician with expertise in the health aspects of radiological emergencies
  - Professor Adele Green\* (QLD), Head, Cancer and Population Studies Group, Queensland Institute of Medical Research
  - Mr Frank Harris (QLD), Chief Adviser Radiation Governance and Product Stewardship, Rio Tinto Uranium
  - Ms Melissa Holzberger (QLD), Director and Principal – Sloan Holzberger Lawyers
  - Professor Pamela Sykes\* (SA), Professor Preventive Cancer Biology, Flinders University
  - Dr Melanie Taylor\* (NSW), Senior Lecturer Organisational Psychology, Macquarie University.

*\* reappointed 1 April 2018 for three-month term*

During 2017–18, Council considered and discussed:

- ARPANSA's activities to promote UVR protection, including further areas of opportunity. At the March 2018 meeting Council held a special session on the health impacts of UVR, and potential role of ARPANSA in promoting the health benefits of UVR protection. Various eminent guest speakers presented, including from Cancer Council, the Bureau of Meteorology, and QIMR Berghofer. Cancer Australia's CEO also attended as an observer. Council agreed that ARPANSA has a key role to play as a coordinator within Commonwealth, and in seeking agreement between jurisdictions, to form the reliable advice and unified messaging that is needed for awareness campaigns
- a radiation risk management concept for ARPANSA, to be incorporated into ARPANSA publications
- ARPANSA's emergency preparedness and response strategy, including its potential role in providing advice on radiological emergencies, and particularly the importance of providing information, education and awareness prior to an emergency
- regulatory issues around naturally occurring radioactive material, such as the type encountered in the mining industry
- ARPANSA's media strategy
- a proposed scientific and technical knowledge and skills framework for the agency
- a draft Code for Disposal of Solid Radioactive Waste (Radiation Protection Series C-3)

- the issue of sustainable funding for ARPANSA activities to maintain an Australian electromagnetic (EME) program, which exists to address public concerns about EME radiation from current and emerging sources such as powerlines or 5G technology. Council wrote to ARPANSA's CEO supporting ARPANSA's continued efforts to address this issue
- the International Atomic Energy Agency (IAEA) Integrated Regulatory Review Services (IRRS) mission to Australia scheduled for November 2018
- a draft Code for Radiation Protection Requirements for Industrial Radiography (Radiation Protection Series C-4).

Council also wrote to the CEO of ARPANSA supporting efforts to pursue as a priority a Radiation Health Committee project to consider options for a redesign of Australia's radiation regulatory system in order to improve national uniformity.

## Operations of the Radiation Health Committee

During 2017–18, the Radiation Health Committee (RHC) met on two occasions. The meeting minutes are available at: [arpansa.gov.au/rhc-minutes](http://arpansa.gov.au/rhc-minutes).

The RHC is appointed on a three year term, which commenced on 1 January 2018. The membership as at 30 June 2018 was:

- **Chair**  
Dr Roslyn Drummond (VIC), Radiation Oncologist, Radiation Oncology and Cancer Imaging, Peter MacCallum Cancer Centre
- **CEO of ARPANSA**  
Dr Carl-Magnus Larsson (Commonwealth)
- **Radiation Control Officers**  
(each state and territory):
  - Mr Bradley Feldtman (NT), Manager Radiation Protection, Department of Health
  - Associate Professor Tony Hooker (SA), Principal Advisor, Radiation Health, Radiation Protection Branch, SA Environment Protection Authority
  - Ms Penny Hill (ACT), Senior Radiation Safety Officer, Health Protection Service, ACT Health
  - Mr Noel Cleaves (VIC), Manager, Environmental Health Regulation & Compliance, Health Protection Branch, Department of Health and Human Services
  - Mr Simon Critchley (QLD), Director, Radiation Health, Queensland Health
  - Ms Hazel Upton (WA), Radiation Control Officer, Radiation Health Unit, Department of Health

- Dr Stephen Newbery (TAS), Senior Health Physicist, Department of Health and Human Services
- Mr Mark Carey (NSW), Principal Policy Officer, NSW Environment Protection Authority

- **Nuclear Safety Committee representative**  
Dr Joanna Wriedt (VIC), Member Victorian Government's Radiation Advisory Committee
- **Person to represent the interests of the general public**  
Ms Fay Bellis (VIC), Quality Management System Consultant
- **Other members**
  - Dr Bruce Hocking, consulting specialist in occupational medicine.

Additionally, the following members served in the 2015–2017 triennium, until December 2017:

- **Radiation Control Officer**  
Mr Len Potapof (NSW), Manager Radiation Regulation Unit, NSW Environment Protection Authority
- **Nuclear Safety Committee representative**  
Mr Robert Lyon (QLD), nuclear safety expert, formerly with Atomic Energy of Canada Limited and the IAEA
- **Person to represent the interests of the general public**  
Dr Peter Karamoskos (VIC), radiologist and nuclear medicine specialist.

During 2017–18, the committee considered and discussed:

### Radon dose coefficients

ARPANSA published an advisory note on *New dose coefficients for radon progeny: impact on workers and the public* taking into account the recently published dose coefficients published by the International Council on Radiation Protection (ICRP). This advisory note provides an explanation of the new estimates of lung cancer risk from radon progeny and what it means in the Australian context. The audience target are regulators, radiation safety officers, hygienists and industry sectors that need to mitigate radon. The RHC issued a statement on *New radon dose coefficients: implications for worker dose assessments*, which is published on our website at: [arpansa.gov.au/radon-statement](http://arpansa.gov.au/radon-statement). The Radiation Health Committee recommends the application of the new International Commission on Radiological Protection (ICRP) dose coefficients when assessing radon and radon progeny exposures of workers in Australia. This information is applicable to the following areas:

- new radon progeny dose conversion factors: implications for the radiation protection of workers in the uranium mining industry
- new radon progeny dose conversion factors: implications for the radiation protection of workers in Australian show caves.

## International Atomic Energy Commission (IAEA) Integrated Regulatory Review Service (IRRS) Mission

Members noted that all state and territory regulators confirmed their participation in the IAEA IRRS mission to Australia in 2018.

### Development of regulatory codes and standards

During the year the 2<sup>nd</sup> Edition of the National Directory for Radiation Protection (NDRP) was finalised for endorsement by the RHC followed by submission to the Australian Health Ministers' Advisory Council and Council of Australian Governments Health Council. This is a revised version rather than continuation of the amendments, and the revised NDRP would be referred to as the *National Directory for Radiation Protection, 2<sup>nd</sup> Edition*. The scope and purpose of this document remained unchanged and are captured in the sub-title, *an agreed framework for nationally consistent radiation protection, policies and practices*. Considering the importance of the *Code for the Disposal of Radioactive Waste by the User* incorporated in Schedule 14 of the NDRP, the RHC agreed to publish this schedule as a standalone code. There has been no material change compared to Schedule 14 of the current NDRP. This code sets out the requirements for disposal and discharge values for the disposal of radioactive material to landfill, and discharge into sewers and the atmosphere, below which no authorisation normally would be required, from the relevant regulatory authority, and below which disposal can normally be performed safely.

During the year ARPANSA finalised the following documents for publication:

- Code for Radiation Protection Requirements for Industrial Radiography
- Code for Disposal Facilities for Solid Radioactive Waste.

Stakeholder consultation on the draft Medical Exposure Code is complete. Stakeholders' comments are in the process of resolution. The Guide for Radiation Protection in Emergency Exposure situations is under public consultation. The guidance document on intense pulsed light and laser use in the cosmetics industry is being finalised and will be released early in 2018–19 for public consultation. This document will provide a common framework for terminology, education, training, equipment, patient care and injury reporting.

The Committee approved the Australian National Radiation Dose Register (ANRDR) as a central record keeping agency as noted in the Code for Radiation Protection for Planned Exposure Situations RPS C-1 (note: WA agreed in principle but is awaiting legal advice).

The Committee agreed to revise the *Code for Safe Transport of Radioactive Material* RPS C-2 incorporating the 2018 Edition of IAEA Regulations for Safe Transport of Radioactive Material. The revision of this Code is in the process of finalisation.

At the end of the financial year the Committee was working on the following documents:

- Radiation Protection Standard for Maximum Exposure Levels to Radiofrequency Fields – 3 kHz to 300 GHz (RPS 3)
- Australian Guidance on Radiological Consideration of Closure, Handover and Post Closure Monitoring and Surveillance Practices.

**Matters of public interest**

The following items of public interest have been discussed at the RHC:

- community consultation about the proposed National Radioactive Waste Management Facility in the Hawker area
- research into the potential occupational dose to eyes for radiologists that emphasises the need for practitioners to wear lead glasses
- Nuclear Fuel Cycle Royal Commission receiving a public consultation award for its engagement with the indigenous community.

## Operations of the Nuclear Safety Committee

During 2017–18, the Nuclear Safety Committee (NSC) met on three occasions. Summaries of the meetings can be found on the ARPANSA website at [arpansa.gov.au/nsc-minutes](http://arpansa.gov.au/nsc-minutes).

Following a public call for nominations, the NSC members were appointed for a three-year term commencing January 2018.

The membership as at 30 June 2018 was:

- **Chair**  
Dr Tamie Weaver, Technical Director – Hydrogeology, environmental resources management consultancy (re-appointed)
- **CEO of ARPANSA**  
Dr Carl-Magnus Larsson (re-appointed)
- **Radiation Health Committee representative**  
Ms Fay Bellis, member of the Radiation Health Committee (member since Jan 2018)
- **Local Government representative**  
Mr Ian Drinnan, Principal Environmental Scientist, Sutherland Shire Council (re-appointed)
- **Person to represent the interests of the general public**  
Dr Joanna Wriedt, experience in commercial law, government and medical research (member since Jan 2018)
- **Other members:**
  - Ms Kerrie Christian, metallurgist with background in governance, safety and reliability (re-appointed)
  - Mr Tony Irwin, engineer with experience in nuclear power and research reactor operations, commissioning, training and regulatory interaction (re-appointed)
  - Dr John Loy, radiation protection and

nuclear safety regulatory expert, with extensive experience internationally and in Australia (member since Jan 2018)

- Mr Don Macnab, former Director, Regulatory and Policy Branch, ARPANSA
- Mr Stuart Parr, radiation protection advisor with experience in safety engineering and management including advice on nuclear regulatory compliance internationally (member since Jan 2018)
- Mr Peter Wilkinson, consultant in safety management and safety culture in hazardous industries (re-appointed).

Dr Rob Lee AO, long-standing member of the NSC, passed away peacefully on 27 April 2018.

Dr Lee was a renowned expert in, among other things, aviation safety, organisational psychology and safety culture. His advice to ARPANSA on a number of complex issues was invaluable. The NSC and ARPANSA will miss his wisdom as well as his kind and considerate personality.

Additionally the following members served in the 2015–2017 triennium, until December 2017:

- **Person to represent the interests of the general public**  
Christopher Tola, Grants Officer, local government authority
- **Other members:**
  - Dr Peter Karamoskos, practising radiologist and nuclear medicine specialist
  - Mr Robert Lyon (QLD), nuclear safety expert, formerly with Atomic Energy of Canada Limited and the IAEA.

During 2017–18, the committee considered and discussed:

### Regulator Performance Framework (RPF) self-assessment

ARPANSA conducted an annual self-assessment of its regulatory effectiveness against six RPF key performance indicators in July 2017. This self-assessment is a requirement of the RPF. The NSC was tasked to review and validate the self-assessment report. The NSC was satisfied with the approach and methodology, and considered the use of stakeholders as part of the review team as a positive initiative. The NSC provided valuable feedback on the report which was incorporated into the final version. This report is published on both the ARPANSA and Department of Health websites.

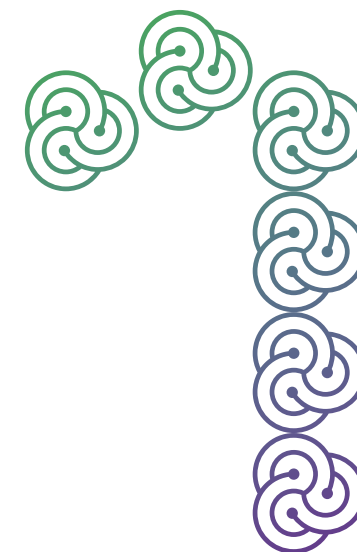
### Review of regulatory documentation

The NSC reviewed and provided comment on a number of key ARPANSA documents including:

- the regulatory guide for decommissioning
- the application documentation and supplied risk assessments on the new ANSTO Nuclear Medicine (ANM) facility operation licence
- proposed enforcement approaches.

### Update on controlled facilities

ARPANSA kept the NSC informed on developments associated with controlled facilities. This included the operation of the ANSTO OPAL reactor, ANSTO Health, and the new ANM facility.



## Abbreviations

ACDS	Australian Clinical Dosimetry Service	NRWMF	National Radioactive Waste Management Facility
ANAO	Australian National Audit Office	NSC	Nuclear Safety Committee
ANM	Nuclear Medicine Facility	OCEO	Office of the CEO
ANRDR	Australian National Radiation Dose Register	OPAL	Open Pool Australian Lightwater
ANSTO	Australian Nuclear Science and Technology Organisation	PBS	Portfolio Budget Statements
APS	Australian Public Service	PGPA Act	<i>Public Governance, Performance and Accountability Act 2013</i>
ARPANS Act	<i>Australian Radiation Protection and Nuclear Safety Act 1998</i>	PGPA Rule	<i>Public Governance, Performance and Accountability Rule 2014</i>
ARPANSA	Australian Radiation Protection and Nuclear Safety Authority	PMAG	Project Management Advisory Group
ASG	Agency Security Group	PSPF	Protective Security Policy Framework
BeOSL	Beryllium Oxide Optically Stimulated Luminescence	RHC	Radiation Health Committee
CEO	Chief Executive Officer	RPF	Regulator Performance Framework
CPRs	Commonwealth Procurement Rules	RPS	Radiation Protection Series
CT	computed tomography	SCF	Staff Consultative Forum
CTBTO	Comprehensive Nuclear-Test-Ban Treaty Organization	SES	Senior Executive Service
DIIS	Department of Industry, Innovation and Science	SMC	Strategic Management Committee
DRL	Diagnostic Reference Level	SME	Small and Medium Enterprises
DTAG	Digital Transformation Advisory Group	SPF	Sun Protection Factor
DTS	Digital Technology section	TASL-n	Track Analysis System Ltd (neutrons)
EPF	Eye Protection Factor	UPF	Ultraviolet Protection Factor
EA	Enterprise Agreement	UV(R)	Ultraviolet (radiation)
EG	Executive Group	WHS	Work Health and Safety
FOI	Freedom of Information	WHS Act	<i>Work Health and Safety Act 2011</i>
GSR	General Safety Requirements		
IAEA	International Atomic Energy Agency		
ICG	International Coordination Group		
IMS	Integrated Management System		
IRC	Ionising Radiation Calibrations		
IRRS	Integrated Regulatory Review Service		
KPI	Key performance indicators		
LMS	Learning Management System		
Mo-99	Molybdenum-99		
MoU	memoranda of understanding		
NATA	National Association of Testing Authorities		
NDRP	National Directory for Radiation Protection		

## Glossary

### *accident*

An unintended event which causes, or has the potential to cause, employees or members of the public to be exposed to radiation from which the individual doses or collective doses received do not lie within the range of variation which is acceptable for normal operation. An accident may result from human error, equipment failure or other mishap; it may require emergency action to save life or to safeguard health, property or the environment; it requires investigation of its causes and consequences and, possibly, corrective action within the program for control of radiation; and it may require remedial action to mitigate its consequences.

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

The ACDS is a national independent dosimetry auditing program, providing quality assurance for radiation oncology facilities and patients.

### *Australian National Radiation Dose Register (ANRDR)*

A centralised repository for the radiation dose records of workers as supplied by the employers, maintained by ARPANSA. It is currently limited to those engaged in the uranium mining and milling industry in Australia.

### *Australian Radiation Incident Register (ARIR)*

The ARIR is Australia's national database of incidents and events, where radiation or radioactivity was implicated. The purpose of the ARIR is to raise awareness on where, how and why incidents and events occur, and how they can be best prevented.

### *Beryllium Oxide Optically Stimulated Luminescence (BeOSL) and Track Analysis System Ltd (TASL-n)*

A dosimetric system using OSL of BeO developed by the radiation physics group in Dresden. Blue light light-emitting diode (LED) stimulation and reading of luminescence light with an enclosed photo sensor module are performed from opposite detector sides. A software controls stimulation, records the amplified and digitised photo sensor signal and generates a unified OSL signal. With the help of calibration these OSL signals can be used to specify dose.

### *ConvEx*

International Atomic Energy Agency (IAEA) Convention Exercises. These are full-scale exercises designed to evaluate international emergency response arrangements and capabilities for a severe nuclear or radiological emergency over several days, regardless of its cause.

### *diagnostic reference levels (DRLs)*

Dose levels for medical exposures in medical radio-diagnostic practices, or levels of activity in the case of radiopharmaceuticals, applied to groups of standard-sized patients or standard phantoms for common types of diagnostic examination and broadly defined types of equipment. These levels are expected not to be consistently exceeded for standard procedures when good and normal practice regarding diagnostic and technical performance is applied. DRLs will be set by relevant professional bodies and published by ARPANSA or the relevant regulatory authority from time to time.

### *dose*

A generic term which may mean absorbed dose, equivalent dose or effective dose depending on context.

### *dosimetry*

The theory and application of the principles and techniques involved in the measurement, calculation and recording of radiation doses.

### *exposure*

The circumstance of being exposed to radiation.

### *hot commissioning*

A phase in the commissioning process which refers to testing a facility using active sources of radiation.

### *incident*

An event which causes, or has the potential to cause, abnormal exposure of employees or of members of the public and which requires investigation of its causes and consequences and may require corrective action within the program for control of radiation, but which is not of such scale as to be classified as an accident.

### *Integrated Regulatory Review Service (IRRS)*

A peer review and appraisal service offered by the IAEA to strengthen and enhance the effectiveness of a national regulatory system in nuclear, radiation, radioactive waste, transport safety and nuclear security.

### *International Atomic Energy Agency (IAEA)*

The IAEA is the international centre for cooperation in the nuclear field. The Agency works with its Member States and multiple partners worldwide to promote the safe, secure and peaceful use of nuclear technologies.

### *ionising radiation*

Radiation which is capable of causing ionisation.

### *licence*

A written authorisation issued to an operator which allows the operator to carry out an operation legally.

***linear accelerator***

Linear accelerators (linacs) are the medical devices used to deliver radiation therapy in highly targeted doses by generating directed radiation beams. These machines are used in hospitals across Australia to treat cancers. The new linac being installed at ARPANSA is an advanced model, ensuring each radiotherapy patient across Australia receives the optimal dose needed to treat their cancer.

***medical exposure***

Exposure of a person to radiation received as a patient undergoing medical diagnosis or therapy, or as a volunteer in medical research, or non-occupational exposure received as a consequence of assisting an exposed patient.

***Molybdenum-99***

Molybdenum-99 is the precursor of technetium-99m which is used for diagnostic imaging in medicine.

***non-ionising radiation***

Ranges from extremely low frequency radiation, through the radiofrequency, microwave, and visible portions of the spectrum into the ultraviolet range.

***National Radioactive Waste Management Facility (NRWMF)***

The proposed NRWMF will only manage waste generated in Australia. It will be designed to permanently dispose of low-level waste and potentially store intermediate-level waste on a temporary basis. The facility will only manage immobilised solid waste. Find out more at [arpansa.gov.au/NRWMF-radioactive-waste](https://arpansa.gov.au/NRWMF-radioactive-waste).

***occupational exposure***

Exposure of a person to radiation which occurs in the course of that person's work and excludes the component of exposure that arises from natural background radiation.

***radiation***

Electromagnetic waves or quanta, and atomic or sub-atomic particles, propagated through space or through a material medium.

***radioactive material***

Material which spontaneously emits ionising radiation as a consequence of radioactive decay.

***radioactive waste***

In Australia, radioactive waste is left after the production of nuclear medicine, research at universities, advanced industrial manufacturing and testing. Other low and intermediate waste types include soil, fire, alarms, exit signs, paper, plastic, glassware and pieces of equipment from radioisotope-producing operations. This waste emits radiation as it decays.

***radiofrequency***

Electromagnetic energy with frequencies in the range 3 kHz to 300 GHz.

***Radiofrequency calibration (service)***

Calibration is the process of configuring an instrument to provide a result for a sample within an acceptable range. ARPANSA provides calibration services for radiotherapy dosimeters. These dosimeters are used by radiotherapy providers to calibrate the output of linear accelerators and kilovoltage X-ray tubes for patient treatment.

***radiological or nuclear emergency***

An emergency in which there is, or is perceived to be, a hazard due to:

- (a) the energy resulting from a nuclear chain reaction or from the decay of the products of a chain reaction
- or
- (b) radiation exposure.

***Radionuclide***

A species of atomic nucleus which undergoes radioactive decay.

***Radon***

Radon is a radioactive noble gas which is part of the uranium decay chain.

***Solar ultraviolet radiation (UVR)***

Solar UVR is invisible energy produced by the sun. It's made up of three wavelengths, UVA, UVB and UVC. Both UVA and UVB can reach the earth's surface and are classified as human carcinogens. This means they cause cancer.

***X-ray***

Ionising electromagnetic radiation emitted during the transition of an atomic electron to a lower energy state or during the rapid deceleration of a charged particle.

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