



Australian Government
Australian Radiation Protection
and Nuclear Safety Agency



ANNUAL REPORT

2020
2021

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Preliminary pages

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Distribution

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The publication should be attributed as *Annual Report of the Chief Executive Officer of ARPANSA 2020–2021*.

Acknowledgement of Country

ARPANSA respectfully acknowledges Australia's Aboriginal and Torres Strait Islander communities 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.

Reader's guide

The Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) Annual Report 2020–2021 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 July 2021. The guide sets out ARPANSA's annual report obligations under section 46 of the *Public Governance, Performance and Accountability Act 2013* (PGPA Act) and the Public Governance, Performance and Accountability Rule 2014 (PGPA Rule).

This year's annual report has been prepared to inform Parliament about ARPANSA's performance and activities in 2020–2021.

The report is available online at arpansa.gov.au/annual-reports.

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.

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 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 including details of advisory bodies.

PART 7: Index

Comprises an abbreviations list, glossary, reporting requirements and alphabetical index.

Letter of transmittal



Australian Government
Australian Radiation Protection
and Nuclear Safety Agency



Parliament House
CANBERRA ACT 2600

Re: 2020–2021 Annual Report of the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA)

Dear Minister Gillespie

I am pleased to present to you the 2020–2021 Annual Report for ARPANSA pursuant to section 46 of the Public Governance, Performance and Accountability Act 2013, which requires that an annual report be given to you as ARPANSA's responsible Minister for presentation to the Parliament, and section 59 of the Australian Radiation Protection and Nuclear Safety Act 1998 (the ARPANS Act).

As required by the ARPANS Act, this report provides details on:

- the activities of the Chief Executive Officer, ARPANSA, the Radiation Health and Safety Advisory Council (the Council), the Nuclear Safety Committee (NSC), and the Radiation Health Committee (RHC)
- any directions given to me by the current or previous responsible Ministers under section 16 of the ARPANS Act and any breach of licence conditions by a licensee, of which I am aware
- all reports I have received from the Council on matters related to radiation protection and nuclear safety or the NSC on matters related to nuclear safety and the safety of controlled facilities, and
- any directions I have given as CEO under section 41 of the ARPANS Act and improvement notices that ARPANSA inspectors have given under section 80A of the ARPANS Act.

I also certify as the accountable authority for ARPANSA that, in compliance with section 10 of the Public Governance, Performance and Accountability Rule 2014, the agency has conducted fraud risk assessments and developed and implemented fraud control plans; has in place appropriate fraud prevention, detection, investigation and reporting mechanisms that meet the agency's specific needs; and I have taken all reasonable measures to appropriately deal with fraud relating to the agency.

Yours sincerely

Dr Carl-Magnus Larsson
CEO of ARPANSA

ARPANSA snapshot

Services

**139**

ACDS audits

**46 000**

ANRDR workers

**1 493 500**UV swing tags
issued**300**RF calibration
test reports

Talk to a Scientist

**627**

Emails

**300**

Telephone calls

Staff

**73**

Male

**61**

Female

**112**

In Victoria

**22**

In NSW

ONGOING AND NON-ONGOING ROLES AS AT 30 JUNE 2021

Licences

**32**

Facility

**58**

Source

**37**Regulatory
inspections

Webpage statistics

**1 736 643**Ultraviolet index
page views**3 304 760**Total website
page views**1 000 467**Total website
users

Part 1: CEO foreword

I am pleased to present to you the 2020–2021 Annual Report of the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA).

The agency has continued to deliver high quality services and advice to the Australian Government and community on radiation protection and nuclear safety during the COVID-19 pandemic-stricken financial year. The Annual Report details our performance against the performance indicators as well as our financial performance. In this foreword I take the opportunity to expand the information in some key areas, including how our work has been, and continues to be, impacted by the pandemic.

Impact of the pandemic on staff and selected services

With 84% of our staff in Melbourne and the remainder in Sydney, we have been significantly impacted by the restrictions and lockdowns caused by the pandemic. It has been a challenging period and ARPANSA has assisted its staff by putting in place special working arrangements, to the best of the agency's ability. Strict protocols for COVID safety have been implemented. In this regard, I am very pleased that none of our staff or immediate household members have, so far, contracted the virus, an outcome to which these protocols may have contributed, albeit in a small way.

ARPANSA staff transitioned to home-based work arrangements on 24 March 2020, with a small number of staff continuing to attend our Melbourne site to maintain essential infrastructure and services. The timely rollout of a virtual collaboration platform enabled smooth transition to home-based, and subsequently hybrid, working arrangements. It has also promoted information exchange and been an important enabler for staff engagement and for supporting staff well-being during testing times. During the year, staff have gradually returned to the workplace with an average expected attendance of about 60% from May, based on interim home-based work agreements, although attendance was later impacted by new virus outbreaks. Restrictions were still in place at the end of the financial year, including lockdown in Sydney and border closures.

IMPACT OF COVID-19

	FY 20/21	FY 19/20	Average FYs 17/18 – 18/19
Regulatory inspections	37	45	43
Regulatory site visits	9	23	60
Australian Clinical Dosimetry Service (ACDS), on-site audits	131	93	81
Primary Standards Dosimetry Laboratory (PSDL), hospital radiation monitors calibrated	60	31	46
Monitoring stations under contract with the Comprehensive Nuclear Test-Ban Treaty Organisation (CTBTO), scheduled maintenance completed	10	11	11
Radiofrequency (RF) probe calibration service test reports	300	444	683
Australian National Radiation Dose Register, submitted quarterly dose reports	23	38	52
Ultraviolet Protection Factor (UPF) service samples	1299	1153	1843
Ultraviolet Protection Factor (UPF) service tags issued	1,493,500	1,369,000	2,977,000

As a regulator, adviser, and service provider, ARPANSA operates across all jurisdictions. Several services were impacted by the intermittent border closures but were still kept in operation. The above table 'Impact of COVID-19', presents data for some of our services during the two COVID-impacted financial years, compared to the two-year average before the pandemic. The numbers have in some areas held up well, but decreased in others. In the case of dosimetry audits of linear accelerators (linac) for cancer treatment, the numbers are commensurate with, or above, the increase in number of linacs nation-wide. The number of regulatory inspections was maintained but the site-visits (primarily intended for information gathering on site and discussions with licence holder staff) decreased. A downturn was observed in radiofrequency probe calibrations and ultraviolet protection factor services.

Several mitigating strategies were implemented to maintain services, health advice and regulatory activities at a level that would support nuclear and radiation safety. These included inspection and audit campaigns in targeted jurisdictions; using virtual means to assist inspections, audits and information/communication; questionnaires to licence holders and regulators; obtaining exemptions for performing essential services; quarantining our staff in, and when returning from, other jurisdictions (including New Zealand); and extended 'outposting' of staff to other jurisdictions.

International engagement

International engagement has continued using virtual means of collaboration. However, some important international events had to be deferred. As one of two Vice-Presidents of the 8th Review Meeting (RM) of the Convention on Nuclear Safety I participated in the decision to defer the 8th RM from 2020 to 2021, and in the subsequent decision to defer it further and hold a joint 8/9th RM in 2023. Much work has gone into sharing preliminary observations from the 8th review cycle between Contracting Parties and all progress and experience gained since the 7th RM (2017) will be thoroughly discussed at the 2023 joint meeting.

ARPANSA's Deputy CEO, Dr Gillian Hirth, chairs the United Nations Scientific Committee on the Effects of Atomic Radiation (UNSCEAR), in which Australia is one of 27 State Members. The Committee has, since the outbreak of the pandemic, pivoted to on-line meetings only. Despite the pandemic, UNSCEAR has approved four scientific annexes during two sessions held in November 2020 and June 2021, including in the UNSCEAR 2020 report the update on radiation exposures and effects from the 2011 Fukushima nuclear accident in Japan. These will be reported to the General Assembly in October 2021.

Virtual meetings do not present the normal opportunities for informal interaction and collaboration with international colleagues and partners. However, it has made it possible for more staff than usual to take part in international meetings and conferences. We anticipate that virtual or 'hybrid' meetings will continue to be part of the mix also when travel restrictions have eased.

Integrated Regulatory Review Service (IRRS)

Work has continued to implement the findings from the International Atomic Energy Agency (IAEA) Integrated Regulatory Review Service (IRRS) mission received by Australia in 2018. The Mission Report, published on ARPANSA's website in early 2019, lists 35 findings. Since 2019 we have completed 9 of the 14 findings that were specific to ARPANSA with the remainder on track for completion by the end of 2021.

A total of 19 findings were addressed to the regulatory bodies of all jurisdictions. Two further findings were addressed to the Australian Government. All jurisdictions have agreed on a national action plan, endorsed by the Australian Health Protection Principal Committee (AHPPC) in 2020, which provides a governance structure for monitoring progress against the IRRS findings. The Environmental Health Standing Committee, under AHPPC, is responsible for managing the multi-jurisdictional findings and a national strategy for radiation safety is under development. ARPANSA, in collaboration with state and territory regulators, have developed the 2nd edition of the National Directory for Radiation Protection, which - subject to Ministers' approval - addresses many of the cross-jurisdictional findings.

It is established practice to invite a follow-up IRRS mission within 4 years of the initial mission. I consider it desirable that a follow-up mission is received in the 2022–2023 financial year, but the feasibility of a timely follow-up mission will be contingent on the pandemic and any travel restrictions that may be in place at the time.

Electromagnetic emissions (EME) from communications technology

Under an enhanced program, funded by the Australian Government, ARPANSA administers a research program with the aim of conducting targeted research into EME issues of relevance to Australia. This includes measurement of EME exposure levels in the community, involvement in international forums (such as the World Health Organization [WHO]), setting and maintenance of EME standards and provision of expert scientific advice on EME and health to stakeholders.

Our Action Plan is available on our website. ARPANSA has recruited Associate Professor Sarah Loughran to lead the program. A program for support of research has been developed, including support to the WHO. ARPANSA's Adjunct Associate Professor Ken Karipidis was elected a member of the International Commission on Non-Ionizing Radiation Protection (ICNIRP), which provides scientific advice and guidance on the health and environmental effects of non-ionising radiation, including EME.

In February 2021, ARPANSA published the new Standard for Limiting Exposure to Radiofrequency Fields – 100 kHz to 300 GHz. From 1 July 2021 this Standard will be referenced as a licence condition in the Australian Radiation Protection and Nuclear Safety Regulations 2018.

Safety among ARPANSA licence holders and of radiation practices across Australia

Under the *Australian Radiation Protection and Nuclear Safety Act 1998* (the ARPANS Act), ARPANSA regulates Commonwealth entities including all nuclear installations in Australia. Radiation facilities and sources in states and territories are regulated under the radiation control acts, and by the regulatory bodies, of those jurisdictions. ARPANSA's licence holders include the Australian Nuclear Science and Technology Organisation (ANSTO), the Defence Organisation, and the Commonwealth Scientific and Industrial Research Organisation (CSIRO). Information on other licence holders, licensing activities, and breaches of the *Australian Radiation Protection and Nuclear Safety Act 1998* by a licence holder, is provided elsewhere in this report. No incident rated above Level 1 ('anomaly') on the International Nuclear and Radiological Event Scale (INES), was recorded among ARPANSA licence holders during the year.

I expect that the regulatory workload related to licensing and surveillance of radioactive waste management facilities and activities will increase in the next financial year and beyond. This includes radioactive waste management at ANSTO's Lucas Heights facilities. ARPANSA is also preparing for receiving a licence application from the recently established Australian Radioactive Waste Agency (ARWA), for preparing a site for a National Radioactive Waste Management Facility, noting that amended legislation was passed in June 2021 that governs the process of selecting a site for the facility. Our activities will include local outreach activities, which during this year were put on hold while the Amendment Bill was before Parliament – and because physical presence in remote communities was considered unjustified during the pandemic.

ARPANSA works with states and territory regulators to achieve nationally uniform safety practices and outcomes across all jurisdictions. ARPANSA also maintains national databases such as the Australian National Radiation Dose Register (currently holding information on occupational exposure for 47 000 workers), and the Australian Radiation Incidents Register (ARIR). The most recent ARIR Report covers the calendar year 2019, whereas data for 2020 are currently being analysed. While information is not complete, ARPANSA is so far not aware of any systemic consequences of the pandemic for radiation safety among regulated radiation practices across Australia.

Digital and laboratory infrastructure

ARPANSA's multi-year Platforms and Systems (PAS) project delivers upgrades of our digital infrastructure in a stepwise fashion. This year, PAS delivered a new system for producing and distributing dose reports generated by ARPANSA's Personal Radiation Monitoring Service (PRMS), which serves about 25 000 wearers of dosimeters in occupational settings across Australia. As part of PAS, ARPANSA entered into a contract to implement a laboratory information management system (LIMS), which will replace legacy systems and provide a stable digital platform for data management and business intelligence. PAS has also delivered a new intranet, which will facilitate day-to-day work, promote uptake of the ARPANSA Management System, and help staff stay informed about new developments and opportunities for collaboration.

ARPANSA has entered into a contract to construct a new anechoic chamber that will cater for millimetre wave frequencies that would be used in future 5G technologies. This is part of the enhanced EME program referred to earlier. The construction and commissioning will take place in the 2021–2022 financial year.

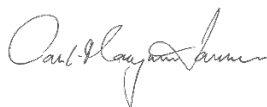
ARPANSA has also entered into contractual arrangements to build and commission a new calorimeter, intended to replace the existing graphite calorimeter that serves as a national primary standard for absorbed dose. ARPANSA's Primary Standards Dosimetry Laboratory (PSDL) is one of about 15 primary standard laboratories for absorbed dose in the world. The standard supports all calibrations carried out by ARPANSA, including for radiation monitors used in hospitals. It provides, together with ARPANSA's two linacs, an essential infrastructure for calibration as well as dosimetry audits of linacs used for cancer treatment. The new calorimeter, constructed in partnership with Canadian colleagues, is planned to be commissioned in 2024.

Staff and working arrangements

ARPANSA's average staffing level (ASL) is balancing on its cap of 138, averaged over the year. The update of the workforce plan and development of a learning and development strategy have not advanced as much as planned, partly because of the pandemic, and remain priorities for the next financial year.

Work arrangements during the pandemic have considered the challenges of working from home or under 'hybrid' arrangements, including the need to safeguard the health and wellbeing of staff, and support productivity and engagement. ARPANSA will consider the lessons that continue to be learned in its development and implementation of future working arrangements. A Future Ways of Working Task Group has been established with cross-agency representation to provide me with recommendations on how to support staff and the functions of the agency, while allowing for increased flexibility, and that secures and if possible enhances our ability to deliver high quality services and advice to the Australian Government and community on radiation protection and nuclear safety.

I look forward to continuing to ensure Australians are protected from the harmful effects of radiation – by maintaining the delivery of our high-quality services, providing Australians with health advice, and independently regulating Commonwealth entities that use or produce radiation. This is my final Annual Report as my tenure with ARPANSA will come to an end in early 2022 after 12 years in the CEO role. I am grateful for having had the opportunity to lead this world class agency and proud of what we have jointly achieved over the years. I am convinced ARPANSA's dedicated and highly capable staff will continue to demonstrate that ARPANSA is Australia's leading authority on radiation protection and nuclear safety, during the challenging times we are currently experiencing and into the future.



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

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.

Our outcome and objectives

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.

The ARPANSA FY2020–21 program of work comprised of six key strategic objectives that directed our priorities:

1. Identify, assess and communicate health, safety and environmental risks from 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 effective regulation
5. Enhance engagement with stakeholders
6. Enhance organisational innovation, capability and resilience.

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 the 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 2021, portfolio responsibility for ARPANSA sat with Senator the Hon Richard Colbeck, Minister for Senior Australians and Aged Care Services, Minister for Sport.

Our staff

As at 30 June 2021, ARPANSA had 134 ongoing staff, 11 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.

What we deliver

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

We serve the public as a:

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
- administer and maintain the Australian Radiation Incident Register (ARIR)
- deliver the Talk to a Scientist program
- provide advice on emergency preparedness and response in the event of a radiological emergency
- administer and maintain an ultraviolet radiation monitoring network
- maintain 9 monitoring stations (4 in mainland Australia and 5 across the Indian and Pacific Oceans and the Antarctic territories) and operate a radionuclide laboratory under the Comprehensive Nuclear-Test-Ban Treaty
- administer the Australian primary standard for absorbed dose.

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:

- assess licence applications, issue authorisations, perform compliance inspections and promote best practice
- assess and issue import and export permits for radioactive material
- assess transport plans and provide authorisations for transport of radioactive material
- promote national uniformity in radiation protection policies and practices
- work to achieve the security of radioactive material.

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 Primary Standards Dosimetry Laboratory (PSDL) calibrations
- the Radiofrequency electromagnetic radiation calibrations
- the Australian Clinical Dosimetry Service (ACDS)
- the National Diagnostic Reference Level Service (NDRL)
- the Personal Radiation Monitoring Service (PRMS).

We also administer and maintain the Australian National Radiation Dose Register (ANRDR), and operate the largest radon chamber in Australia.

Organisational structure

Chief Executive Officer

Dr Carl-Magnus Larsson has held the position of Chief Executive Officer (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 and providing services in relation 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 3 branch heads and 4 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 for day-to-day management of ARPANSA.

ARPANSA business groups

ARPANSA has 7 business groups that deliver components of the agency's strategies and services. Figure 1 'Organisational chart', shows ARPANSA's organisational structure at 30 June 2021.

Regulatory Services Branch

Regulatory Services Branch has carriage of the regulation of safety and security of Commonwealth radiation sources and facilities authorised by ARPANSA. The branch has 3 sections: Facility Safety, Source Safety and Security, and Safety Systems. The branch is responsible for assessing licence applications, monitoring compliance with the ARPANS Act and Regulations, undertaking enforcement actions and providing regulatory guidance. It also promotes the development and implementation of a uniform regulatory framework across all jurisdictions. The branch currently oversees 32 facility licences and 58 source licences. The costs for regulatory services are recovered from licence holders and applicants, through annual licence charges and application fees.

Radiation Health Services Branch

The Radiation Health Services Branch provides expertise, specialised resources and services to support the protection of the public, workers and the environment from the hazards of both ionising and non-ionising radiation. We undertake a range of scientific activities and services to characterise sources of radiation exposures, to assess the risks to people and the environment from exposure to radiation, and to reflect this understanding into advice and guidance to the public, Government and other stakeholders. The branch comprises 3 sections: Monitoring and Emergency Response, Assessment and Advice, and Radiation Protection Services. Services provided by the branch operate on a fee-for-service basis and include the Personal Radiation Monitoring Service, ultraviolet radiation services, radioanalytical services and radiofrequency electromagnetic radiation calibration services. The branch undertakes a range of national initiatives including the 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 by the branch 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 3 sections: Medical Imaging, Primary Standards Dosimetry Laboratory, and the Australian Clinical Dosimetry Service. The Medical Imaging section is responsible for dose data collection and advice on patient safety within diagnostic imaging and nuclear medicine. The Primary Standards Dosimetry Laboratory maintains the Australian primary standard for absorbed dose and, by calibrating hospitals' radiation detectors against the primary standard, ensures that the radiation equipment used by the hospital operate accurately. The Australian Clinical Dosimetry Service carries out dosimetric audits of linear accelerators used by radiotherapy providers in Australia and New Zealand to verify that the radiation exposure of patients undergoing treatment is correct.

Office of the CEO

The Office of the Chief Executive Officer (OCEO) facilitates, coordinates and supports the activities of the CEO. The OCEO comprises three sections: Communications, Government and International Relations, and Governance and Risk. The OCEO leads collaboration and communication with the public and government, coordinates international engagement, and supports effective governance and risk management including maintenance of the ARPANSA Management System. The OCEO also provides advice to the agency and government on emerging and strategic issues.

Office for Business Support

The Office for Business Support (OBS) provides insights and expertise on a daily basis to our stakeholders across various branches and offices. The OBS is responsible for three sections: Finance, Digital Technologies, and Facilities and Engineering. The OBS is involved in continuing to modernise the delivery of customer-centric enabling services to the wider agency through finding opportunities to enhance business partnering, adoption of new technologies and continually reviewing business models to ensure the agency remains fit-for-purpose to deliver its strategic objectives. It also provides business intelligence and support to ARPANSA's services to the Australian community, such as calibration, auditing, monitoring and analytical services.

Office of the General Counsel

The Office of the General Counsel provides legal advice and strategic support to agency staff regarding all aspects of the agency's operations and assists the CEO in achieving his statutory mandate. The Office of the General Counsel provides legal services to support staff perform their functions and to ensure that in doing so they are compliant with relevant government policies and legislation. The Office also performs freedom of information and privacy functions on behalf of the agency.

Office for People Strategies and Wellbeing

ARPANSA's Office for People Strategies and Wellbeing (OPSW) is responsible for contemporary human resource practices and wellbeing strategies. Working in partnership with ARPANSA's Executive Group, branches and offices, OPSW provides strategic advice on the agency's employment framework, including workforce and succession planning, talent attraction and retention, leadership, learning and capability development, diversity and inclusion initiatives, and wellbeing.

Organisational chart

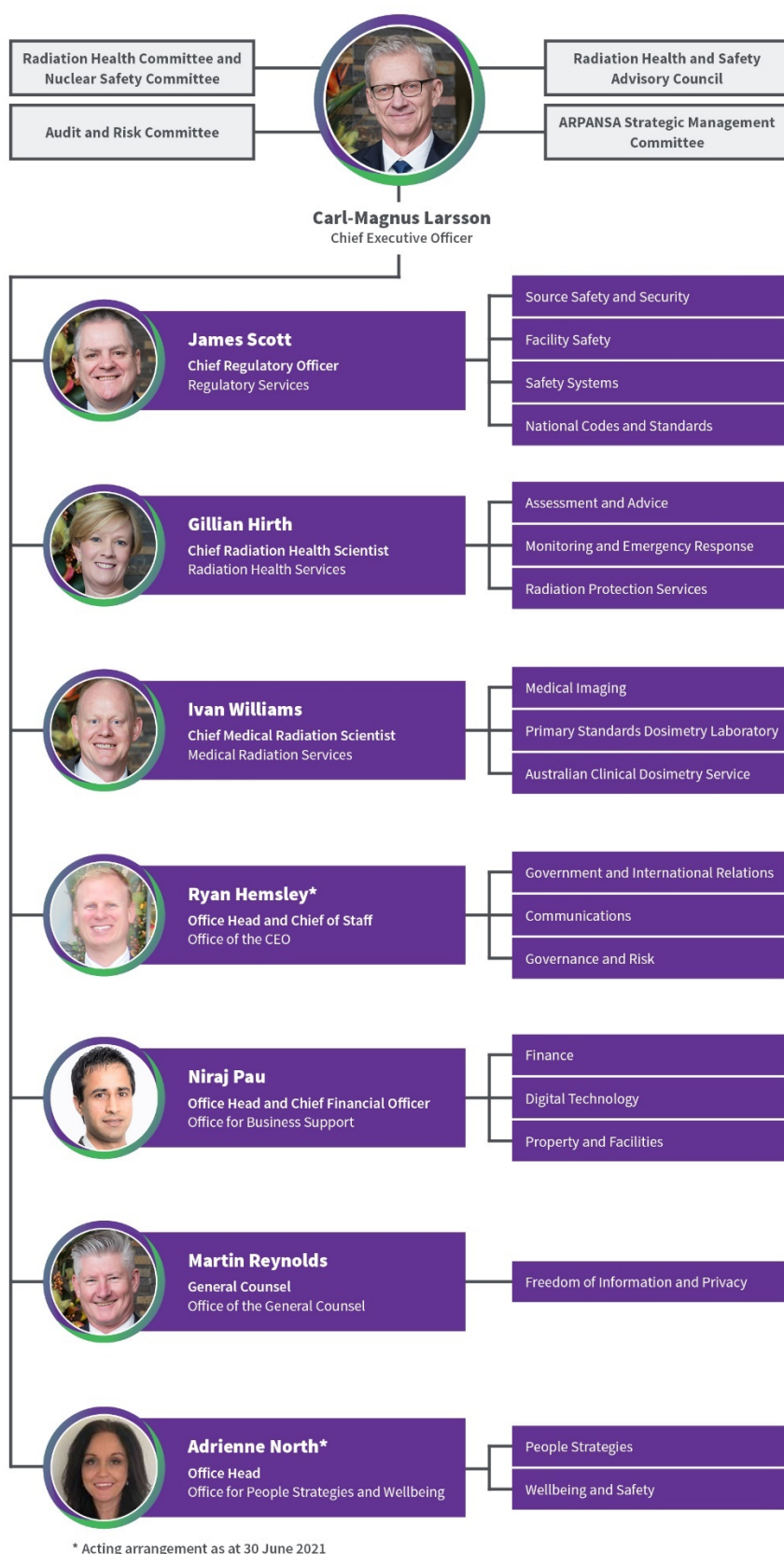


FIGURE 1: ORGANISATIONAL CHART

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 2020–2021 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.



Dr Carl-Magnus Larsson
CEO of ARPANSA

Purpose

ARPANSA's 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. This is reinforced by the agency's commitment to its 6 strategic objectives¹ that guided our priorities and contributed to delivering radiation protection and nuclear safety outcomes to the Australian community:

1. Identify, assess and communicate health, safety and environmental risks from 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 effective regulation.
5. Enhance engagement with stakeholders.
6. Enhance organisational innovation, capability and resilience.

¹In FY 2020–21 ARPANSA reviewed the six strategic objective and established four distinct and significant areas of work, referred to as our Key Activities (in alignment with PGPA requirements). These 4 Key Activities, presented in our Corporate Plan, will demonstrate how the agency will achieve its purpose in FY 2021–22.

Overview of performance against ARPANSA's purpose

The performance measures outlined in the Portfolio Budget Statements and ARPANSA's Corporate Plan 2020–21 provide the reference for the ensuing annual performance statement. ARPANSA's non-financial performance against the performance measures listed in the Portfolio Budget Statement (PBS) and Corporate Plan are summarised in the table below.

TABLE 1: SUMMARY OF THE ANNUAL PERFORMANCE STATEMENT RESULTS FOR THE 2020-21 REPORTING PERIOD

Performance Area	Performance Measure						Totals
	KPI				Project		
	Achieved	Partially achieved	Not achieved	Redundant	Project on track	Project delayed	
Strategic Objective 1	3	1			1		5
Strategic Objective 2	1	1			1	1	4
Strategic Objective 3	3	1			2		6
Strategic Objective 4	3				1		4
Strategic Objective 5		1		1	1		3
Strategic Objective 6	3				2	2	7
Results	13	4	0	1	8	3	29

TABLE 2: LEGEND

KPI	Achieved	The agency has succeeded in reaching a desired goal, or a project has been completed.
	Partially achieved	The agency has not succeeded in reaching the anticipated target, but substantial progress has been made and our purpose and strategic objectives are in no way compromised.
	Not achieved	The agency has not succeeded in reaching the goal and substantial progress has not been made. Where a performance measure is not achieved, the agency will review the resourcing around delivery of this performance measure.
	Redundant	The performance measure was made redundant during the reporting period. An explanation of why the measure is redundant is included in the statement.
Project	Project on track	The project is on track for completion.
	Project delayed	The agency has not succeeded in finishing a project on time or project performance is not what in line with anticipated targets. Work is underway and the agency is reviewing the resourcing around delivery of this project

Analysis of results against ARPANSA's purpose

Over the course of the 2020–21 reporting period, ARPANSA has been conscientiously working to achieve all performance measures despite the challenges presented by the current global pandemic. Leading into 2020-21, the agency maintained 29 performance measures, 4 within the 2020-21 Portfolio Budget Statements and 25 within the Corporate Plan. The latter contained a combination of key performance indicators (KPI) and projects to reflect the wide variety of work the agency undertakes. To ensure strategic uniformity, all measures were ascribed to one of the 6 agency strategic objectives, which supports our purpose: to protect the Australian people and the environment from the harmful effects of radiation.

During 2020-21, ARPANSA performed well, delivering (achieved/on track) 21 out of 29 performance measures. Seven measures were impacted (partially achieved/delayed) by various factors discussed within this report. One measure was determined as redundant to the performance statement.

During the year, ARPANSA made considerable advances in delivering enhanced radiation protection and nuclear safety outcomes to the Australian community and environment. Highlights have included:

- ARPANSA worked with a team of doctors, engineers and scientists from other organisations to better understand airborne particles in hospitals. This helped develop better ventilation systems for the control of COVID-19 in medical settings (see Case Study 1).
- ARPANSA published a new safety standard which sets limits for public and occupational exposure to all types of radio waves. ARPANSA also published 2 scientific reviews which found radio waves related to the 5G communications network were safe for the public (see Case Study 3).
- ARPANSA's Primary Standards Dosimetry Laboratory (PSDL) performed an international comparison of radiation dose measurements, demonstrating excellent agreement with international peers and thereby assuring the foundation of dosimetric accuracy for all radiotherapy providers in Australia.
- ARPANSA's clinical dosimetry auditing service (ACDS) overcame COVID related travel restrictions, re-locating staff interstate for months at a time to ensure auditing targets were achieved and patient safety was maintained nationally.
- ARPANSA hosted the Transport Competent Authorities Forum which focused on the harmonisation of transport packaging approval.
- ARPANSA published an updated Guide for Classification of Radioactive Waste focusing on safety after disposal when classifying radioactive waste.
- Several ARPANSA staff were appointed as Australian representatives on the International Atomic Energy Agency (IAEA) Safety Standards Committees for the next three-year cycle. These committees provide input to the IAEA on its emergency preparedness and response, and on nuclear, radiation, transport and waste safety programs. Our involvement ensures that Australia can influence the development of IAEA guidance that is adopted as part of the ARPANSA Radiation Protection Series.
- The Australian National Radiation Dose Register (ANRDR) Advisory Board approved the strategic direction roadmap to achieve coverage of all workers exposed to radiation in Australia.
- The Australian Health Protection Principal Committee (AHPPC) endorsed the national plan to address the findings of the IAEA-coordinated Integrated Regulatory Review Service (IRRS) mission to Australia, and ARPANSA is on track to close out the findings that were directed to the agency.
- ARPANSA maintained all legislated responsibilities through virtual attendance of the Radiation Health and Safety Advisory Council (Council), Radiation Health Committee (RHC) and Nuclear Safety Committee (NSC).

This financial year, the nation continued its battle with COVID-19, which impacted agency initiatives. A high-level summary of impacts on delivery was provided in the CEO's Foreword in Part 1 of the Annual Report. With measures in place to protect the health and safety of staff, the personal radiation monitoring service continued throughout the pandemic and all other laboratory-based services provided from the Melbourne Office gradually resumed after a short cessation, with a limited workforce on site. ARPANSA's Sydney Office was first to return to full capacity, enabling inspections and stakeholder engagement activities to recommence. Placing the health and safety of staff at the forefront, ARPANSA supported the national efforts to reduce transmission by implementing prescribed COVIDSafe measures and adapting readily as government directives evolved. This uncertain environment created significant scheduling complications, impacted planning and restricted delivery, especially in circumstances where travel or stakeholder engagement was required. This has been the main underlying factor to delays impacting projects and performance measures that were delayed or partially achieved.

Factors that have contributed to, and restricted delivery include:

- **Infrastructure:** ARPANSA manages and maintains a number of business-critical specialised assets and infrastructure, including buildings, laboratories, instrumentation and mobile equipment. During this year, access to these assets was restricted and alternative arrangements employed. Reduced staff capacity and access in turn, limited service delivery and output.
- **Cooperation:** ARPANSA faced challenges as to how we engage domestically and internationally. As more flexible modes of service delivery are continuing to evolve, virtual working arrangements were maintained where a physical presence and international engagement was restricted.
- **Capability:** As priorities were redirected to better support the agency with emerging issues, resources were reprioritised at times to aid delivery of these additional responsibilities. All performance measures and projects progressed; however, time frames were necessarily readjusted to ensure quality was maintained and team capacity not overstretched.

Significant efforts were undertaken by our staff to ensure the agency was poised to remain on track and deliver the results presented in this report. Despite the impact of COVID on the performance during the last year, ARPANSA demonstrated resilience and continued to refine its mitigation strategies to ensure the performance of key activities were maintained. All staff were equipped with necessary IT assets and infrastructure which enabled the agency to adapt readily to the shifting pandemic landscape. ARPANSA also employed COVIDSafe work practices that enabled continued provision of dosimetry services, maintaining the functions under the Comprehensive Test Ban Treaty (CTBT), and returning all the radioanalytical laboratories and radiation protection services to full operability. ARPANSA continued to demonstrate the agency's commitment to delivering its purpose.

Segmented by 6 strategic objectives, the details of the performance measures, results and an analysis of the performance are presented on the following pages of this annual performance statement.

Summary of results

1. Identify, assess and communicate health, safety and environmental risks from radiation

ARPANSA gathered scientific knowledge to inform its regulatory activities and provide evidence-based, risk-informed advice to the Australian Government and community.

Details of performance against purpose and program objectives

Number	Measure (KPI or Project)	Target or milestone	Source	Outcome
PBS 1	Provide high quality advice to government and the community on health, safety and environmental risks from radiation	Identify, assess and communicate health, safety and environmental risks from radiation to the Australian community through research, communication campaigns, provision of radiation protection services, and community consultation and awareness activities	PBS 2020-21	Achieved
1.1	Percentage of time that ultraviolet (UV) monitoring network data is available to the public	>95%	ARPANSA Corporate Plan 2020-21	Achieved
1.2	Monitor radiation doses to occupationally exposed workers	Annual reporting of trend in radiation doses received by workers, determined from quantitative dose measurement, provides evidence of optimisation of radiation protection	ARPANSA Corporate Plan 2020-21	Partially achieved
1.3	Percentage of time the 'Talk to a Scientist' call centre is made available to the public as advertised	>95%	ARPANSA Corporate Plan 2020-21	Achieved
1.4	Project Electromagnetic Energy (EME) Program	Publish the new standard on radiofrequency (RPS S-1) following public consultation	ARPANSA Corporate Plan 2020-21	Project on track

In 2020–21, ARPANSA continued to provide advice, timely communications on key topics, specialised resources, and services to support the protection of the public, workers and the environment from the harmful effects of ionising and non-ionising radiation.

ARPANSA achieved this by:

PBS 1: Advice has been provided when requested and communications on key topics published on social media in cooperation with Office of the CEO.

CP 1.1: The UV network data has been available to the public through the ARPANSA website greater than 95% for the full term. This allows the public to make an informed decision on their exposure to UV radiation and supports nation-wide efforts to reduce skin cancer rates.

CP 1.3: Ensuring the Talk to a Scientist call centre was made available as advertised for the reporting period. While the advertised Talk to a Scientist call service was modified between July to September 2020 due to the pandemic, email enquiries and call back could be undertaken and targets were achieved. Over the course of the year the service reviewed and updated its systems for delivery, and from October the service once again advertised its twice per week offering and maintained its 95% public availability target, with at least 2 scientists available during advertised call times. By 2021 the call centre could be delivered by staff from any location, no longer impacted by the pandemic or further work from home directives, building resilience in the service. The service was available all year to the public to receive and respond to enquiries via email.

CP 1.4: ARPANSA published a new safety standard for exposure to radiofrequency EME, Standard for Limiting Exposure to Radiofrequency Fields – 100 kHz to 300 GHz, (RPS S-1). The updated standard supersedes the previous standard for ‘Maximum Exposure Levels to Radiofrequency Field’, RPS 3. The safety standard sets limits for public and occupational exposure across all types of radio waves. The standard is mainly used in the telecommunications industry, but also in various industrial settings. The exposure limits in the new standard continue to be set conservatively, meaning they remain well below the level at which any harm can occur, and will protect the community from all new and existing technologies using EME.

Some activities have been partially achieved or delayed due to time-frames and operability being impacted by the pandemic:

CP 1.2: The annual publication of the Australian National Radiation Dose Register (ANRDR) in Review is pending due to late data submissions. The register holds dose records for approximately 47 000 radiation workers. This includes full coverage of workers from all state and territory-licensed uranium mining and milling operations, and partial coverage of workers from Commonwealth licence holders, state and territory regulatory bodies, and the mineral sands mining and processing industry. The annual publication provides an assessment of trends of radiation doses received by workers but was delayed this year due to delays in operators completing their data submission.

Additional progress over the last 12 months included the following.

- Distribution of the Radon Action Plan to state and territory regulatory authorities.
- Contact between the CEOs of ARPANSA and Safe Work Australia, with confirmation that Safe Work would assist in raising workplace awareness of national radon protection initiatives.
- Presentations have been made (virtually) to tourist caves in Western Australia.
- Contact has been made with the Australasian Caves and Karst Management Association in order to engage with the managers of caves that were not part of the 1990 survey.
- The Radon Chamber has been upgraded to provide better control of the radon concentration.

2. Promote radiological and nuclear safety and security, and emergency preparedness

ARPANSA supported a national approach to the secure and safe management of radiation sources, radiation facilities and nuclear installations.

Details of performance against purpose and program objectives

Number	Measure (KPI or Project)	Target or milestone	Source	Outcome
PBS 2	Provide emergency preparedness and response systems for a radiological or nuclear incident.	Emergency preparedness and response (EPR) systems for field, network and laboratory measurements, and information management and decision support systems are available, calibrated, tested and aligned with national planning	PBS 2020-21	Partially Achieved
CP 2.1	Data availability of ARPANSA operated CTBTO (Comprehensive Nuclear-Test-Ban Treaty Organisation) International Monitoring Systems (IMS) radionuclide stations	>95% *average per reporting period	ARPANSA Corporate Plan 2020-21	Achieved
CP 2.2	Project Reference Accident for nuclear powered vessels	Publish a review of the Reference Accident for nuclear powered vessels as part of the implementation of Emergency Exposure Guide	ARPANSA Corporate Plan 2020-21	Project delayed
CP 2.3	Project CTBTO IMS monitoring station upgrades	Deliver, in cooperation with the CTBTO, upgrades to the Macquarie Island radionuclide monitoring station.	ARPANSA Corporate Plan 2020-21	Project on track

ARPANSA's commitment to test the adequacy of emergency preparedness arrangements and capability by participating in exercises both internally and with other agencies remained consistent in the 2020–21 reporting period despite challenges faced by the pandemic. ARPANSA continues to utilise regulation in driving best practice for radiological and nuclear safety and security both within the Commonwealth and across Australia by our promotion of national uniformity.

During 2020-21:

CP 2.1: Data availability for the 9 Australian stations operated as part of the global Comprehensive Test Ban Treaty (CTBT) network was greater than 95% for the year. ARPANSA met contractual obligations to the CTBTO and contributed to the global verification regime to monitor compliance with the Comprehensive Nuclear-Test-Ban Treaty.

CP 2.3: ARPANSA operated and maintained 9 particulate radionuclide monitoring stations and 2 noble gas monitoring stations that are part of the CTBT International Monitoring System. Overall data availability was maintained, despite pandemic related travel restrictions preventing maintenance from occurring as planned.

Some activities have been partially achieved or delayed due to time frames being impacted by the pandemic:

PBS 2: ARPANSA maintained its emergency preparedness and response network, decision support systems and laboratory, ensuring they remained aligned with national planning over the period. COVID-19 and resourcing challenges limited the agency's ability to fully implement training and maintenance programs for field response capabilities. ARPANSA initiated activities to upgrade and modernise its framework for preparedness and emergency response by adopting the Australasian Inter-service Incident Management System (AIIMS). The incident management plan was activated as required, allowing ARPANSA to effectively respond to incidents in a timely manner. While ARPANSA is still able to provide emergency preparedness and response systems for a radiological or nuclear incident, elements of our response capability, particularly for deployment of staff for field measurement may be delayed as a consequence of operational restrictions during the pandemic.

CP 2.2: ARPANSA provided evidence and attained agreement from the Visiting Ships Panel (Nuclear) regarding the 2000 Reference Accident and its supporting accident code. These documents are being reviewed to ensure they remain current, meet national and international best practice and provide the basis for state and territory emergency planning. The completion of the full update is expected to take at least 3 years.

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

- ARPANSA participated in an IAEA Convention Exercise (ConvEx), also known as ConvEx-2b. The exercise tested specific parts of the international framework for emergency preparedness and response. ARPANSA was able to verify good practices and identify improvements in the preparation stage.

3. Promote the safe and effective use of ionising radiation in medicine

The use of medical radiation results in the largest ionising radiation exposure to the Australian population.

ARPANSA provides calibration, audits, diagnostic reference levels and educational services, which underpin the safe and appropriate use of medical radiation throughout the country.

Details of performance against purpose and program objectives

Number	Measure (KPI or Project)	Target or milestone	Source	Outcome
PBS 3	Promote patient safety in radiotherapy and diagnostic radiology	Report annually on significant deviations and trends discovered through the Australian Clinical Dosimetry Services and Diagnostic Reference Level programs Annual publications	PBS 2020-21	Partially Achieved
CP 3.1	Number of Diagnostic Reference Level (DRL) surveys per category are sufficient to infer national characteristics per annual survey period	>2400	ARPANSA Corporate Plan 2020-21	Achieved
CP 3.2	Percentage of Australian radiotherapy providers subscribing to the national dosimetric auditing program provided by the Australian Clinical Dosimetry Service (ACDS)	>95% *average per reporting period	ARPANSA Corporate Plan 2020-21	Achieved
CP 3.3	Number of hospital radiotherapy local dosimetry standards calibrated by ARPANSA against the national primary standard.	15	ARPANSA Corporate Plan 2020-21	Achieved
CP 3.4	Project Development of new audit techniques for emerging brain cancer treatments	Using ARPANSA's newly commissioned linear accelerator, develop audit techniques for stereotactic radiosurgery (SRS) brain cancer treatment	ARPANSA Corporate Plan 2020-21	Project on track
CP 3.5	Project Proton radiotherapy dosimetry and advice	Providing guidance, informed through research, to professional organisations and governments. Provide dosimetry support and measurement services to radiotherapy clinic	ARPANSA Corporate Plan 2020-21	Project on track

In 2020–21, ARPANSA promoted the safe and effective use of ionising radiation in medicine. The main work programs are the diagnostic reference level (DRL) surveys, dosimetric auditing by the Australian Clinical Dosimetry Service (ACDS) and the maintenance and dissemination of the primary standard for absorbed dose. These are all designed to promote the safety of patients undergoing medical examination or treatment involving radiation.

All programs have been developed with, and operate successfully through, ongoing interaction and engagement with medical professionals and clinical staff who perform and supervise the treatment and imaging procedures. In 2020–21:

CP 3.1: ARPANSA used data collected from the DRL surveys to calculate national diagnostic reference levels (NDRLs) for common types of computed tomography (CT) scans. The NDRLs provide a point of comparison so a

given imaging facility can compare their practice with that of their peers. The aim of NDRL comparisons is to encourage imaging facilities to review their practice and avoid excessive radiation dose to patients from medical imaging. A larger data sample gives increased confidence that the DRLs ARPANSA published appropriately reflects current practice across Australia.

- ARPANSA received 4621 surveys of patient dose in CT scans during the 2020/2021 financial year and 5078 surveys during the 2020 calendar year. In comparison, the Service received 5073 surveys during the 2019/2020 financial year and 4781 surveys in the 2019 calendar year. Survey medians were consistent with or lower than the published DRLs.
- Revisions to the NDRLs for kidney-ureter-bladder, cervical spine, and soft-tissue neck scans were endorsed by relevant professional bodies and updated on the ARPANSA website. The NDRL data portal was updated on 29 March 2021 and clients advised of the update via e-mail. The Diagnostic Imaging Accreditation Scheme (DIAS) Advisory Committee (supported by the Commonwealth Department of Health) released an advisory statement in the same week.

CP 3.2: ARPANSA maintained subscription from 100% of Australian radiation therapy providers under the ACDS national dosimetric auditing program. This encompasses 219 linear accelerators deployed in 107 facilities. The ACDS is a national independent dosimetry auditing program, providing quality assurance for radiation oncology facilities and patients. The ACDS identified a number of issues within hospital dosimetry systems that could have impacted patient outcomes, some of which were followed up by jurisdictional regulators.

CP 3.3: ARPANSA calibrated 60 hospital chambers, significantly exceeding the annual target. This result reflects both catching up on previously deferred calibrations and the increasing number of facilities in Australia. This magnitude of work could only be conducted, without compromising other ARPANSA objectives, due to the presence of two linear accelerators at the Yallambie laboratories.

CP 3.4: ARPANSA undertook 14 stereotactic radiosurgery (SRS) brain field trial audits, including 2 Gamma Knife systems. Film dosimetry software developments were made to streamline the process and improve reproducibility. A presentation outlining the ACDS SRS cranial audit and summary of findings from the first 10 audits was delivered to the European Society for Radiotherapy and Oncology (ESTRO) virtual conference in November 2020.

CP 3.5: ARPANSA has supported proton radiotherapy dosimetry and advice through its involvement with the Australasian College of Physical Scientists and Engineers in Medicine, Specialty working group on Protons. Associate Professor Ivan Williams, ARPANSA's Chief Medical Radiation Scientist, participated in multiple meetings and directed appropriate queries to the Primary Standards Dosimetry Laboratory section. There are frequent queries regarding the radiation safety guide and offers to assist with content relating to proton therapy and quality control.

One measure was partially achieved/delayed due to time frames being impacted by the pandemic:

PBS 3: The Year-in-Review summary of ACDS activity from 1 January 2019 to 30 June 2020 was published in April 2021. This report includes a 'Key Findings' section detailing significant trends and case studies showing deviations discovered through the ACDS audit program. Presentations on the ACDS audit program were delivered at virtual professional conferences in Australia and New Zealand throughout the year. Annual reporting is now on track and a report is in preparation that covers the financial year 2020-21, expected to be published early in the 2021-22 financial year. Compilation of annual DRL statistics for 2020 was delayed due to the extra work required to incorporate a bulk DRL data submission from a large radiology network. The upload was completed in May 2021 and summary DRL statistics for 2020 were published on the ARPANSA website in June 2021.

Other ARPANSA activities that promoted the safe and effective use of ionising radiation in medicine included:

- The Australian Radiation Incident Register (ARIR) is Australia's national database of incidents and events, where radiation 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. ARIR informs radiation protection authorities and users of radiation of specific sources, causes, events and procedures that present hazards and risks.
- ARPANSA maintained authorisation from the National Measurement Institute to maintain and disseminate the primary standards of absorbed dose and air kerma for ionising radiation.
- ARPANSA provided advice on the licensing of the South Australian proton radiotherapy facility by participating in the South Australian Environment Protection Authority Project Steering Committee.

4. Ensure risk informed and effective regulation

ARPANSA took a graded, risk-informed approach to regulation of radiation sources, radiation facilities and nuclear installations across the lifecycle.

Details of performance against purpose and program objectives

Number	Measure (KPI or Project)	Target or milestone	Source	Outcome
PBS 4	Ensure risk informed and effective regulation	Implement ARPANSA-specific findings as necessary from the IAEA IRRS mission to Australia, in which Australia's national regulatory, legal and governmental framework for nuclear and radiation safety was benchmarked against international best practice.	PBS 2020-21	Achieved
CP 4.1	Percentage of Regulator Performance Framework (RPS) KPIs met or exceeded per reporting period.	Meet or exceed 75%* of ARPANSA's RPF performance measures. *average per reporting period	ARPANSA Corporate Plan 2020-21	Achieved
CP 4.2	The principles of radiation protection (justification, optimisation and limitation) are applied to all Commonwealth licence holder operations	The radiation doses of the 100 most exposed workers at licensed Commonwealth entities trend downwards over time.	ARPANSA Corporate Plan 2020-21	Achieved
CP 4.3	Project National action plan and strategy	Support the work of the Environmental Health Standing Committee (enHealth) to coordinate efforts to achieve nationally consistent regulatory practices and uniform safety and protection outcomes through the implementation of the multi-jurisdictional findings from the IAEA IRRS mission to Australia.	ARPANSA Corporate Plan 2020-21	Project on track

ARPANSA is committed to the effective regulation of radiation sources, radiation facilities and nuclear installations across the full life cycle, as well as national uniformity and compliance with the Regulator Performance Framework (RPF). The regulatory activities are undertaken using a risk-informed approach, to not unduly impede on justified practices.

ARPANSA has undertaken activities to support effective and proportionate regulation in Australia including:

PBS 4: By the closure of the 2020-21 financial year, 9 of 14 findings that were directed at ARPANSA from the IAEA IRRS mission to Australia, had been completed. Remaining findings directed to ARPANSA are expected to be closed out by December 2021.

CP 4.1: ARPANSA achieved in excess of 75% of its key performance indicators, demonstrating a robust commitment to the RPF.

- The RPF entails 6 overarching outcomes-based key performance indicators against which Commonwealth regulators should measure themselves on an annual basis to ensure regulators administer regulation fairly, effectively and efficiently. Indicators include communication with regulated entities is clear targeted and effective, actions undertaken by regulators are proportionate to the regulatory risk being managed, regulators are open and transparent in their dealings with regulated entities.
- ARPANSA updated the methodology used to determine facility regulatory priority. The methodology is based on facility performance over the previous year, which determines the priority and inspection frequency. There was also an unusually high number of applications received over the last six months of the year which has stretched agency capacity to meet these targets.

CP 4.2: ARPANSA has analysed the radiation doses of the 100 most exposed workers at licensed Commonwealth entities to ensure the principles of radiation protection are applied. Data from the year indicates that the average dose within the group of 100 most exposed individuals has dropped from a mean of 0.476 millisievert to 0.409 millisievert.

CP 4.3: ARPANSA coordinated efforts to support the National Action plan to address the findings from the IRRS mission, published in 2019. The action plan, which was endorsed by the Australian Health Protection Principal Committee (AHPPC) in December 2020, incorporates all findings addressed to ARPANSA, state and territory regulators and the Australian Government. The multi-jurisdictional findings are being managed by the Environmental Health Standing Committee (enHealth), reporting to the AHPPC. ARPANSA continues to support the findings owned by enHealth, with a focus on the finalisation of National Directory for Radiation Protection 2nd edition (NDRP2) to provide an agreed framework for radiation safety, including both ionising and non-ionising radiation, together with clear regulatory statements to be adopted by the Commonwealth, states and territories. NDRP2 was sent to state and territory Health Ministers for endorsement in June 2021. ARPANSA also supports the development of the National Strategy for Radiation Safety, which is progressing to public consultation.

Other ARPANSA activities that supported risk-informed and effective regulation included:

- The importation and exportation of radioactive material to and from Australia, under the Customs (Prohibited Imports) Regulations 1956 and the Customs (Prohibited Exports) Regulations 1958. Under these regulations, the Minister for Health has authorised ARPANSA officers to issue import and export permits. During the reporting period, ARPANSA approved 180 urgent permits, 221 standard permits, 11 twelve-month permits for radioisotopes and 33 export permits.
- 32 information sharing meetings with licence holders and additionally, 9 site visits.
- A higher number of licence applications were submitted to ARPANSA this reporting period. Consequently, only 62% of applications were completed within agreed time frames a result of increased demand on ARPANSA's regulatory resources. This increase in applications is potentially attributed to licence holders changing their work practices in response to the pandemic. As a result, licence holders may have diverted resources to new projects which has contributed to the increase in applications submitted.

5. Enhance engagement with community, industry and government

ARPANSA provided accessible, evidence-based and risk-informed advice to the Australian Government, industry and the public. To effectively deliver this objective ARPANSA has striven to understand our stakeholder's needs and meaningfully communicate and engage on topics of interest. Effective international relations have also played an important role in our ability to deliver against this objective, particularly as we support meeting Australia's international obligations for radiation protection and nuclear safety.

Details of performance against purpose and program objectives

Number	Measure (KPI or Project)	Target or milestone	Source	Year to date tracking
CP 5.1	Compliance with international agreements and treaties	Compliance with international conventions and codes through submitting national reports to review meetings as per schedule.	ARPANSA Corporate Plan 2020-21	Partially Achieved
CP 5.2	Facilitate stakeholder engagement in decision making processes for major licence applications such as arranging public forums and community consultation meetings	Stakeholders are consulted when license applications are received.	ARPANSA Corporate Plan 2020-21	Redundant
CP 5.3	Project National Radioactive Waste Management Facility (NRWMF) stakeholder engagement	Undertake stakeholder engagement activities for the proposed NRWMF prior to the receipt of a potential licence application. This will include community visits as needed and ongoing communication with interested parties via written correspondence and telephone. Additional activities may include the provision of new fact sheets and guidance material	ARPANSA Corporate Plan 2020-21	Project on track

ARPANSA has maintained strong engagement with national stakeholders and with international organisations despite challenges posed by the pandemic:

CP 5.1: Continuing to drive and influence international safety standards in radiation protection and nuclear safety, drive international risk assessments, and submit reports on behalf of Australia under the terms of a number international conventions, including:

- Due to the ongoing impacts of COVID-19, the review meetings of both the Convention on Nuclear Safety (CNS) and Joint Convention (JC) on the Safety of Spent Fuel Management and the Safety of Radioactive Waste Management have been postponed. The national reports for both the CNS and JC have been submitted on schedule and are available on the ARPANSA website.
- ARPANSA's CEO, Dr Carl-Magnus Larsson, and a staff member participated virtually in the CNS Officers' Meeting in their capacity as Vice-President and a Rapporteur for the Eighth Organizational Meeting of Contracting Parties, respectively. After initially being postponed in 2020, due to the COVID-19 pandemic, it was announced that the eighth Review Meeting would be merged with the ninth Review Meeting scheduled for 2023.

- Dr Gillian Hirth, Deputy CEO and Chief Radiation Health Scientist was re-elected as Chair of the United Nations Scientific Committee on the Effects of Atomic Radiation for the 68th session. This is a position Dr Hirth will hold until the next election of officers, which will take place at the commencement of the 69th session in 2022. Dr Hirth has been involved with the work of the Committee since 2012 and has been a member of the Committee's Bureau since December 2016.
- ARPANSA staff members attended IAEA safety standards committee meetings virtually during 2020-21. ARPANSA nominated a number of staff members to be the Australian representatives for the next three-year term to the five IAEA Safety Standards Committees and support the Australian Safeguards and Non-proliferation Office as the alternate member for the IAEA Nuclear Security Guidance Committee.

CP 5.2: During this year, there were no major licence applications or decisions requiring public notice or consultation under section 48 of the Regulations. As a result, this measure is redundant.

CP 5.3: No site visits were conducted during this year due to COVID-19 restrictions and ongoing legislative processes. Planning for future stakeholder engagement activities for this project is under way. ARPANSA responded to enquiries from members of the community and other interested parties during the quarter.

During 2020-21, ARPANSA increased public engagement and broadened our audience reach through the following communication activities:

- ARPANSA responded to 25 media enquiries, a significant decrease from 78 in 2019-20. Most enquiries related to either mobile phones or UV radiation.
- ARPANSA continued to engage with the public and industry through social media with Facebook followers increasing by 11%, Twitter followers by 18% and LinkedIn followers by 47%.
- Stakeholder engagement was facilitated for the consultation and release of the new radiofrequency exposure standard (RPS S-1) with an online consultation forum, social media and media engagement.

6. Enhance organisational innovation, capability and resilience

ARPANSA invested in projects that build capability, increase agility and focus on future needs.

Details of performance against purpose and program objectives

Number	Measure (KPI or Project)	Target or milestone	Source	Outcome
CP 6.1	Employee engagement score achieved in annual APS employee census	>APS census average	ARPANSA Corporate Plan 2020-21	Achieved
CP 6.2	Number of ARPANSA breaches identified in radiation safety and security compliance assessments	0 *average per reporting period	ARPANSA Corporate Plan 2020-21	Achieved
CP 6.3	Peer reviewed publications demonstrating high quality research in radiation protection, nuclear safety and medical exposures to radiation	6 peer-reviewed publications	ARPANSA Corporate Plan 2020-21	Achieved
CP 6.4	Project Workforce Plan	Review and update the existing Workforce Plan 2017–2021 to reset priorities ensuring we continue to build our organisational capabilities strategies including health and wellbeing, attraction and recruitment, leadership and learning, and diversity and inclusion.	ARPANSA Corporate Plan 2020-21	Project delayed
CP 6.5	Project Digital Technology Roadmap	Implement digital technology initiatives to enhance service delivery, improve customer experience and streamline business processes. This will include the commencement of approved projects to increase business sustainability, integrate data and uplift technology platforms	ARPANSA Corporate Plan 2020-21	Project on track
CP 6.6	Project Cybersecurity Plan	Develop and commence implementation of a Cybersecurity Plan, with a focus on the principles to govern, protect, detect and respond to a cybersecurity event	ARPANSA Corporate Plan 2020-21	Project on track
CP 6.7	Project Research and Innovation Strategy 2021-2025	Review and update the existing Research and Innovation Strategy 2017–2021 to reflect contemporary practice and drivers. The resulting strategy will guide the areas and types of research which ARPANSA should pursue.	ARPANSA Corporate Plan 2020-21	Project delayed

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 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:

CP 6.1: ARPANSA staff overall Engagement score was slightly higher than that of the APS overall.

CP 6.2: No safety breaches were recorded during this reporting period. ARPANSA addressed an outstanding breach from the previous reporting period by including the area monitors on a calibration schedule and modifying the alarm system to include an audible alarm. Compliance was confirmed in September 2020.

CP 6.3: ARPANSA published 19 peer-reviewed publications during the 2020–21 reporting period (13 publications from Radiation Health Services and 6 from Medical Radiation Services).

CP 6.5: As part of ARPANSA’s wide-ranging review of business systems and technology platforms, the Platform and Systems (PAS) Roadmap was established in 2019 to support the future of our business services. The program of work for 2020–21 has seen the delivery of several projects along with significant progress on the planning of others. Of note was the successful delivery of the new ARPANSA intranet and risk management system. In addition, intensive preparation for the Laboratory Information Management System (LIMS), Incident Management System and Records Management integration has resulted in contractual arrangement with vendors and project commencement.

CP 6.6: ARPANSA’s Cyber Security Plan is on track for delivery in 2021 and will incorporate current recommendations and approach from the Australian Cyber Security Centre. The plan incorporates the updated release of the Essential 8 mitigations for information security from the Australian Cyber Security Centre.

Some activities have been partially achieved/delayed due to timeframes being impacted by the pandemic:

CP 6.4: ARPANSA initiated a review of the Workforce Plan, which sets out how best to place our people’s capability, performance and productivity to enable achievement of our key activities. During the reporting period, individual branch needs and priorities formed the focus of this piece work to maintain key people management strategies that support the workforce. Competing priorities and other factors have caused delay and the review will be finalised in 2021-22.

CP 6.7: The Research and Innovation Strategy 2017-2021 is being reviewed and updated to reflect contemporary practices and expectations. The resulting document will cover ARPANSA operations in this space to 2025.

Other activities ARPANSA has undertaken to enhance organisational innovation, capability and resilience include:

- A new electronic dose report for Optically Stimulated Luminescence (OSL) monitors was developed and is now in operation. This results in more information being made available for customers, giving context and improving optimisation of worker protection. It also improves efficiency due to the ability to provide reports electronically.
- ARPANSA commenced the development of a 4-year investment plan to upgrade physical security.
- ARPANSA commenced a risk management project. The project has revised the risk framework and introduced risk software which enables greater oversight and accountability of risk.
- A post-implementation review of the project management framework was initiated. The review evaluated the effectiveness of the project management framework and recommendations posed.
- A post-implementation review of the new structure for ARPANSA’s enabling services was initiated. This will evaluate experiences from the implementation of the new structure in April 2020 and, if deemed appropriate, propose adjustments to the structure.

Regulator Performance Framework

The Regulator Performance Framework (RPF) was introduced in 2014 and forms an important part of the Government's commitment to reduce unnecessary and inefficient regulation. In July 2021, the RPF was replaced by the Commonwealth Regulator Performance Guide (CRPG). Traditionally, ARPANSA has undertaken an annual self-assessment of their performance against the framework at the end of the financial year and produced a standalone performance report which was endorsed by the Nuclear Safety Committee. Under the CRPG the agency is now required to report publicly within the Annual Report. As a result of this transitional period, the below analysis reflects information from both the 2019-20 and 2020-21 reporting periods, to capture the adjusted reporting timeframes. ARPANSA conducted an annual self-assessment of its regulatory activities against six RPF key performance indicators in July 2020 for the period covering the 2019-20 financial year.

The assessment found that ARPANSA continues to perform well against the RPF metrics and indicators, demonstrating that the principles enshrined in the RPF are embedded in the way ARPANSA carries out the regulatory function under the ARPANS Act. Core strengths for ARPANSA are its openness and transparency with all stakeholders. ARPANSA was found to consult widely, set clear objectives and seek regular feedback. The report identified certain opportunities for improvement including the better use of data management tools and further strengthening the approach to, and promotion of, holistic safety (human, organisational and technological).

The Nuclear Safety Committee (NSC) was tasked to review and validate the self-assessment report. The NSC was satisfied with the approach and methodology noting that benefits to be gained from an annual assessment against the RPF metrics were diminishing year on year. The self-assessment report is available on the ARPANSA website. The Regulator Performance Framework was superseded in June 2021 by the Commonwealth Guide for Regulatory Functions.

ARPANSA's regulatory operations were impacted by the COVID pandemic during the 2020-21 financial year. Data indicates that ARPANSA met 75% of its performance measures related to the RPF in this period.

ARPANSA had difficulty meeting its inspection schedule due to travel restrictions. It was necessary to cancel some inspections at short notice and inspections that have taken place have focused on facilities with higher risks. This has been reflected in the overall proportion of regulatory effort on medium or higher risk activities increasing to 87%. A number of inspections were undertaken through video or using a combination of video and physical inspection. Wherever possible, inspections were undertaken in a geographical campaign where travel opened up to specific areas within Australia. Nine site visits have also been undertaken during the year. Data indicates that more than 75% of identified areas for improvement found during an inspection are being addressed by the license holder within three months of the inspection report being issued.

ARPANSA fell a little short of its target for assessment of applications finished in an agreed timeframe. This was partly due to an increase in the typical number of applications received, particularly in the second half of the year, that has challenged ARPANSA's capacity.

ARPANSA has maintained good engagement with license holders during the year. It has become common to hold information sharing meetings by video conference. In May, ARPANSA held a license holder forum by virtual means for the first time. The number of people registering for the forum was a little higher than when attending a typical Canberra based forum. The virtual forum, which utilised the services of a professional media company, demonstrated the feasibility of using this format for conveying important information developments in radiation safety.

ARPANSA reviewed and revised its main operating manuals during the year in order to reflect and deliver its objectives. The revised review and assessment manual, inspection manual and compliance manual can be found on the ARPANSA website. A number of regulatory guides have also been developed or updated on the website including a guide for preparing a safety analysis report for controlled facilities.

Previous RPF reports have highlighted the value of improving ARPANSA's regulatory data management. ARPANSA has been progressively upgrading its platforms and systems and the planning for a major upgrade to its regulatory administration database has been progressed with the upgrade expected to take place in the 2021-22 financial year. This will provide improved business intelligence and efficiency improvements.

Further details of the assessment of regulatory performance can be found on the ARPANSA website including past RPF self-assessments.

Financial performance

For the financial year ending 30 June 2021, ARPANSA reported an operating deficit of \$2.655 million. This deficit relates to depreciation and amortisation expenses not requiring appropriation.

Total operating revenue for the year was \$26.752 million and consisted of:

- government appropriation of \$13.869 million
- regulatory license fees and charges of \$5.260 million
- sale of goods and provision of services and other revenue of \$7.623 million.

ARPANSA's total operating expenses were \$29.407 million and consisted of:

- employee benefits of \$18.486 million
- supplier and other expenses of \$7.585 million
- depreciation and amortisation expenses of \$3.336 million.

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 totaling \$40.907 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 2020–21, ARPANSA procurement activities complied with the CPRs.

Consultants

EXPENDITURE ON REPORTABLE CONSULTANCY CONTRACTS

Reportable consultancy contracts 2020-21	Number	Expenditure \$
New contracts entered into during the reporting period	10	\$161,854
Ongoing contracts entered into during a previous reporting period	1	\$19,800
Total	11	\$181,654
Organisations receiving a share of reportable consultancy contract expenditure 2020-21	Expenditure \$	
RMIT University	\$44,000	
Edith Cowan University	\$33,000	
People Foundations Consulting Group P/L	\$32,230	
Pamela Mitchell	\$19,800	
Antares Solutions Pty Ltd	\$18,040	

During 2020-21, 10 new reportable consultancy contracts were entered into involving total actual expenditure of \$161,854. In addition, one ongoing reportable consultancy contract was active during the period, involving total actual expenditure of \$19,800.

Decisions to engage consultants during 2020-21 were made in accordance with the PGPA Act and related regulations including the Commonwealth Procurement Rules and relevant internal policies.

ARPANSA engages consultants where there is a requirement for specialist expertise that is not available within the Agency, or where an independent assessment is required. The Agency selects consultants through the use of panel arrangements, by making an open approach to market, or direct engagement of a recognised or pre-eminent expert.

EXPENDITURE ON REPORTABLE NON-CONSULTANCY CONTRACTS

Reportable non-consultancy contracts 2020-21	Number	Expenditure \$
New contracts entered into during the reporting period	82	\$2,294,408
Ongoing contracts entered into during a previous reporting period	36	\$2,613,039
Total	118	\$4,907,447
Organisations receiving a share of reportable non-consultancy contract expenditure 2020-21	Expenditure \$	
Hays Specialist Recruitment (Australia) Pty Ltd	\$543,067	
Paras and Partners Pty Ltd	\$402,071	
AARNET Pty Ltd	\$372,802	
Dosimetrix GmbH	\$290,463	
Data#3 Limited	\$206,913	

Annual reports contain information about actual expenditure on reportable non-consultancy contracts. Information on the reportable non-consultancy contracts' value is available on the AusTender website.

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/

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 payments of \$14,300 or more (inclusive of GST) relating to advertising and market research.

During 2020-21, 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 2020-2021

RESOURCE STATEMENT 2020-21

	Actual Available Appropriation for 2020-21	Payments Made 2020-21	Balance Remaining 2020-21
	\$'000	\$'000	\$'000
	(a)	(b)	(a)-(b)
Ordinary annual service ¹			
Departmental appropriation			
Prior year departmental appropriation ²	3,056	3,056	-
Departmental appropriation ³	15,904	12,600	3,304
Total	18,960	15,656	3,304
Total ordinary annual services	18,960	15,656	
Other services			
Departmental non-operating			
Equity injection ⁴	1,987	-	1,987
Total	1,987	-	1,987
Total other services	1,987	-	
Special account ⁵			
Opening balance	1,192		
Appropriation receipt ⁶	15,656		
Non-Appropriation receipts to			
Special accounts	13,329		
Payments made		28,969	
Total Special account	30,177	28,969	1,208
Total resourcing	51,124	44,625	
Less departmental appropriations and equity			
injections drawn from the above	(15,656)	(15,656)	
and credited to special accounts			
Total net resourcing for ARPANSA	35,468	28,969	

1 Appropriation Bill (No.1,3) and Supply Bill (No.1) 2020-21

2 Balance carried forward from previous year for annual appropriations

3 Includes an amount of \$2.035 million in 2020-21 for Departmental Capital Budget. For accounting purposes this amount has been designated as 'contributions by owners'

4 Appropriation Bill (No.2) and Supply Bill (No.2) 2020-21 does not include 'Special Public Money' held in accounts like Other Trust Monies accounts (OTM).

5 Services for other Government and Non-agency Bodies accounts (SOG), or Services for Other Entities and Trust Monies Special accounts (SOETM)

6 Appropriation receipts from ARPANSA's annual and special appropriations for 2020-21 included above,

ARPANSA expenses for outcome 1

ARPANSA EXPENSES FOR OUTCOME 1

Outcome 1:

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

	Budget* 2020-21	Actual Expenses 2020-21	Variation 2020-21
	\$'000	\$'000	\$'000
	(a)	(b)	(a)-(b)
Program 1.1: (Radiation protection and nuclear safety)			
Departmental Expense			
Ordinary annual services			
Departmental appropriation ¹	13,869	12,200	1,669
Special Accounts	12,720	14,063	(1,343)
Expenses not requiring appropriation in the Budget year	2,578	3,144	(566)
Subtotal for Program 1.1	29,167	29,407	(240)
Total for Outcome	29,167	29,407	(240)
	2019-20	2020-21	
Average staffing level (number)	132	138	

* Full year budget including any subsequent adjustment made to the 2020-21 budget

1 Appropriation Bill (No.1,3) and Supply Bill (No.1) 2020-21

Case study 1: ARPANSA research

As a scientific agency and a health advisor, ARPANSA undertakes research to better understand radiation and its effects on health and the environment. Some research projects ARPANSA engaged in during 2020-21 included:

Cosmic radiation exposure in Australia

ARPANSA conducted a first of its kind study to calculate the Australian public's average exposure to cosmic radiation – part of the normal background radiation that we are exposed to from sun and other stars and galaxies. The study assessed radiation exposure at ground level and at higher altitudes during international and domestic flights. The study found exposure levels for occasional flyers, and the majority of frequent flyers are low and additional radiation protection measures are not required for these groups. This study provides valuable insight into cosmic radiation exposure to the Australian public including frequent flyers.

The study is available at www.arpansa.gov.au/understanding-radiation/radiation-sources/more-radiation-sources/flying-and-health

Sunscreen testing

ARPANSA partnered with Queensland University of Technology to research the effectiveness of aerosol-based sunscreen. The study found that using aerosol made it difficult to accurately determine the amount of sunscreen being applied, not only due to the spray application method but also because of the liquid propellant mixed in with the sunscreen. As part of our sun protection recommendations, ARPANSA now recommends using lotion and cream-based sunscreens so that people can determine if they are applying the correct amount.

The study is available at www.arpansa.gov.au/sites/default/files/aerosol_sunscreen_report_final.pdf

COVID research

During 2020, ARPANSA staff worked with a team of doctors, engineers and scientists from Western Health, The University of Melbourne and CSIRO to assist in characterising the aerosol particles produced by COVID-19 patients. Using our radon laboratory equipment, capable of advanced nanoparticle measurements, we were able to characterise and monitor particle size to get a better idea of how COVID-19 particles behave. The data collected from the program is assisting in designing better ventilation systems for hospitals and allowing for more effective and targeted use of protective equipment. This will help to protect health care workers from COVID-19 and help stop the spread of coronavirus in medical settings.

More information is available at www.arpansa.gov.au/news/arpansas-radon-laboratory-contributes-fight-against-covid-19

Electromagnetic energy

A study between ARPANSA and the University of Auckland examined the number of parotid and other salivary gland cancers that occurred in Australia from 1982 to 2016 to examine whether the rise of mobile phone use in the general population during this time contributed to an increase in cancers. The study found that there was no indication that electromagnetic energy exposure from mobile phone use increased the incidences of these cancers. This research is consistent with our previous findings and those of the International Commission on Non-Ionizing Radiation Protection, that exposure to radiofrequency electromagnetic energy (within international safety limits) has no adverse health effects on the human body.

ARPANSA often partners with research and educational institutions to further our understanding of radiation and health. Other research topics include ongoing assessment of historical nuclear test sites, radon measurement and medical use of radiation.

The study is available at pubmed.ncbi.nlm.nih.gov/34020314/

Case study 2: Digital transformation

The 2020–21 period saw the launch of 2 key digital projects as part of a larger investment into digital transformation through our Platforms and Systems roadmap. The Platforms and Systems roadmap is a multi-year, multi-project digital transformation plan aimed at improving the digital capabilities of the agency. The roadmap is based on a holistic view of ARPANSA's digital capabilities, determining high priority areas for development.

The intranet replacement project

The intranet replacement project aimed to modernise our then outdated and no longer supported intranet to provide a digital workspace that would help staff remain positively engaged and connected, keep them informed about organisational activities, and help staff work more effectively by providing easy access to information.

The project included evaluation and assessment of requirements under an Agile approach, procurement and tender, and development and testing. The new intranet was launched to staff (virtually due to COVID-19 restrictions) on 22 June 2021.

The new intranet offers an improved user interface and design, better search capabilities, and a more intuitive content management system and publishing process. The new intranet also provides greater opportunities for staff interaction and engagement and serves as an important tool for internal communications for news, events, and vacancies, and houses ARPANSA's management system (AMS). Further upgrades and features will be released as they become available including further integration with our records management system and Microsoft Teams.

LIMS

A new Laboratory Information Management System (LIMS) – a software system specifically designed for the requirements of laboratory work including workflow tracking and data management – has been commissioned for 2 of our laboratories: the radiofrequency calibration and ultraviolet radiation services.

The new cloud-based system will allow ARPANSA to standardise and centralise the platform laboratory teams use to interact with customers and manage workflows. The system will allow for a customer self-service portal and help us modernise our approach to customer service. The new system will also expand our capability to conduct research using the new anechoic chamber, being built as part of our EME project (see Case Study 3).

The next stage of the project will see the LIMS rolled out to the remaining laboratory-based areas of ARPANSA as part of the second stage of the project.

Case study 3: ARPANSA's Electromagnetic Energy Program

In July 2020, ARPANSA released a four-year Electromagnetic Energy (EME) Action Plan detailing our planned activities under the government's enhanced EME Program. The program exists to advance research and public understanding of the EME used in telecommunications – also known as radio waves. ARPANSA progressed the following key initiatives under the first year of the action plan.

Safety standard

ARPANSA launched its new radio wave safety standard in February 2021 following extensive consultation and engagement during 2020. The new safety standard, entitled *Radiation Protection Standard for Limiting Exposure to Radiofrequency Fields – 100 kHz to 300 GHz (RPS S-1)*, sets the limits for human exposure from all radio wave sources including Wi-Fi, mobile phones and radio transmissions. Development of the new standard included consideration of more than 8,000 radio wave studies conducted since the previous safety standard released in 2002. ARPANSA presented to the World Health Organization's International Advisory Committee on ARPANSA's Radiofrequency Safety Standard.

Australia was one of the first countries to update its radio wave Standard based on the new international guidelines published by the International Commission on Non-Ionizing Radiation Protection in 2020. This safety standard is used by regulatory bodies in telecommunications, manufacturing and health sectors to protect workers and the public.

EME laboratory

In late 2020, ARPANSA commenced a tender process and selected a vendor to update its EME laboratory, which will include a new anechoic chamber. The upgrade will allow ARPANSA to offer services and conduct research on a broader range of radio wave frequencies, including those to be used in 5G, and future telecommunications. The upgrade is expected to be completed in 2022.

Research

During 2020-21, ARPANSA conducted research activities relating to radio waves and health including:

- ARPANSA and Swinburne University produced two world-first reviews into 5G and health. Both papers rank in the top 5% of engagement levels for all research outputs ever tracked¹.
- ARPANSA and the University of Auckland investigated mobile phone use and the incidence of parotid gland tumours.
- ARPANSA contributed \$350,000 to World Health Organization (WHO) systematic reviews on radiofrequency and health.
- ARPANSA and Monash University are supporting a joint PhD student project on occupational EME exposure.

Many of these initiatives led to peer-viewed journal publications and extensive international recognition and coverage.

International engagement

ARPANSA continued to engage with international health authorities including the World Health Organization and International Commission on Non-Ionizing Radiation Protection on several research and Standard-related initiatives. In December 2020, EME Program Director, Associate Professor Sarah Loughran presented at an international 5G and misinformation conference held by the Polish Government.

Providing information

A key component of the EME program is to increase public knowledge and awareness of radio wave safety and health. As part of this initiative ARPANSA has:

- conducted social media campaigns on ARPANSA's safety standard, EME Action Plan and Talk to a Scientist Program
- reviewed and updated radio wave content on the ARPANSA website to reflect the new safety standard and address frequently asked questions
- provided information to local governments and liaised with Federal government to contribute to wider EME Program communications and engagement activities.

¹ Altmetric – Meta-analysis of in vitro and in vivo studies of the biological effects of low-level millimetre waves

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 management to support the achievement of our purpose. ARPANSA's core governance structure includes 3 statutory advisory bodies and 2 senior committees. Our extended governance structure involves a number of internal management committees to provide oversight and ensure controls are maintained.

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; and advise and report to the CEO, at the CEO's request or as Council considers appropriate, on the above and any other matters. During 2020–21, the Council met virtually on 5 occasions: 27–28 July 2020, 2 September 2020, 21 October 2020, 9 December 2020, 19–20 April 2021. The Council was not able to meet in-person during 2020–21 due to the operational impact of COVID-19.

A summary of the issues considered and discussed at Council during 2020–21 can be found in Appendix 2.

Radiation Health Committee

The role of RHC, in relation to radiation protection, is to advise the CEO and the Council; develop policies and 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 2020–21, the RHC met on 4 occasions: 22 July 2020, 18–19 November 2020, 10 February 2021 and 24–25 March 2021.

The meeting on 10 February 2021 was a single-issue meeting that focused on a potential Radiation Protection Series (RPS) framework and a new type of RPS document, namely, Regulatory Expectations.

A summary of the issues considered and discussed at RHC during 2020–21 can be found in Appendix 2.

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 2020–2021, the NSC met on four occasions: 13 August 2020, 13 November 2020, 5 March 2021, and 11 June 2021. Due to the impacts of COVID-19 Pandemic, all meetings were held online.

A summary of the issues considered and discussed at NSC during 2020–2021 can be found in Appendix 2.

Senior 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.

In response to the amendment to the PGPA Rule (which excludes members of the audit committee who are officials of the entity) and corresponding with committee position terms' concluding, all committee positions were advertised. Four new members (including the Chair) were appointed prior to the March 2021 meeting, all of whom are independent external members. Representatives from the Australian National Audit Office (ANAO) 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 5 times in 2020–21.

The Audit and Risk Committee charter can be viewed on the ARPANSA website at: arpansa.gov.au/about-us/corporate-publications/audit-and-risk-committee

Audit committee members

Member name	Qualifications, knowledge, skills or experience	Number of meetings attended/total number of meetings	Total annual remuneration
Pam Mitchell	Chartered Accountant	3/3 Appointment ended 2020	\$19,800
Stephen Lutze	Chief Financial Officer, Attorney-General's Department Bachelor of Economics Master of Business Administration Chartered Accountant	3/3 Appointment ended 2020	Nil
Daine Alcorn	Emeritus Professor, RMIT University Bachelor of Science (Honors) Master of Science PhD Biomedical Science Australian Institute of Company Directors, Graduate Member	3/3 Appointment ended 2020	\$6,000
Alex Kalaiziovski	Senior Regulatory Officer, ARPANSA Master, Environmental Engineering Management Member of the IAEA's Radiation Safety Standards Committee Diploma in Government Investigations	3/3 Appointment ended 2020	Nil
Margaret Donnan	Master of Science (Chemistry) Bachelor of Science Associate Fellow of Institution of Chemical Engineers Member Australian Institute of Company Directors	2/2 Current Committee Member: Appointment commenced 2021	\$8,000
Leanne Heywood	Bachelor of Business (Accounting) Certified Practising Accountant Master of Business Administration Graduate AICD International Company Director's Course	2/2 Current Committee Member: Appointment commenced 2021	\$4,614 (includes expense reimbursement)
Claire Miller	Bachelor of Laws Bachelor of Arts Graduate Diploma of Applied Corporate Governance Associate Member of Governance Institute of Australia Member Australian Institute of Company Directors	2/2 Current Committee Member: Appointment commenced 2021	\$4,000

	Member Association of Corporate Counsel Australia		
Dennis Clark	Bachelor of Economics Company Directors Diploma Fellow Governance Institute of Australia Fellow Australian Institute of Company Directors Fellow Chartered Accountant Fellow Certified Practicing Accountant Member Institute of Internal Auditors Australia	2/2 Current Committee Member: Appointment commenced 2021	\$4,000

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 3 times in 2020–2021 and comprises the CEO (Chair), branch and office heads, and 2 external members appointed by the CEO.

Management committees

ARPANSA ensures effective decision-making, management and oversight of the agency's operations and performance through the following management committees.

Executive Group

The Executive Group (EG) is ARPANSA's operational management forum. The EG is responsible for monitoring the strategies and initiatives used to implement agency business plans. The EG met 11 times in 2020–21 and comprises the CEO, 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 4 times in 2020–21.

The Radiation Safety Committee

The Radiation Safety Committee monitors, reviews and improves radiation safety practices within ARPANSA. It is chaired by the Radiation Safety Officer and is comprised of Radiation Protection Advisors from across the agency. It works closely with the WHS Advisor, the Quality Manager and the WHS Committee. The Radiation Safety Committee met 3 times in 2020–21.

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 7 times in 2020–2021, and comprises the Chief Security Officer (Chair), the Chief Information Security Officer, the Agency Security Adviser, the Chief Information Officer, the Information Technology Security Adviser, the alternate Agency Security Adviser and the Facilities Manager. Other subject matter experts may participate in meetings as required.

Project Management Advisory Group

The Project Management Advisory Group (PMAG) met 8 times in 2020–21. PMAG provides a centralised coordination and support function for agency projects. This ensures projects align with ARPANSA's strategic activities and project management practices are applied consistently across the agency. The PMAG is chaired by the Director of Governance and Risk and comprises 5 staff with project management expertise from across the agency.

Staff Consultative Forum

ARPANSA's enterprise agreement provides for a Staff Consultative Forum (SCF) as the key employee consultative body. The SCF comprises the CEO, 9 employees elected by staff (one of which is the Chair) and a representative from each of the unions supporting ARPANSA staff. The SCF met on 8 occasions in 2020–21 to discuss issues relating to management of the agency and impacts to staff.

Digital Information Advisory Group

The Digital Information Advisory Group (DIAG) was established to achieve agency-wide information and technology governance. It is responsible for the management of agency information, technology and data, and the coordination of agency information and data management frameworks, strategies and policies. The DIAG comprises the Chief Information Officer (Chair) and 6 staff with digital information and technology expertise. The DIAG met twice in 2020–21.

Accountability and risk management

ARPANSA ensures effective accountability and risk management through the following:

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. The integrated annual planning cycle ensures alignment of our strategic priorities, operational activities, resource allocation and performance measures. This results in clear linkages between 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.

Performance reporting

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

Financial performance is reported separately through monthly internal financial reports to the EG and to the Audit and Risk Committee at the end of each quarter. Performance reporting culminates in the publication of this annual report.

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 ARPANSA 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 and the international standard on risk management (ISO 31000) and meets the requirements of section 16 of the PGPA Act.

During this reporting period, ARPANSA's risk management framework was reviewed as part of an annual review process, leading to a project to revise the framework and introduce risk software for increased transparency and accountability. ARPANSA achieved an 'established' level of maturity in the most recent Comcover Risk Management Benchmarking Survey in 2020–21. This result further highlighted the need to improve ARPANSA's risk maturity which this project is addressing.

Audit and fraud control

ARPANSA has in place rigorous internal and external audit programs. The internal audits are performed as outlined below. The external audits and certification are undertaken by the Australian National Audit Office (ANAO) and the National Association of Testing of Authorities (NATA). NATA conducts ARPANSA's certification audits to ISO/IEC 17025 competency-based certification every 18 months.

Internal audit program

ARPANSA's internal audit program is scheduled per calendar year in advance. The planning and scheduling of audits is based on the previous year's performance, and a risk-based logic is applied to calculate the potential future risk of the audited areas. Internal inputs (e.g. management review meetings, previous audit findings) and external factors (e.g. external audits, regulatory inspections) are captured within this risk calculation.

On a number of occasions during 2020–21, ARPANSA staff in both Melbourne and Sydney were required to work from home due to lockdowns or stay-at-home orders as part of COVID-19 mitigation control strategies. During

those periods where staff were not able to attend the office on-site, internal audits were conducted remotely. Where audits were unable to be performed remotely, they were rescheduled until the audit has been completed.

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.

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

No significant non-compliance issues have occurred during the 2020-21 reporting period that require reporting to the Minister or disclosure in the ARPANSA Annual Report.

Fraud minimisation strategies

During 2020–21, the agency maintained a rolling program to assess fraud risks that was embedded within ARPANSA's overarching risk management framework. Treatment strategies were 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 2020–21.

Work health and safety

ARPANSA strives to achieve an agile health and safety system that can respond to changes in the work health and safety landscape and challenges such as COVID-19. ARPANSA is committed to continuous improvement with a focus on the interaction between technology, and human and organisational factors to reduce relative risk.

The COVID-19 pandemic response required dedicated resources to ensure plans, procedures, training and supplies were in place that would allow the agency to maintain a COVIDSafe workplace. Regular and personal contact with staff using collaborative platforms was established allowing any mental health concerns to be handled quickly and sensitively.

Hazard and incident reporting

COVID-19 presented challenges to our hazard and incident reporting systems as most of our staff worked from home. ARPANSA provided support to staff to aid the development of ergonomically sound home work stations and maintain a mentally-healthy virtual workplace.

Two incidents were notifiable to Comcare with respect to the agency's statutory obligation under section 35 of the Work Health and Safety Act 2011. An action plan was proposed by ARPANSA to demonstrate continuous improvement. This was accepted by Comcare who have been monitoring accordingly.

Workers compensation

There were no workers compensation claims made during the 2020–21 year.

Investigations or notices given

There were 2 Comcare notifiable incidents during the 2020–2021 period resulting in 2 investigations. Corrective actions were proposed by the regulator and action plans developed by the agency to address findings. This has triggered an internal review of the Workplace Health and Safety Management System. A verification inspection will be conducted by Comcare as work progresses.

Accountability

External scrutiny

Judicial review

During 2020–21, the agency was not involved in any matters before the Federal Court, the Full Federal Court or the Administrative Appeals Tribunal.

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

ARPANSA was not the subject of any audits undertaken by the Auditor-General during the year 2020–21.

As at 30 June 2021, no reports were made by Parliamentary Committees regarding ARPANSA for the year 2020–21.

During 2020–21, there were no complaints made to the Commonwealth Ombudsman against the agency. There were no earlier complaints that remained 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. 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. The plan is available on the ARPANSA website at: arpansa.gov.au/about-us/accessing-our-information/information-publication-scheme-agency-plan.

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

The FOI and Privacy Officer ARPANSA

PO Box 655

MIRANDA NSW 1490

foi@arpansa.gov.au

(03) 9433 2211

Documents released by ARPANSA in response to FOI requests can be found on the disclosure log at arpansa.gov.au/about-us/accessing-our-information/disclosure-log.

Statistics

ARPANSA received 8 FOI requests during the reporting period of which one request was withdrawn and one request was handled outside the FOI Act through an administrative access process.

Of the 6 requests decided during the reporting period, 2 resulted in full release, one in partial release, one was refused and in 2 cases, the requested documents were found to not exist.

Human resources

ARPANSA's Office for People Strategies and Wellbeing (OPSW) is responsible for delivering contemporary human resource practices and wellbeing strategies. Working in partnership with ARPANSA's Executive, branches and offices, OPSW provides strategic advice on the agency's employment framework, including workforce and succession planning, talent attraction and retention, leadership, wellbeing, learning and capability development, and diversity and inclusion initiatives.

ARPANSA's Workforce plan

ARPANSA's Workforce Plan 2017–2021 (the Plan) was developed to enable ARPANSA to achieve its objectives through its people. The objectives of the Plan are based around:

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

Work on the new APS Workforce Strategy (2021-2025) has commenced in March 2021. The updated strategy will ensure we continue to build our organisational capabilities and invest in initiatives that support our workforce to deliver quality outcomes.

ARPANSA has a strategic and future-focused succession initiative as one pillar of the ARPANSA Workforce Plan. The initiative assesses succession risks for every position in the organisation and prioritises the development of competencies that are found to be vulnerabilities to the long-term capability of the organisation.

Attraction and recruitment

The ARPANSA attraction and recruitment process is based on the APS principles of merit, fairness and transparency. During COVID-19 restrictions, ARPANSA continued to recruit and adapted our recruitment processes to support virtual interviewing.

During the 2020–21 reporting period, ARPANSA ran 17 external recruitment campaigns for 5 executive level (EL) positions and 12 Australian Public Services (APS) positions. The campaigns attracted 395 total applicants and resulted in 8 new starters, 1 internal transfer, 5 internal promotions, 1 role with no suitable candidates and 2 roles still pending at time of reporting compared to the previous financial year which included 17 external campaigns attracting 194 applicants and resulted in 11 new starters and 6 internal promotions.

Employment arrangements

As at 30 June 2021, ARPANSA employed 134 (132.05 FTE) ongoing and non-ongoing employees, and one statutory office holder (1.0 FTE). ARPANSA also employs staff on an irregular or intermittent basis to support the delivery of our objectives. Our total number of employees remained within the average staffing level. All ARPANSA employees are engaged under the Public Service Act 1999.

The ARPANSA Enterprise Agreement 2017–2020 (the Agreement) will remain in operation for a further 3-year period as part of a determination under section 24(1) of the Public Service Act 1999 (with a 98.3% ‘Yes’ vote from staff). The Agreement outlines the terms and conditions of employment for non-senior executive service (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. As at 30 June 2021, 11 such arrangements were in place.

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:

- flexible working arrangements, including flextime (Australian Public Service (APS) levels 1 to 6 only), job-sharing, part-time, time-shifted and hybrid work arrangements
- generous parental/maternity leave provisions
- generous range of paid and unpaid leave options
- study assistance
- salary packaging for cars (novated lease) and superannuation, with fringe benefits tax (FBT) applicable
- an employee assistance program.

Executive remuneration

As a non-corporate Commonwealth entity, ARPANSA has the following categories of officials covered by the executive remuneration disclosures:

- Key management personnel—this includes the Chief Executive Officer
- Senior executives—Branch and Office Heads who are responsible for making decisions, or having substantial input into decisions, that affect the operations of the agency.

ARPANSA does not have any other officials who are key management personnel or senior executives or whose total remuneration exceeds the threshold amount (\$230 000) for the reporting period.

Remuneration policies and practises

ARPANSA's CEO is responsible for determining the remuneration policy and the remuneration structure for senior executives.

Remuneration governance arrangements

ARPANSA's framework for determining remuneration is set out in the [ARPANSA Enterprise Agreement 2017–2020](#) and the [Remuneration Tribunal Act 1973](#). The employment instruments for determining remuneration for the different categories of ARPANSA officials include:

- The CEO is remunerated under the Remuneration Tribunal (Remuneration and Allowances for Holders of Full-time Public Office) Determination 2018
- Senior executives are remunerated through a common law contract of employment, or under Annex 1 of the ARPANSA Enterprise Agreement where Clause 32 is applied to provide additional remuneration benefits under an individual flexibility arrangement.

ARPANSA's remuneration policy and practices are linked to the achievement of the agency's objectives and performance. Officials' salaries only increase, generally, on an annual basis as part of a performance review process. Due to the SES pay freeze introduced during the COVID-19 pandemic, SES salaries have not increased during 2020–21.

Executive remuneration information

EXECUTIVE REMUNERATION INFORMATION FOR THE 2020–21 REPORTING PERIOD

Position title	Short-term benefits			Post-employment benefits	Other long-term benefits		Termination benefits	Total remuneration
	Base salary	Bonuses	Other benefits and allowances	Superannuation contributions	Long service leave	Other long-term benefits		
Chief Executive Officer	284,391	-	69,615	43,475	7,058	-	-	404,539
Chief Radiation Health Scientist	185,825	-	35,310	38,789	5,158	-	-	265,083
Chief Medical Radiation Scientist	194,461	-	25,169	29,635	4,893	-	-	254,159
Chief Regulatory Officer	187,561	-	25,169	35,725	4,751	-	-	253,206
Office Head and Chief of Staff	94,165	-	45,692	28,474	4,751	-	-	173,082
General Counsel	171,099	-	54,537	28,902	4,751	-	-	259,289
Office Head and Chief Financial Officer	172,298	-	54,481	28,441	4,751	-	-	259,971
Office Head People Strategies and Wellbeing	121,733	-	14,739	24,214	4,007	-	-	164,693

Learning strategy

ARPANSA staff have access to learning and development programs that support them in developing and refining skills critical to succeed in both their current and future roles within the agency.

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's online learning management system, LearnHub, is a key resource for all staff and is supplemented by face-to-face or virtual training. Revision and consolidation of ARPANSA's learning and development program is a priority for 2021-22.

Diversity and inclusion

ARPANSA recognises that diversity and inclusion plans and programs create a workplace where people feel supported to achieve their potential.

ARPANSA's Diversity and Inclusion Plan sets out initiatives across 6 key areas of:

- inclusion
- gender equity
- flexibility
- LGBTIQ+
- people with a disability
- Aboriginal and Torres Strait Islander Peoples.

Branch and office heads have taken up the opportunity to be a champion of each initiative, undertaking and promoting a range of programs within ARPANSA and from early next financial year supported by a Diversity and Inclusion Working Group with cross-agency representation. During 2020–21, these initiatives included Women's Health Week, NAIDOC Week, National Reconciliation Week, Skin Cancer Action Week, R U OK? Day, Stress Down Day, Sleep Awareness Week, International Day Against Homophobia, Biphobia, Intersexism and Transphobia (IDAHOBIT), Intersex Awareness Day, and Australia's Biggest Morning Tea.

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. From 2010–11, entities have no longer been required to report on these functions.

ARPANSA's Diversity and Inclusion Strategy outlines objectives to review recruitment processes and remove barriers to hiring candidates with disability. In 2020–21, ARPANSA has supported people to apply for jobs through use of an inclusive recruitment statement and use of the RecruitAbility scheme.

Wellbeing

ARPANSA continued to undertake a number of activities that aim to support the wellbeing of its staff covering aspects of psychosocial health, relationships, finance and physical protection, including on-site and remote Employee Assistance Program (EAP) sessions. Promotion of activities in support of key awareness campaigns were an important part of the health and wellbeing program, which in this reporting period included World Mental Health Day, Mindful in May, Men's Health Week, Women's Health Week, World Blood Donor Day, Skin Cancer Action Week and R U OK? Day, Intersex Awareness Day and Australia's Biggest Morning Tea.

As part of the agency response to COVID-19 an isolation support phone service was offered as a series of scheduled confidential one-to-one telephone calls from an EAP consultant to check-in on impacted staff. Internally, work health and safety support has also been provided as part of the agency response to COVID-19, with information and guidance materials provided to staff.

APS census

The APS employee census is an annual employee perception survey of the APS workforce, with over 130 000 employees invited to participate. Delivery of the 2020 Employee Census was delayed by the Australian Public Service Commission due to the impact of the COVID-19 pandemic and as such was available from 12 October to 13 November 2020 with results made available in early 2021. The questionnaire was streamlined and reshaped to focus on wellbeing, changing ways of working and continuing to deliver outcomes.

At ARPANSA, 84% of staff participated in the 2020 survey, compared with 83% of staff in the 2019 survey.

The results demonstrate the agency's continued improvement in employee engagement, with ARPANSA having achieved positive outcomes both compared to the APS overall and to ARPANSA's 2019 results on both employee engagement (+4% / +4%) and wellbeing (+7% / +9%)

Following on from the APS Employee Census in 2020, results were shared with staff via the staff intranet and through virtual presentations to staff due to COVID-19 restrictions.

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 more efficiently and 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.

Performance pay

There is no provision for the payment of performance pay in ARPANSA's Enterprise Agreement 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 that 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 Code of Conduct and values and upholds professionalism in all capacities when interacting with clients and stakeholders.

The 2020 ARPANSA Award was presented to 2 teams. One maintained service delivery to Personal Radiation Monitoring Service (PMRS) customers throughout a period of COVID-19 disruption and another team delivered outstanding communications to all staff during the response to COVID 19.

High achievement certificates were awarded to:

- The Chair of the Expert Group on Medical Exposures for the United Nations Scientific Committee on the Effects of Atomic Radiation and lead writer for the report on medical exposure.
- The Property and Facilities Team for managing agency logistics, engineering support and store operations during the significant disruption caused by COVID-19.
- The Australian Clinical Dosimetry Service for maintaining safety for patients undergoing radiotherapy and fulfilling ongoing contractual requirements despite COVID-19 challenges, which ensured financial stability and future viability for the Service
- The Office for People Strategies and Wellbeing for delivering high-quality services in the areas of industrial relations, workplace health and safety, policy design, change management and business improvement.
- The Radiation Monitoring Networks team for delivering outstanding data availability and station reliability during the agency response to COVID-19.

Staffing statistics

As at 30 June 2021 ARPANSA employed 134 ongoing and non-ongoing staff (not including the CEO or casual staff).

No employees identified themselves as indigenous.

Table 6.1 Salary ranges by classification level as at 30 June 2021 sets out the salary ranges as at 30 June 2021.

Table 6.2 Staff by location, gender and APS classification sets out employees by location, gender and APS classification. The table shows that 84 per cent of staff are located in the Victorian office

Table 6.3 Distribution of staff by full or part-time status shows that of the 134 employees (not including the CEO or casual staff), 130 are ongoing and 4 are non-ongoing. 6 ongoing staff are part-time and 1 non-ongoing employee is part time.

Table 6.4 Distribution of staff by branch/office shows that as at 30 June 2021 Radiation Health Services is the largest branch with 42 staff, followed by the Office of Business Support (26), Medical Radiation Services (23), Regulatory Services (22), Office the CEO (14), Office of People Strategies and Wellbeing (5) and Office of the General Counsel (2).

Table 6.1 Salary ranges by classification level as at 30 June 2021

SALARY RANGES BY CLASSIFICATION AS AT 30 JUNE 2021

APS Classification	Salary Range (\$)
ARPANSA Graduate	63 342 - 70 875
APS Level 1	47 516 - 51 010
APS Level 2	55 630 - 61 069
APS Level 3	63 342 - 70 875
APS Level 4	73 001 - 76 284
APS Level 5	78 573 - 82 497
APS Level 6	84 971 - 97 193
Executive Level 1	104 972 - 120 780
Executive Level lower	128 269 - 145 661
Executive Level 2 upper	151 486 - 162 705

Table 6.2 Staff by location, gender and APS classification

Classification	SES		EL 2		EL 1		APS 6		APS 5		APS 4		APS 3		APS 2		APS 1		Graduate		Total	
	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021
New South Wales																						
Female	0	0	0	0	4	4	1	1	0	0	3	3	0	0	0	0	0	0	0	0	8	8
Male	1	1	4	4	8	7	1	1	1	1	0	0	0	0	0	0	0	0	0	0	15	14
Total	1	1	4	4	12	11	2	2	1	1	3	3	0	0	0	0	0	0	0	0	23	22
Victoria																						
Female	1	1	3	6	12	10	11	13	11	9	3	3	10	8	3	3	0	0	0	0	54	53
Male	1	1	10	10	21	21	17	19	6	6	0	0	2	2	0	0	0	0	0	0	57	59
Total	2	2	13	16	33	31	28	32	17	15	3	3	12	10	3	3	0	0	0	0	111	112
Total																						
Female	1	1	3	6	16	14	12	14	11	9	6	6	10	8	3	3	0	0	0	0	62	61
Male	2	2	14	14	29	28	18	20	7	7	0	0	2	2	0	0	0	0	0	0	72	73
Total	3	3	17	20	45	42	30	34	18	16	6	6	12	10	3	3	0	0	0	0	134	134

Table 6.3 Distribution of staff by full or part-time status

	Full-time Ongoing		Full-time Non-ongoing		Part-time Ongoing		Part-time Non-ongoing		Total	
	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021
Female	53	54	5	2	3	4	1	1	62	61
Male	65	70	3	1	3	2	1	0	72	73
Total	118	124	8	3	6	6	2	1	134	134

Table 6.4 Distribution of staff by branch/office

Branch	Ongoing	Non-ongoing	Ongoing	Non-ongoing	Ongoing	Non-ongoing
	Female		Male		Total	
Office of the CEO	8	0	6	0	14	0
Office for People Strategies and Wellbeing	4	0	1	0	5	0
Office of the General Counsel	0	0	2	0	2	0
Medical Radiation Services Branch	5	2	16	0	21	2
Radiation Health Services Branch	19	0	23	0	42	0
Regulatory Services Branch	7	1	14	0	21	1
Office for Business Support	15	0	10	1	25	1
Total	58	3	72	1	130	4

Part 5: Financial statements

Independent Auditor report



INDEPENDENT AUDITOR'S REPORT

To the Minister for Health and Aged Care

Opinion

In my opinion, the financial statements of the Australian Radiation Protection and Nuclear Safety Agency (the Entity) for the year ended 30 June 2021:

- (a) comply with Australian Accounting Standards – Reduced Disclosure Requirements and the *Public Governance, Performance and Accountability (Financial Reporting) Rule 2015*; and
- (b) present fairly the financial position of the Entity as at 30 June 2021 and its financial performance and cash flows for the year then ended.

The financial statements of the Entity, which I have audited, comprise the following as at 30 June 2021 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 Entity 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 (including Independence Standards)* (the Code) to the extent that they are not in conflict with the *Auditor-General Act 1997*. 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 Entity, the Chief Executive Officer is responsible under the *Public Governance, Performance and Accountability Act 2013* (the Act) for the preparation and fair presentation of annual financial statements that comply with Australian Accounting Standards – Reduced Disclosure Requirements and the rules made under the Act. The Chief Executive Officer is also responsible for such internal control as the Chief Executive Officer determines is necessary to enable the preparation 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 ability of the Entity 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.

GPO Box 707 CANBERRA ACT 2601
38 Sydney Avenue FORREST ACT 2603
Phone (02) 6203 7300 Fax (02) 6203 7777

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 the Accountable Authority 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
Senior Director

Delegate of the Auditor-General

Canberra

15 September 2021

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Statement by the Accountable Authority and Chief Financial Officer

STATEMENT BY THE ACCOUNTABLE AUTHORITY AND CHIEF FINANCIAL OFFICER

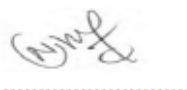
In our opinion, the attached financial statements for the year ended 30 June 2021 comply with subsection 42(2) of the *Public Governance, Performance and Accountability Act 2013* (PGPA Act), and are based on properly maintained financial records as per subsection 41(2) of the PGPA Act.

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

13 September 2021



Niraj Pau
Chief Financial Officer

13 September 2021

Statement of comprehensive income

for the period ended 30 June 2021

			Original Budget	
		2021	2020	2021
	Notes	\$	\$	\$
NET COST OF SERVICES				
Expenses				
Employee benefits	1.1A	18,485,944	17,661,916	17,637,000
Suppliers	1.1B	7,514,502	7,002,254	8,704,000
Depreciation and amortisation	2.2A	3,336,376	3,437,020	2,810,000
Finance costs	1.1C	5,174	9,466	16,000
Impairment loss on financial instruments	1.1D	9,240	8,764	-
Write-down and impairment of other assets	1.1E	50,962	130,876	-
Foreign exchange losses	1.1F	4,533	-	-
Total expenses		29,406,731	28,250,296	29,167,000
Own-Source Income				
Own-source revenue				
Revenue from contracts with customers	1.2A	7,568,762	7,940,231	7,550,000
Licence fees	1.2B	5,260,420	5,081,276	5,170,000
Other revenue	1.2C	54,000	54,000	-
Total own-source revenue		12,883,182	13,075,507	12,720,000
Gains				
Foreign exchange gains	1.2D	-	1,021	-
Total gains		-	1,021	-
Total own-source income		12,883,182	13,076,528	12,720,000
Net (cost of) contribution by services		16,523,549	15,173,768	16,447,000
Revenue from Government	1.2E	13,869,000	12,757,000	13,869,000
Surplus / (Deficit) on continuing operations		(2,654,549)	(2,416,768)	(2,578,000)

OTHER COMPREHENSIVE INCOME			
Items not subject to subsequent reclassification to net cost of services			
Changes in asset revaluation reserve	2,000,895	60,026	-
Total other comprehensive income	2,000,895	60,026	-
Total comprehensive loss	(653,654)	(2,356,742)	(2,578,000)
The above statement should be read in conjunction with the accompanying notes.			

Statement of Comprehensive Income Budget variances

Explanations are only provided where the variance is greater than 10% of the Original Budget. If the variance is greater than 10%, but small in the overall context of the of the financial statements, judgement was used to determine if an explanation would be useful in analysing ARPANSA's performance.

Suppliers

Supplier expenses, specifically those relating to travel and other running costs, were lower than that estimated at budget as result of Covid 19.

Depreciation

Building Deprecation expenses were higher than estimated at budget, this is related to an increase in building value, not estimated at budget.

Statement of financial position

as at 30 June 2021

			Original Budget	
		2021	2020	2021
	Notes	\$	\$	\$
ASSETS				
Financial assets				
Cash and cash equivalents	2.1A	1,207,753	1,192,228	1,192,000
Trade and other receivables	2.1B	6,192,657	4,125,923	4,126,000
Other financial assets	2.1C	530,715	42,534	45,000
Total financial assets		7,931,125	5,360,685	5,363,000
Non-financial assets¹				
Land	2.2A	11,260,000	9,460,000	9,460,000
Buildings	2.2A	17,234,805	18,195,538	17,610,000
Plant and equipment	2.2A	9,587,530	9,755,444	11,564,000
Intangibles	2.2A	560,178	595,338	583,000
Inventories	2.2B	1,700,982	1,609,559	1,610,000
Other non-financial assets	2.2C	563,580	509,910	510,000
Total non-financial assets		40,907,075	40,125,789	41,337,000
Total assets		48,838,200	45,486,474	46,700,000
LIABILITIES				
Payables				
Suppliers	2.3A	429,389	743,736	744,000
Other payables	2.3B	915,116	793,046	793,000
Total payables		1,344,505	1,536,782	1,537,000
Interest bearing liabilities				
Leases	2.4	160,239	412,036	180,000
Total interest bearing liabilities		160,239	412,036	180,000

Provisions				
Employee provisions	4.1	5,734,524	5,307,070	5,307,000
Total provisions		5,734,524	5,307,070	5,307,000
Total liabilities		7,239,268	7,255,888	7,024,000
Net assets		41,598,932	38,230,586	39,676,000
EQUITY				
Contributed equity		36,477,000	32,455,000	36,477,000
Reserves		21,575,714	19,574,819	19,574,000
Accumulated deficit		(16,453,782)	(13,799,233)	(16,375,000)
Total equity		41,598,932	38,230,586	39,676,000

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

1. Right-of-use assets are included in the following line item; Buildings

Statement of Financial Position Budget variances

Explanations are only provided where the variance is greater than 10% of the Original Budget. If the variance is greater than 10%, but small in the overall context of the of the financial statements, judgement was used to determine if an explanation would be useful in analysing ARPANSA's performance.

Trade and other receivables

Trade and other receivables is mainly comprised of appropriation receivable, and the original budget was prepared on the basis of full drawdown of available capital funds. These capital funds will now be expended in the 2021-22 year.

Other financial assets

Accrued revenue was higher than that forecast at budget, and specifically relates to the Comprehensive nuclear test ban treaty operation and maintenance contracts.

Land

The variance relates to the independent revaluation of land in 2021, since the budget was prepared.

Plant and equipment

The variance relates specifically to a delay in capital expenditure associated with the enhanced electromagnetic energy program. These capital funds will now be expended in the 2021-22 year.

Suppliers and Other payables

The suppliers payable budget variation relates to the timing of payments. A large number of deliverables were finalised and paid prior to year-end.

Statement of changes in equity

for the period ended 30 June 2021

			Original Budget	
	Notes	2021	2020	2021
CONTRIBUTED EQUITY		\$	\$	\$
Opening balance				
Balance carried forward from previous period		32,455,000	30,506,000	32,455,000
Adjusted opening balance		32,455,000	30,506,000	32,455,000
Transactions with owners				
Contributions by owners				
Departmental capital budget	3.1A	2,035,000	1,949,000	2,035,000
Equity injection - appropriation		1,987,000	-	1,987,000
Total transactions with owners		4,022,000	1,949,000	4,022,000
Closing balance as at 30 June		36,477,000	32,455,000	36,477,000
RETAINED EARNINGS				
Opening balance				
Balance carried forward from previous period		(13,799,233)	(11,382,465)	(13,797,000)
Adjusted opening balance		(13,799,233)	(11,382,465)	(13,797,000)
Comprehensive income				
Deficit for the period		(2,654,549)	(2,416,768)	(2,578,000)
Total comprehensive income		(2,654,549)	(2,416,768)	(2,578,000)
Closing balance as at 30 June		(16,453,782)	(13,799,233)	(16,375,000)

ASSET REVALUATION RESERVE			
Opening balance			
Balance carried forward from previous period	19,574,819	19,514,793	19,574,000
Adjusted opening balance	19,574,819	19,514,793	19,574,000
Comprehensive income			
Other comprehensive income	2,000,895	60,026	-
Total comprehensive income	2,000,895	60,026	-
Closing balance as at 30 June	21,575,714	19,574,819	19,574,000
TOTAL EQUITY			
Opening balance			
Balance carried forward from previous period	38,230,586	38,638,328	38,232,000
Adjusted opening balance	38,230,586	38,638,328	38,232,000
Comprehensive income			
Other comprehensive income	2,000,895	60,026	-
Surplus / (deficit) for the period	(2,654,549)	(2,416,768)	(2,578,000)
Total comprehensive income	(653,654)	(2,356,742)	(2,578,000)
Transactions with owners			
Contributions by owners			
Departmental capital budget	2,035,000	1,949,000	2,035,000
Equity injection - appropriation	1,987,000	-	1,987,000
Total transactions with owners	4,022,000	1,949,000	4,022,000
Closing balance as at 30 June	41,598,932	38,230,586	39,676,000

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 Budget variances commentary

Explanations are only provided where the variance is greater than 10% of the Original Budget. If the variance is greater than 10%, but small in the overall context of the of the financial statements, judgement was used to determine if an explanation would be useful in analysing ARPANSA's performance.

Asset Revaluation Reserves

Increase relates to the actual independent revaluation of land and buildings in 2021, since the budget was prepared.

Cash flow statement

for the period ended 30 June 2021

		Original Budget	
	2021	2020	2021
Notes	\$	\$	\$
OPERATING ACTIVITIES			
Cash received			
Appropriations	14,057,000	11,533,000	13,869,000
Sales of goods and rendering of services	7,950,707	8,688,615	7,973,000
Other cash received	5,260,420	5,081,276	5,170,000
GST received	122,616	10,936	474,000
Total cash received	27,390,743	25,313,827	27,486,000
Cash used			
Employees	(17,988,091)	(17,074,682)	(17,637,000)
Suppliers	(8,722,108)	(8,181,211)	(9,178,000)
Interest payments on lease liabilities	(5,174)	(9,466)	(16,000)
GST paid	-	-	(423,000)
Total cash used	(26,715,373)	(25,265,359)	(27,254,000)
Net cash from / (used by) operating activities	675,370	48,468	232,000
INVESTING ACTIVITIES			
Cash used			
Purchase of property, plant, equipment and intangibles	(2,012,516)	(1,385,809)	(4,022,000)
Total cash used	(2,012,516)	(1,385,809)	(4,022,000)
Net cash from / (used by) investing activities	(2,012,516)	(1,385,809)	(4,022,000)
FINANCING ACTIVITIES			
Cash received			
Contributed equity - Departmental capital budget	1,599,000	1,420,000	2,035,000
Contributed equity - Equity injection	-	-	1,987,000
Total cash received	1,599,000	1,420,000	4,022,000

Cash used				
Principal payments of lease liabilities		(246,329)	(236,522)	(232,000)
Total cash used		(246,329)	(236,522)	(232,000)
Net cash from / (used by) financing activities		1,352,671	1,183,478	3,790,000
Net increase / (decrease) in cash held		15,525	(153,863)	-
Cash and cash equivalents at the beginning of the reporting period		1,192,228	1,346,091	1,192,000
Cash and cash equivalents at the end of the reporting period	2.1A	1,207,753	1,192,228	1,192,000
The above statement should be read in conjunction with the accompanying notes.				

Cash Flow Statement Budget variances commentary

Explanations are only provided where the variance is greater than 10% of the Original Budget. If the variance is greater than 10%, but small in the overall context of the of the financial statements, judgement was used to determine if an explanation would be useful in analysing ARPANSA's performance.

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

Investing Activities - Cash Used and Financing Activities - Cash Received

The variance relates specifically to delay in capital expenditure associated with the enhanced electromagnetic energy program. These capital funds will now be expended in the 2021-22 year.

Overview

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

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

ARPANSA 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 ARPANSA 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.

- 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 model developed by the Australian Government Actuary.

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.

New Australian Accounting Standard

All new, revised, amending standards and interpretations that were issued prior to the sign-off date and are applicable to the current reporting period did not have a material effect on ARPANSA's financial statements.

Standard / Interpretation	Nature of change in accounting policy, transitional provisions and adjustment to financial statements
AASB 1059 Service Concession Arrangements: Grantors	<p>AASB 1059 became effective from 1 July 2020.</p> <p>The new standard addresses the accounting for a service concession arrangement by a grantor that is a public sector entity by prescribing the accounting for the arrangement from a grantor's perspective.</p> <p>Prior to the issuance of AASB 1059, there was no definitive accounting guidance in Australia for service concession arrangements, which include a number of public private partnerships (PPP) arrangements. The AASB issued the new standard to address the lack of specific accounting guidance and based the content thereof broadly on its international equivalent: International Public Sector Accounting Standard 32: Service Concession Arrangements: Grantor.</p>

ARPANSA does not have any service concession arrangements.

Taxation

ARPANSA 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; and
- 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 2021.

COVID-19 pandemic

There has been no material impact on the financial statement for the year ended 30 June 2021 as a result of COVID-19.

Notes to and forming part of the financial statements

Financial performance

This section analyses the financial performance of ARPANSA for the year ended 2021

Note 1.1: Expenses

1.1A: Employee benefits

	2021	2020
	\$	\$
1.1A: Employee benefits		
Wages and salaries	13,464,766	12,469,513
Superannuation - defined contribution	1,915,430	2,073,846
Superannuation - defined benefit	655,600	549,778
Leave and other entitlements	2,328,596	2,568,779
Separation and redundancies	121,552	-
Total employee benefits	18,485,944	17,661,916

Accounting policy

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

1.1B: Suppliers**Goods and services supplied or rendered**

Audit fees - ANAO	54,000	54,000
Audit fees - outsourced	-	45,450
Advisory council and committees	95,530	102,400
Communications	332,398	198,116
Construction and maintenance - Comprehensive nuclear test ban treaty	749,557	805,741
Contractors/Consultants	1,226,123	1,116,854
Information technology	1,108,879	1,032,310
Insurance	102,811	66,041
Laboratory and office supplies	325,923	313,324
Postage and freight	208,311	161,469
Reference material & subscriptions	282,896	303,716
Repair and maintenance	531,113	590,385
Research Agreements	680,121	169,920
Training and conferences	224,245	182,163
Travel	449,428	900,100
Utilities	428,737	434,824
Other goods and services	673,838	483,696
Total goods and services supplied or rendered	7,473,910	6,960,509

Goods supplied	2,048,653	1,289,163
Services rendered	5,425,257	5,671,346
Total goods and services supplied or rendered	7,473,910	6,960,509

Other supplier expenses

Short-term leases	-	4,381
Low value leases	14,771	9,678
Workers compensation premiums	25,821	27,686
Total other supplier expenses	40,592	41,745
Total supplier expenses	7,514,502	7,002,254

The above lease disclosures should be read in conjunction with the accompanying notes 1.1B, 2.2 and 2.4.

Accounting policy

Short-term leases and leases of low-value assets

ARPANSA has elected not to recognise right-of-use assets and lease liabilities for short-term leases of assets that have a lease term of 12 months or less and leases of low-value assets (less than \$10,000). ARPANSA recognises the lease payments associated with these leases as an expense on a straight-line basis over the lease term.

Note 1.1C: Finance costs

Interest on lease liabilities	5,174	9,466
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Note 1.1D: Impairment loss of financial instruments

Impairment on trade and other receivables	9,240	8,764
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Note 1.1E: Write-down and impairment of other assets

Property, plant and equipment - write-off	35,374	5,908
Computer software - write-off	-	122,502
Inventories - write-off	15,588	2,466
Total write-down and impairment of assets	50,962	130,876

NOTE 1.1F: Foreign exchange losses

Non-speculative	4,533	-
Total foreign exchange losses	4,533	-

Accounting policy

Gains and losses from foreign currency are recognised when incurred.

Note 1.2: Own-source revenue and gains

Own-source revenue

1.2A: REVENUE FROM CONTRACTS WITH CUSTOMERS

Sale of goods and rendering of services	7,568,762	7,940,231
Total revenue from contracts with customers	7,568,762	7,940,231
Major product / service line:		
Scientific services - Personal radiation monitoring service	2,356,410	2,434,745
Construction and maintenance - Comprehensive nuclear test ban treaty	2,065,663	2,047,043
Australian clinical dosimetry service	1,882,335	2,314,451
Other scientific services	1,264,354	1,143,992
	7,568,762	7,940,231
Type of customer:		
Australian Government entities (related parties)	98,365	57,370
State and Territory Governments	871,537	972,781
Non-government entities	6,598,860	6,910,080
	7,568,762	7,940,231
Timing of transfer of goods and services:		
Over time	3,947,998	4,361,494
Point in time	3,620,764	3,578,737
	7,568,762	7,940,231

Accounting policy

Revenue from the sale of goods is recognised when control has been transferred to the buyer.

ARPANSA's sale of good and service contract fall within scope of AASB 15. Performance obligations are required by enforceable contracts and are sufficiently specific to enable ARPANSA to determine when they have been satisfied.

The following is a description of principal activities from which ARPANSA generates its revenue:

- (i) Personal radiation monitoring service - monitors potential ionising radiation exposure to workers in fields such as medical, dental, chiropractic, industrial and mining.
- (ii) Comprehensive nuclear test ban treaty (CTBT) - ARPANSA is responsible for carrying out Australia's radionuclide monitoring obligations to the Comprehensive Nuclear-Test-Ban Treaty. In this capacity, ARPANSA has worked to establish the international monitoring systems required to monitor treaty compliance through the installation, implementation and operation of seven stations within Australia and its Territories. The CTBT team within ARPANSA has also expanded to include operational responsibility for the radionuclide stations situated in Fiji and Kiribati.
- (iii) Australian clinical dosimetry service (ACDS) - is a national independent dosimetry auditing program, providing quality assurance for radiation oncology facilities and patients. The ACDS has been operating since February 2011, covering 100% of Australian and selected New Zealand radiotherapy facilities
- (iv) Other scientific services including testing and calibrations (ultraviolet and radio analytical services), training and hire of radiation meters

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	13,989	15,365
Annual charges	5,246,431	5,065,911
Total licence fees	5,260,420	5,081,276

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.

NOTE 1.2C: OTHER REVENUE

Resources received free of charge - ANAO	54,000	54,000
Total other revenue	54,000	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

1.2D: FOREIGN EXCHANGE GAINS

Non-speculative	-	1,021
Total foreign exchange gains	-	1,021

Accounting policy

Gains and losses from foreign currency are recognised when incurred.

1.2E: REVENUE FROM GOVERNMENT

Appropriation:	2021	2020
Departmental appropriation	13,869,000	12,757,000
Total revenue from Government	13,869,000	12,757,000

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.

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 2021. Employee related information is disclosed in the People and relationships section.

Note 2.1: Financial assets

	2021	2020
	\$	\$

Note 2.1A: Cash and cash equivalents

Cash in special accounts	1,149,018	1,145,258
Cash on hand or on deposit	58,735	46,970
Total cash and cash equivalents	1,207,753	1,192,228

The closing balance of Cash in special accounts does not include any amounts held in trust: (nil in 2020)

Accounting policy

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

- a) cash at bank; and
- b) cash in special accounts.

Note 2.1B: Trade and other receivables

Goods and services receivables		
Goods and services	904,531	1,091,758
Total goods and services receivables	904,531	1,091,758
Appropriations receivable:		
For existing program	1,669,000	1,857,000
Undrawn equity injection	1,987,000	-
Departmental capital budget	1,635,000	1,199,000
Total appropriations receivable	5,291,000	3,056,000
Other receivables		
Statutory receivables - GST	24,262	-
Total other receivables	24,262	-
Total trade and other receivables (gross)	6,219,793	4,147,758
Less impairment loss allowance	(27,136)	(21,835)
Total trade and other receivables (net)	6,192,657	4,125,923

Goods and services receivable was with entities external to the Australian Government. Credit terms are net 30 days (2020: 30 days)

Accounting policy

Receivables

Trade receivables, and other receivables that are held for the purpose of collecting the contractual cash flows where the cash flows are solely payments of principle and interest, that are not provided at below-market interest rates, are subsequently measured at amortised cost using the effective interest method adjusted for any loss allowance.

Reconciliation of impairment allowance

Goods and services		
Opening Balance	21,835	14,308
Amounts recovered and reversed	425	981
Amounts written off	(4,364)	(2,218)
Increase/decrease recognised in net cost of services	9,240	8,764
Closing Balance	27,136	21,835

Note 2.1C: Other financial assets

Accrued revenue	530,715	42,534
Total other financial assets	530,715	42,534

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.

Note 2.2: Non-financial assets

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

	Land	Buildings	Leasehold improvements	Plant and equipment	Computer software	Other intangibles - Trademarks	Total
	\$	\$	\$	\$	\$	\$	\$
As at 1 July 2020							
Gross book value	9,460,000	18,195,538	256,275	14,193,608	4,071,025	3,200	46,179,646
Accumulated depreciation, amortisation and impairment	-	-	(256,275)	(4,438,164)	(3,478,502)	(385)	(8,173,326)
Total as at 1 July 2020	9,460,000	18,195,538	-	9,755,444	592,523	2,815	38,006,320
Additions:							
Purchase	-	197,867	-	1,488,871	325,778	-	2,012,516
Revaluations and impairments recognised in other comprehensive income	1,800,000	200,895	-	-	-	-	2,000,895
Depreciation and amortisation	-	(1,110,710)	-	(1,621,411)	(360,618)	(320)	(3,093,059)
Depreciation on right-of-use assets	-	(243,317)	-	-	-	-	(243,317)
Other movements of right-of- use assets	-	(5,468)	-	-	-	-	(5,468)
Disposals:							
Write-offs	-	-	-	(35,374)	-	-	(35,374)
Total as at 30 June 2021	11,260,000	17,234,805	-	9,587,530	557,683	2,495	38,642,513
Total as at 30 June 2021 represented by:							
Gross book value	11,260,000	17,234,805	256,275	15,541,379	4,396,803	3,200	48,692,462
Accumulated depreciation, amortisation and impairment	-	-	(256,275)	(5,953,849)	(3,839,120)	(705)	(10,049,949)
Total as at 30 June 2021	11,260,000	17,234,805	-	9,587,530	557,683	2,495	38,642,513
Carrying amount of right-of- use assets	-	159,753	-	-	-	-	159,753

1. The carrying amount of computer software included \$336,100 purchased software and \$221,583 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 2021, an independent valuer conducted revaluations of Land (increment \$1,800,000) and Buildings on freehold land (increment of \$200,895).

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).

Lease Right of Use (ROU) Assets

Leased ROU assets are capitalised at the commencement date of the lease and comprise of the initial lease liability amount, initial direct costs incurred when entering into the lease less any lease incentives received. These assets are accounted for by Commonwealth lessees as separate asset classes to corresponding assets owned outright, but included in the same column as where the corresponding underlying assets would be presented if they were owned.

On initial adoption of AASB 16 ARPANSA has adjusted the ROU assets at the date of initial application by the amount of any provision for onerous leases recognised immediately before the date of initial application. Following initial application, an impairment review is undertaken for any right of use lease asset that shows indicators of impairment and an impairment loss is recognised against any right of use lease asset that is impaired. Lease ROU assets continue to be measured at cost after initial recognition in Commonwealth agency, GGS and Whole of Government financial statements.

Revaluations

Following initial recognition at cost, property plant and equipment (excluding ROU assets) are carried at fair value (or an amount not materially different from fair value) less subsequent accumulated depreciation and accumulated impairment losses. 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.

Independent valuers from the Jones Lang LaSalle Advisory Services Pty Ltd conducted a desktop valuation of land and buildings on 30 June 2021.

Revaluation increment of \$1,800,000 for land (decrement 2020: \$290,000) and increment of \$200,895 for buildings on freehold land (2020: \$350,026) were transferred to the asset revaluation reserve surplus by asset class and included in the equity section of the statement of financial position.

Depreciation

Depreciable property plant and equipment assets, are written-off to their estimated residual values over their estimated useful lives to ARPANSA using, in all cases the straight-line method of depreciation.

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:

	2021	2020
Buildings on freehold land	15 years	16 years
Leasehold improvements	Lease term - 4 years	Lease term - 4 years
Plant and equipment	1 to 45 years	1 to 45 years

The depreciation rates for ROU assets are based on the commencement date to the earlier of the end of the useful life of the ROU asset or the end of the lease term.

Impairment

All assets were assessed for impairment at 30 June 2021. 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 1.7 to 12.6 years (2020: 1.7 to 12.6 years).

All intangibles assets were assessed for indications of impairment as at 30 June 2021.

Note 2.2B Inventories

	2021	2020
	\$	\$
Inventories held for sale		
Finished goods	12,561	14,164
Total Inventories held for sale	12,561	14,164
Inventories held for distribution	1,688,421	1,595,395
Total inventories	1,700,982	1,609,559

During 2020-21, \$31,161 of inventory held for sale was recognised as an expense (2019-20: \$21,843).

During 2020-21, \$206,290 of inventory held for distribution was recognised as an expense (2019-20: \$30,417).

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	563,580	509,910
Total other non-financial assets	563,580	509,910

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

Note 2.3: Payables

Note 2.3A: Suppliers

	2021	2020
	\$	\$
Trade creditors and accruals	429,389	743,736
Total suppliers	429,389	743,736

Settlement is usually made within 30 days.

Note 2.3B: Other payables

Salaries and wages	340,971	281,017
Superannuation	48,884	38,439
Unearned income	466,526	425,976
Statutory payable – GST	-	644
Other	58,735	46,970
Total other payables	915,116	793,046

Note 2.4: Interest bearing

	2021	2020
	\$	\$
Leases		
Lease liabilities	160,239	412,036
Total leases	160,239	412,036
Maturity analysis - contractual undiscounted cash flows		
Within 1 year	168,525	250,855
Between 1 to 5 years	-	167,237
Total leases	168,525	418,092

Total cash outlay for leases for the year ended 30 June 2021 was \$251,503 (2020: \$245,988)

Accounting policy

Refer Overview section for accounting policy on leases.

Funding

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 2021

	Annual appropriation ¹	Adjustments to appropriation ²	Total appropriation	Appropriation applied in 2021 (current and prior years)	Variance ³
	\$	\$	\$	\$	\$
DEPARTMENTAL					
Ordinary annual services	13,869,000	-	13,869,000	14,057,000	(188,000)
Capital Budget ⁴	2,035,000	-	2,035,000	1,599,000	436,000
Other services					
Equity injections	1,987,000	-	1,987,000	-	1,987,000
Total departmental	17,891,000	-	17,891,000	15,656,000	2,235,000

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 \$2,235,000 reflects the movement in appropriation receivable amount at 30 June 2021 for ordinary annual services, capital budget and other services.
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.

Annual appropriations for 2020

	Annual appropriation ¹	Adjustments to appropriation ²	Total appropriation	Appropriation applied in 2020 (current and prior years)	Variance ³
	\$	\$	\$	\$	\$
DEPARTMENTAL					
Ordinary annual services	12,757,000	-	12,757,000	11,533,000	1,224,000
Capital Budget ⁴	1,949,000	-	1,949,000	1,420,000	529,000
Other services					
Equity injections	-	-	-		-
Total departmental	14,706,000	-	14,706,000	12,953,000	1,753,000

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 \$1,753,000 reflects the movement in appropriation receivable amount at 30 June 2020 for ordinary annual services, capital budget and other services.
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.

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

	2021	2020
Authority	\$	\$
DEPARTMENTAL		
Appropriation Act (No. 1) 2020-21	2,516,000	-
Appropriation Supply Act (No. 1) 2020-21	788,000	-
Appropriation Act (No. 2) - Equity Injections	827,000	-
Supply Act (No. 2) - Equity Injections	1,160,000	-
Appropriation Act (No. 1) 2020-21 - cash at bank	58,735	-
Appropriation Act (No. 1) 2019-20	-	2,233,000
Appropriation Act (No. 3) 2019-20	-	10,000
Appropriation Supply Act (No. 1) 2019-20	-	813,000
Appropriation Act (No. 1) 2019-20 - cash at bank	-	46,970
Total Departmental	5,349,735	3,102,970

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.”

	2021	2020
	\$	\$
Balance brought forward from previous period	1,192,228	1,346,091
Increases		
Departmental	28,984,569	26,724,361
Total increase	28,984,569	26,724,361
Available for payments	30,176,797	28,070,452
Decreases		
Departmental	(28,969,044)	(26,878,224)
Total decrease	(28,969,044)	(26,878,224)
Total Balance carried to next period	1,207,753	1,192,228
Balance represented by:		
Cash held in entity bank accounts	1,207,753	1,192,228
Total Balance carried to next period	1,207,753	1,192,228

Note 3.3: Net cash appropriation arrangements

	2021	2020
	\$	\$
Total comprehensive income/(loss) - as per Statement of Comprehensive Income	(653,654)	(2,356,742)
Plus: depreciation/amortisation of assets funded through appropriations(departmental capital budget funding and/or equity injection)	3,093,059	3,197,000
Plus: depreciation right-of-use assets ¹	243,317	240,020
Less: principal repayment - leased assets ²	(246,329)	(236,522)
Net Cash Operating Surplus/ (Deficit)	2,436,393	843,756

1. From 2010-11, the Government introduced net cash appropriation arrangements where revenue appropriations for depreciation/amortisation expenses of non-corporate Commonwealth entities and selected corporate Commonwealth entities were replaced with a separate capital budget provided through equity injections. Capital budgets are to be appropriated in the period when cash payment for capital expenditure is required.

2. The inclusion of depreciation/amortisation expenses related to ROU leased assets and the lease liability principal repayment amount reflects the impact of AASB 16 Leases, which does not directly reflect a change in appropriation arrangements.

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

Note 4.1: Employee provisions

	2021	2020
	\$	\$
Employee provisions		
Leave	5,734,524	5,307,070
Total employee provisions	5,734,524	5,307,070

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 2021. 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.

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 7 Branch and Office Heads. Key management personnel remuneration is reported in the table below:

	2021	2020
	\$	\$
Short-term employee benefits	1,736,247	1,728,234
Post-employment benefits	257,655	253,381
Other long-term employee benefits	40,118	41,674
Total key management personnel remuneration expenses¹	2,034,020	2,023,289

The total number of key management personnel that are included in the above table are 8 individuals (2020: 9). In 2021, nil individuals were employed in key management personnel roles for part of the year only (2020: 2).

1. 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.

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 2021 ARPANSA had no quantifiable or unquantifiable contingencies. (2020: 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.

Note 5.2: Financial instruments

Note 5.2A: Categories of financial instruments

	2021	2020
	\$	\$
Financial assets at amortised cost		
Cash and cash equivalents	1,207,753	1,192,228
Trade and other receivables	877,395	1,069,923
Other financials assets	530,715	42,534
Total financial assets at amortised cost	2,615,863	2,304,685
Financial liabilities		
Financial liabilities measured at amortised cost		
Trade creditors	429,389	743,736
Total financial liabilities measured at amortised cost	429,389	743,736
Total financial liabilities	429,389	743,736

Accounting policy

Financial Assets

ARPANSA classifies its financial assets in the following category:

- a) financial assets measured at amortised cost.

The classification depends on both ARPANSA's business model for managing the financial assets and contractual cash flow characteristics at the time of initial recognition. Financial assets are recognised when ARPANSA becomes a party to the contract and, as a consequence, has a legal right to receive or a legal obligation to pay cash and derecognised when the contractual rights to the cash flows from the financial asset expire or are transferred upon trade date.

Financial Assets at amortised cost

Financial assets included in this category need to meet two criteria:

1. the financial asset is held in order to collect the contractual cash flows; and
2. the cash flows are solely payments of principal and interest (SPPI) on the principal outstanding amount.

Amortised cost is determined using the effective interest method.

Effective Interest Method

Income is recognised on an effective interest rate basis for financial assets that are recognised at amortised cost.

Impairment of Financial Assets

Financial assets are assessed for impairment at the end of each reporting period based on Expected Credit Losses, using the general approach which measures the loss allowance based on an amount equal to lifetime expected credit losses where risk has significantly increased, or an amount equal to 12-month expected credit losses if risk has not increased.

The simplified approach for trade receivables is used. This approach always measures the loss allowance as the amount equal to the lifetime expected credit losses.

A write-off constitutes a derecognition event where the write-off directly reduces the gross carrying amount of the financial asset.

Financial liabilities

Financial liabilities are classified as 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).

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.

Note 5.3A: Fair value measurements

Fair value measurements at the end of the reporting period		
	2021	2020
	\$	\$
Non-financial assets		
Land	11,260,000	9,460,000
Buildings on freehold land	17,234,805	18,195,538
Leasehold Improvements	-	-
Plant and equipment	9,587,530	9,755,444
Total non-financial assets	38,082,335	37,410,982

No change in valuation technique occurred during the period.

Other information

Note 6.1: Current/non-current distinction for assets and liabilities

	2021	2020
	\$	\$
Assets expected to be recovered in:		
No more than 12 months		
Cash and cash equivalents	1,207,753	1,192,228
Trade and other receivables	6,192,657	4,125,923
Other financial assets	530,715	42,534
Other non-financial assets	563,580	509,911
Inventory	1,700,982	1,609,559
Total no more than 12 months	10,195,687	7,480,154
More than 12 months		
Land and buildings	28,494,804	27,655,538
Plant and equipment	9,587,530	9,755,444
Computer software	557,683	592,523
Other intangibles	2,495	2,815
Total more than 12 months	38,642,513	38,006,320
Total assets	48,838,200	45,486,474
Liabilities expected to be settled in:		
No more than 12 months		
Suppliers	429,389	743,736
Other payables	915,115	793,045
Leases	160,239	247,222
Employee provisions	1,413,891	1,295,617
Total no more than 12 months	2,918,635	3,079,620
More than 12 months		
Leases	-	164,815
Employee provisions	4,320,633	4,011,453
Total no more than 12 months	4,320,633	4,176,268
Total liabilities	7,239,268	7,255,888

Part 6: Appendices

Appendix 1

ARPANSA licensing activities

ARPANSA strives to support high levels of licence holder compliance with the Act and Regulations. It does so by actively engaging with licensees, providing regulatory guidance and through a risk informed program of regulatory oversight that includes self-reporting and inspection.

Details of licence breaches in the financial year

ARPANSA categorises breaches of licence conditions based on whether the potential risks to safety were either minor or significant. Breaches with minor implications for safety are typically administrative failures to meet regulatory requirements. Examples include poor safety signage, not keeping records or inventories up to date, not reviewing or updating plans and not submitting reports to ARPANSA on time.

Breaches with significant implications for safety typically occur where there is an actual exposure or a risk for not insignificant exposure to people or the environment.

Breaches with significant implications for safety

The CEO was made aware of 3 breaches with significant implications for safety:

- During an inspection of radiation sources, the Australian Nuclear Science and Technology Organisation's security plan for radioactive sources was found to be significantly out-of-date and not in accordance with the requirements of the Code of Practice for the Security of Radioactive Sources (RPS 11). Specific security arrangements for a high-activity source were not adequate and ARPANSA determined that ANSTO was in breach of subsection 81(b) of the ARPANS Regulations for failing to implement RPS 11, as well as update their internal plans and procedures. Maintaining security plans is important for the overall safety and security of the site. An improvement notice was also issued for the matter.
- ANSTO was found to have failed to comply with section 60 of the Regulations at its Camperdown facility by failing to take all reasonably practicable steps to manage safety. It was found that ANSTO was manually handling quantities of unsealed sources with activity values of 8 times that assessed within its safety case. The operations had been undertaken for a prolonged period without being properly assessed and without approval. This was the first of 2 breaches, significant to safety, where ANSTO had not stayed within its safety case.
- ANSTO was found to have failed to comply with subsection 60(1) of the Regulations in that its Health Products Division has not effectively managed nor stayed within the safety case as it relates to lutetium-177 (Lu-177). Lu-177 is a radionuclide used for the treatment of cancer. The processing of undiluted Lu-177 into a radiopharmaceutical has risks to workers that must be managed. This breach was identified during a reactive inspection undertaken after a safety incident at the Health Products facility. Compliance with section 60 of the Regulations is a licence condition that requires all reasonably practical steps to manage

safety to be taken. Subsection 30(2) of the Act requires the licence holder to comply with these licence conditions. This was the second of two breaches, significant to safety, where ANSTO had not stayed within its safety case.

ARPANSA has not identified any need to update internal regulatory policies following these findings, however our regulatory response has highlighted the importance and benefit of a graded approach to regulation, through the use regulatory tools such as improvement notices issued by inspectors as part of regulatory inspections.

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

The CEO was made aware of 8 breaches with minor or no safety implications:

- A licence holder failed to comply with a condition of their licence when a required annual calibration of an item of radiation monitoring equipment was not carried out. This equipment is part of an interlock that prevents access to a hot cell when high levels of radiation are detected. A subsequent check of the equipment indicated it had been functioning correctly; however, it is important that operators know the operational status of equipment by conducting planned calibrations.
- During an inspection of sources of radiation, it was determined that the licence holder had failed to review and update their plans and arrangements for managing safety at least once every 3 years, as required under subsection 61(1) of the Regulations. Plans and arrangements assist the licence holder to safely and securely manage its use of radiation sources and equipment. Keeping them reviewed and up-to-date is important to reflect current practice, benchmark against best practice and to understand risk and opportunity in a dynamic operational environment.
- A licence holder failed to seek approval to dispose of a source of radiation (an ultraviolet germicidal lamp housed in a biological safety cabinet). This is required under section 65 of the Regulations. The licence holder self-reported the oversight and there were no other issues with the disposal. Regulatory approval for disposal of controlled sources is important to ensure that they are always controlled by properly authorised and qualified people.
- A licence holder failed to notify the CEO within 7 days of the transfer of 2 molybdenum-99 (Mo-99) sources to another licence holder, as required under subsection 65(3) of the Regulations. Regulatory approval for the transfer of controlled sources is important to ensure that they are always controlled by properly authorised and qualified people.
- During an inspection of a facility, it was determined that the licence holder had failed to comply with a relevant code or standard, as stated in their licence, including requirements of the Radiation Health Series publication Code of Practice for the Design and Safe Operation of Non-medical Irradiation Facilities (1988) (RHS 24). Failure to comply with the code indicates, to varying degrees, a weakness in practices or safety management of the facility.
- A licence holder failed to comply with a requirement to ensure that any person who entered a controlled facility, including for repair, maintenance or monitoring activities, had received appropriate training in radiation safety, a condition of licence. It is important that persons working on or around radiation equipment have appropriate knowledge and awareness of safety requirements relating to the equipment for their own safety and the safety of others.
- A licence holder failed to conduct an annual review of the radiation exposures at a disposal facility. In order to optimise radiation doses, a dose constraint for both workers and members of the public is set. A regular review of actual doses against the constraint is important to understand how work practices impact doses to

people and to identify opportunities for improvement. The requirement for review and reporting to ARPANSA was a condition of licence placed on the licence holder for the purpose of progressively reducing radiation doses and optimise worker protection.

- A licence holder failed to report on the airborne radionuclide discharges for several facilities within the prescribed timeframe, as required by licence conditions. The outstanding reports were provided, demonstrating compliance with the licence conditions. After consulting with the licence holder, the licence conditions were amended to provide clearer expectations on the timeframes for reporting.

Details of any improvement notices or directions issued during the year

Improvement notices may be issued if an inspector believes that the licence holder is acting, or likely to act, in contravention of the Act, Regulations or licence conditions but has not formally breached their licence conditions. Improvement notices are issued by ARPANSA to help pre-empt potential licence breaches or risks to safety.

ARPANSA issued 4 improvement notices under section 80A of the ARPANS Act throughout the year.

One improvement notice was issued to the National Archives of Australia (NAA) during a routine inspection:

- It was determined that NAA did not have a dedicated radiation safety officer and had not maintained training records or procedures for the use of a controlled apparatus it possessed. This is important for safe management of radiation apparatus and is a condition of licence. NAA advised that it no longer had use for the apparatus. Inspectors formed the view that, until the apparatus was disposed, it was likely that NAA would continue to contravene the Act and the Regulations. Inspectors issued an improvement notice requiring NAA to dispose of the apparatus before December 2020. NAA completed this task and the licence was subsequently surrendered.

Three improvement notices were issued to ANSTO for the following:

- ARPANSA found 2 high-activity sealed radiation sources being stored without being covered by an approved security plan. These plans are required under the Code of Practice for the Security of Radioactive Sources (RPS 11).
- ARPANSA found that ANSTO failed to comply with the Code of Practice for the Design and Safe Operation of Non-medical Irradiation Facilities (1988) (RHS 24), which had been previously identified. Failure to comply with the code indicates, to varying degrees, a weakness in safety management of the facility. ANSTO was required to address the deficiencies in 6 months.
- ARPANSA identified that manual operations performed as part of the radiochemistry processes at Camperdown had not been addressed in the approved safety case. The process involved a unsealed source, the activity of which was 8 times higher than previously assessed. An improvement notice was issued giving ANSTO 3 weeks to provide an interim risk assessment for the process that justified its continuation. After a regulatory review of the interim risk assessment, ANSTO was provided a further 4 months to update its safety case. ANSTO was found to have breached section 60 of the Regulations in regard to this issue (see breaches section above).

On all occasions, ARPANSA informed the licence holders that they must take appropriate action to remedy the contraventions and ensure a return to compliance.

Other significant activities

ANSTO Open-Pool Australian Lightwater (OPAL) Reactor Riser Structural Defects

ANSTO informed ARPANSA on 11 November 2020 that structural defects had been observed in the OPAL riser (upper chimney) during a planned inspection of the OPAL reactor pool. The inspection took place during a planned shutdown of the reactor. The OPAL Riser forms part of the reactor primary cooling system (PCS) and performs various safety functions during normal operation and accident conditions.

As a result of the defects, ARPANSA informed ANSTO that it would need to provide justification before returning the reactor to operation. The OPAL reactor did not return to operation when originally planned whilst ANSTO assessed the situation, conducted further inspections, and prepared a submission to ARPANSA providing justification to return the reactor to operation. ARPANSA received the submission on 27 November 2020 and, after review, concluded that ANSTO had provided satisfactory evidence that there was no immediate risk to safety when operating the reactor, subject to further assessment and monitoring. The OPAL reactor returned to power on 30 November 2020.

On 7 December 2020, ARPANSA and ANSTO representatives met to discuss the safety management of the structural defects, including regular inspection, mitigating measures and rectification options for the future. On 24 December 2020, ANSTO provided ARPANSA with a plan with timelines to rectify the defects in the OPAL riser. ARPANSA reviewed this plan, conducted site visits, inspections and met with ANSTO to review their progress against the plan and to communicate expectations.

ARPANSA placed a licence condition on ANSTO in regard to ongoing investigations and inspections, and on reporting to ARPANSA on these activities within specific timeframes. A number of inspections have since been performed, which has informed both ANSTO and ARPANSA of the condition of the defects. Further, ARPANSA met with ANSTO and communicated the need to plan for an extended shutdown of the reactor within the next 2-3 years, to undertake detailed inspections with a view to identifying rectification options.

ANSTO Health Products exposure incident

On 23 December 2020, ANSTO informed ARPANSA about an exposure to the hands of 2 workers at its Health Products facility that occurred whilst they were investigating a leaking flange on a process waste container. The exposure was from lutetium-177. The staff used protective equipment providing limited protection during the collection of a sample of liquid and crystalline material coming from the flange.

On 4 January 2021, ANSTO provided ARPANSA with a detailed assessment including a best estimate assessment of worker doses. The estimated exposure (equivalent dose) to the hand of the most exposed individual was 160 millisieverts (mSv), a figure verified by ARPANSA's own independent assessment. This dose is about one third of the annual statutory dose limit to the body extremities of 500 mSv. ARPANSA sought further information about the incident from ANSTO, which provided a detailed report based on its investigation. ARPANSA subsequently undertook an inspection to better understand the sequence of events that led to the exposure, including interviews of involved workers and an assessment of the associated human factors. The inspection identified areas for improvement and a non-compliance which was confirmed as a breach, relating to undertaking activities outside of their approved safety assessment.

A preliminary assessment of the incident identified this as a Level 1 event on the International Nuclear and Radiological Event Scale (INES). Level 1 is the lowest category of event on a scale of 1 to 7 in the INES reporting system.

OPAL Reactor Shutdown Systems

On 11 January 2021, ANSTO informed ARPANSA of an event at the OPAL reactor where an unirradiated rig containing uranium targets used in nuclear medicine production inadvertently dropped into the irradiation position within the reactor. The effect of the dropped uranium targets was to increase reactivity in the reactor causing the second shutdown system (SSS) and first shutdown system (FSS) to be activated to shut the reactor down safely. No apparent physical damage occurred but it was unusual that the First Reactor Protection System (FRPS) had not actuated first. ANSTO attributed the activation of the Second Reactor Protection System (SRPS), rather than the FRPS, to the positioning of the safety instrumentation adjacent to where the rig was dropped.

ANSTO informed ARPANSA on 16 March 2021 of an issue with the OPAL reactor's FRPS, which did not function as designed during a reactor start-up the previous evening. As with the incident on 11 January 2021, the reactor shut down safely following the SRPS activation of the FSS and SSS. ARPANSA instructed ANSTO to demonstrate the full functionality of the reactor's FRPS before returning the reactor to operation. The reactor remained shutdown whilst ANSTO prepared a safety submission to demonstrate the functionality of the FRPS.

A submission to modify the associated FRPS electronics was received on 16 April and on 27 April, after review, ARPANSA approved the installation of modified electronics and for the reactor to return to power operation. Bench-top testing was performed of the modified electronics, following installation in the reactor circuits, and during reactor power ascension on 29 April, demonstrating the effectiveness of the modification. ANSTO identified further improvements which could be made. ARPANSA imposed a licence condition requiring the redesign of the electronics by 29 October 2021 to implement the identified improvements. An INES rating of Level 1 was assigned to the event.

Facility licences as at 30 June 2021

Commonwealth entity	Licences held
Australian National University	3
Australian Nuclear Science and Technology Organisation	19
Australian Radiation Protection and Nuclear Safety Agency	1
Department of Agriculture, Water and the Environment	1
Department of Defence/Australian Defence Forces	4
Department of Home Affairs	4
Total	32

Source licences as at 30 June 2021

Commonwealth entity	Licences held
ASC Pty Ltd and ASC AWD Shipbuilder Pty Ltd	1
Attorney-General's Department	2
Australian Criminal Intelligence Commission	1
Australian Federal Police	1
Australian Institute of Marine Science	1
Australian National Maritime Museum	1
Australian National University	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 Signals Directorate	1
Australian Sports Commission	1
Australian Trade and Investment Commission	1
Australian Transaction Reports and Analysis Centre	1
Australian War Memorial	1
Commonwealth Bureau of Meteorology	1
Commonwealth Scientific and Industrial Research Organisation	9
Decipha Pty Ltd	1
Department of Agriculture, Water and the Environment	5
Department of Defence/Australian Defence Forces	1
Department of Foreign Affairs and Trade	1
Department of Home Affairs	3
Department of Industry, Science, Energy and Resources	3
Department of Infrastructure, Transport, Regional Development and Communications	1
Department of Parliamentary Services	1
Department of the Prime Minister and Cabinet	1
Federal Court of Australia	1
High Court of Australia	1
Indian Ocean Territories Health Service	1

Commonwealth entity	Licences held
Law Courts Limited	1
National Gallery of Australia	1
National Museum of Australia	1
Norfolk Island Health and Residential Aged Care Service	1
Note Printing Australia	1
Reserve Bank of Australia	1
Royal Australian Mint	1
Silex Systems Limited	1
Total	58

Appendix 2

Operations of the Radiation Health and Safety Advisory Council and Committees

Operations of the Radiation Health and Safety Advisory Council

During 2020–21, the Radiation Health and Safety Advisory Council (the Council) met virtually on 5 occasions. Summaries of the meetings can be found at arpansa.gov.au/rhsac-minutes.

The membership as at 30 June 2021 was:

Chair

- Dr Roger Allison, 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[^] (South Australia), Director, Regulation and Compliance, South Australian Environment Protection Authority.
- Mr John Piispanen* (Queensland), Acting Executive Director, Health Protection Branch, Queensland Health.

Nominee of the Chief Minister of the Northern Territory

- Dr Hugh Heggie, Chief Health Officer, Department of Health of the Northern Territory.

Person to represent the interests of the general public

- Dr Peter Karamoskos, consultant radiologist at Epworth Medical Imaging.

Other members:

- Dr Jane Canestra, medical practitioner and emergency physician with expertise in the health aspects of radiological emergencies
- Professor Adele Green, Head, Cancer and Population Studies Group, Queensland Institute of Medical Research
- Ms Melissa Holzberger, Director and Principal, Sloan Holzberger Lawyers
- Professor Pamela Sykes, Emeritus Professor Preventive Cancer Biology, Flinders University
- Dr Melanie Taylor, Senior Lecturer Organisational Psychology, Macquarie University
- Dr Trevor Wheatley, Adjunct Senior Lecturer & Chief Laser Safety Officer, University of New South Wales
- Mr Jim Hondros, Consultant, JRHC Enterprises, experience in mining and minerals processing, particularly with uranium and naturally occurring radioactive material.

*appointed for a 3-year term ending 29 February 2024.

[^]reappointed for a 3-year term ending 29 February 2024.

The term of appointment for Dr Stephen Newbery (Tasmania), Principal Health Physicist, Tasmanian Department of Health and Human Services ended on 31 March 2021.

During 2020–21, Council considered and discussed:

- Radiation safety in medical imaging with a focus on optimisation of use, noting the importance of gathering high-level data as evidence for advice to the CEO of ARPANSA.
- Lasers safety from the perspective of clinical and patient safety, and public exposure risk. Noting ARPANSA's mandate to improve national uniformity, it discussed regulatory compliance challenges across jurisdictions and the importance of obtaining high-level data as evidence for health advice.
- ARPANSA's community engagement on the Department of Industry, Science, Energy and Resources proposed National Radioactive Waste Management Facility (NRWMF).
- Naturally occurring radioactive material (NORM). The Council finalised advice to the CEO of ARPANSA, focusing on the developing approach to managing NORM both internationally and in Australia. The Council's recommendations aim to improve national uniformity within Australia and increase Australia's influence, through ARPANSA, on international policy setting for NORM.
- ARPANSA's regulatory function and regulatory response to safety incidents at regulated entities, including assessing organisational culture for safety.
- Issues raised by a range of stakeholders including:
 - the Australian Society of Dermal Clinicians regarding the regulation of laser and intense pulsed light (IPL) technologies,
 - the Dental Hygienists Association of Australia Ltd, the Australian Dental and Oral Health Therapists Association Ltd. and the Melbourne Dental School at the University of Melbourne regarding their request for updates to the Code of Practice and Safety Guide for Radiation Protection in Dentistry, and
 - the Barngarla Determination Aboriginal Corporation regarding the Department of Industry, Science, Energy and Resources proposed National Radioactive Waste Management Facility.

Operations of the Radiation Health Committee

During 2020–21, the Radiation Health Committee (RHC) met on 4 occasions. The meeting minutes are available at arpansa.gov.au/rhc-minutes. The new Committee was appointed on a 3-year term for 2021–23, which commenced on 1 January 2021. The membership as at 30 June 2021 was:

Chair

- Dr Roslyn Drummond (Victoria), 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 (Northern Territory), Manager Radiation Protection, Department of Health
- Dr Massey de los Reyes (South Australia), Senior Radiation Protection Officer, Science and Information, Mining and Radiation Branch, South Australian Environment Protection Authority
- Ms Penny Hill (Australian Capital Territory), Assistant Director, Health Protection Service, ACT Health
- Mr Glenn Riley (Victoria), Senior Project Officer, Radiation Team, Health Protection Branch, Department of Health and Human Services
- Mr Simon Critchley (Queensland), Director, Radiation Health, Queensland Health
- Ms Hazel Upton (Western Australia), Managing Health Physicist, Radiation Health Branch, Department of Health
- Dr Stephen Newbery (Tasmania), Principal Health Physicist, Population Health Services, Department of Health
- Mr Mark Carey (New South Wales), Principal Policy Officer, New South Wales Environment Protection Authority.

Nuclear Safety Committee representative

- Dr Joanna Wriedt (Victoria), Member Victorian Government's Radiation Advisory Committee.

Person to represent the interests of the general public

- Ms Fay Bellis (Victoria), Quality Management System Consultant.

During 2020–21, the committee considered and discussed the following:

Competencies for non-medical use of radiation sources

The RHC agreed to develop additional competencies for non-medical use of radiation sources considering the competencies for users of fixed radiation gauges and mobile soil density and moisture gauges.

Communication with enHealth regarding regulation of non-ionising radiation (NIR)

The committee discussed the letter from the CEO of ARPANSA to the Chair of Environmental Health Standing Committee (enHealth) describing the recent developments in the regulation of NIR. Members acknowledged that the letter would be very useful for enHealth, as a policy setting committee, in establishing a risk-informed strategy for regulation of NIR.

Radiation Protection Series (RPS) framework

The committee discussed the process of adopting the RPS framework that provides a more effective and efficient approach to achieving the desired level of protection of health and safety of people, and protection of the environment, from harmful effects of radiation. It establishes how requirements and regulatory expectations are linked, providing clarity for those responsible for safety and a balanced approach to risk-based regulation and compliance-related assistance and advice. The framework introduces a new type of document, Regulatory Expectations, which is a forward-looking system that can be designed and developed to provide nationally consistent regulatory expectations to establish a ‘baseline’ for compliance against applicable Codes. Considering the benefits of the RPS framework, members agreed to adopt this framework incorporating Regulatory Expectation documents.

Promoting national uniformity

During the year, the RHC facilitated the following regarding national uniformity.

- ARPANSA published an advisory note on validation of the design of Type B(U) and Type C packages for radioactive material, which are already approved outside of Australia. This advisory note provides explanation and advice with regard to validation of non-Australian approval of the design of special form radioactive material, Type B(U) and Type C packages. The intended audience is the licence holder or the responsible person making the application for validation. This note does not provide technical guidance for compliance but explains ARPANSA’s validation process for non-Australian design approvals, as an example.
- The RHC approved the program to collect radiation monitoring data on cabinet X-ray apparatus from all jurisdictions. The data will be used to justify an exemption from holding a user licence for operators of cabinet X-ray apparatus.
- Draft RHC statement on ‘wearable personal dosimeter and airport CT-security scanners’ was endorsed as working document. This was to allow jurisdictions to include radiation monitoring data before finalising the statement. The statement is currently under the review of Department of Home Affairs (DHA). The aim of the statement is to prevent a potential false high dose being recorded when regulatory inspectors scan their wearable personal dosimeters with their carry-on baggage as part of security screening process at the airport. This statement will help DHA to prepare policy and guidance on exempting wearable personal dosimeters from being subject to CT-baggage scans.

Publication of codes, standards and guides

During the year, ARPANSA published the following documents:

- Guide for Classification of Radioactive Waste (2020), Radiation Protection Series G-4. This guide sets out non-prescriptive, best-practice guidance for classifying radioactive waste, with primary focus on long-term safety after disposal. This publication supersedes the Radiation Protection Series (RPS) No. 20 Safety Guide for Classification of Radioactive Waste (2010).
- The Standard for Limiting Exposure to Radiofrequency Fields – 100 kHz to 300 GHz, Radiation Protection Series S-1 (Rev. 1) (RPS S-1). This Standard sets limits of exposure to radiofrequency (RF) electromagnetic energy (EME) for the public and workers. The exposure limits set out in the Standard provide protection against all known adverse health effects from RF EME exposure and are set well below the level at which harm may occur. The limits in RPS S-1 are aligned with guidelines published in 2020 by the International Commission on Non-Ionizing Radiation Protection (ICNIRP), which is the international body recognised as the leader in non-ionising radiation protection. RPS S-1 also includes requirements for protection of the public and the management of risk in occupational exposure from RF EME, together with information on verifying compliance within the limits of the standard. This publication supersedes the Radiation Protection Standard for Maximum Exposure Levels to Radiofrequency Fields – 3 kHz to 300 GHz (2002), RPS 3.
- A guide and a regulatory expectations document have been developed for diagnostic and interventional radiology users on how to comply with the Code for Radiation Protection in Medical Exposure (RPS C-5). The RHC endorsed the guidance for implementation of the Medical Exposure Code (RPS C-5) in terms of approach and content, subject to review 12 months after implementation of this Code.

Ongoing activities

At the end of the financial year, the Committee continued to work on the following documents considering the progress in the RPS documents framework:

- Code of Practice and Safety Guide for Portable Density/Moisture Gauges containing Radioactive Sources (RPS 5)
- Code of Practice and Safety Guide for Radiation Protection and Radioactive Waste Management in Mining and Mineral Processing (RPS 9)
- Code of Practice and Safety Guide for Radiation Protection in Dentistry (RPS 10)
- Code of Practice and Safety Guide for Safe Use of Fixed Radiation Gauges (RPS 13)
- Code of Practice for Protection Against Ionizing Radiation Emitted from X-ray Analysis Equipment (RHS 9)
- Revised Statement on Cabinet X-ray Equipment for Examination of Letters, Packages, Baggage, Freight and Other Articles for Security, Quality Control and Other Purposes (RHS 21)
- Statement on Enclosed X-ray Equipment for Special Applications (RHS 22)
- Code of Practice for the Design and Safe Operation of Non-medical Irradiation Facilities (RHS 24)
- Code of Practice for the Safe Use of Sealed Radioactive Sources in Borehole Logging (RHS 28).

Operations of the Nuclear Safety Committee

During 2020–21, the Nuclear Safety Committee (NSC) met via video conferencing on 4 occasions and issued one formal advice to the CEO of ARPANSA. Summaries of the meetings can be found on the ARPANSA website at arpansa.gov.au/nsc-minutes.

Membership appointments for the 2021–23 triennium were completed, following advertisement and seeking nominations. Two members, Mr Don Macnab and Ms Kerrie Anne Christian, who had been members since 2007 and 2012 respectively, left the service of the NSC. Both members have provided valuable assistance to ARPANSA through the NSC over the years, with their expert knowledge and experience strengthening ARPANSA's regulatory policies, approach and decision-making.

The membership as at 30 June 2021 was:

Chair

- Dr Tamie Weaver, Technical Fellow and Partner, ERM: Environmental Resources Management, with experience in hydrogeology.

CEO of ARPANSA

- Dr Carl-Magnus Larsson.

Radiation Health Committee representative

- Ms Fay Bellis, member of the Radiation Health Committee.

Local Government representative

- Mr Ian Drinnan, Principal Environmental Scientist, Sutherland Shire Council.

Person to represent the interests of the general public

- Dr Joanna Wriedt, experience in commercial law, government and medical research.

Other members:

- Ms Jasmin Diab, nuclear engineer with experience in the Australian Defence Force (new appointment commencing 2021).
- Mr Tony Irwin, engineer with experience in nuclear power and research reactor operations, commissioning, training, and regulatory interaction.
- Dr John Loy, radiation protection and nuclear safety regulatory expert, with extensive experience internationally and in Australia.
- Mr Cameron MacPhail, engineer with experience of process engineering and safety assurance within the Defence, pharmaceutical, nuclear power and water treatment industry (new appointment commencing 2021).
- Dr Peta Miller, Senior Lecturer and Researcher, Work Health and Safety practices, University of New South Wales, and consultant in safety management, ergonomics and human factors.
- Mr Stuart Parr, radiation protection advisor with experience in safety engineering and management including advice on nuclear regulatory compliance internationally.
- Mr Peter Wilkinson, consultant in safety management and safety culture in hazardous industries.

Key considerations and discussions during 2020–21 included the following:

Regulator Performance Framework self-assessment

ARPANSA conducted an annual self-assessment of its regulatory effectiveness against 6 Regulator Performance Framework (RPF) key performance indicators in July 2020. This self-assessment is a requirement of the RPF. The NSC was tasked to review and validate the self-assessment report. The NSC provided valuable feedback on the report that was incorporated into the final version. This report is published on the ARPANSA website <https://www.arpansa.gov.au/about-us/corporate-publications/regulator-performance-framework>.

Review of regulatory documentation

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

- a review of documentation associated with a revised risk assessment for the ANSTO Nuclear Medicine Facility.
- a draft guide on carrying out safety assessments at facilities, which are required from facility license holders at application and periodically thereafter
- a proposed update to the ARPANSA Compliance Manual, which outlines periodic reporting requirements and how enforcement actions are considered and reported.

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 Products, and ANSTO Nuclear Medicine facility.

The NSC provided formal advice on the OPAL riser defects including highlighting key information that may assist in obtaining a complete and comprehensive understanding of the defects, their causes and potential mitigation strategies.

Appendix 3

Workforce Statistics

Staffing statistics as of 30 June 2021

Ongoing and non-ongoing employment information

A3.1 All ongoing employees current report period (2020-2021)

	Male			Female			Indeterminate			Total
	Full time	Part time	Total male	Full time	Part time	Total female	Full time	Part time	Total indeterminate	
NSW	14	0	14	7	0	7	0	0	0	21
VIC	56	2	58	47	4	51	0	0	0	109
Total	70	2	72	54	4	58	0	0	0	130

A3.2 All non-ongoing Employees current report period (2020-21)

	Male			Female			Indeterminate			Total
	Full time	Part time	Total male	Full time	Part time	Total female	Full time	Part time	Total indeterminate	
NSW	0	0	0	1	0	1	0	0	0	1
VIC	1	0	1	1	1	2	0	0	0	3
Total	1	0	1	2	1	3	0	0	0	4

A3.3 All ongoing employees previous report period (2019-20)

	Male			Female			Indeterminate			Total
	Full time	Part time	Total male	Full time	Part time	Total female	Full time	Part time	Total indeterminate	
NSW	15	0	15	7	0	7	0	0	0	22
VIC	50	3	53	45	4	49	0	0	0	102
Total	65	3	68	52	4	56	0	0	0	124

A3.4 All non-ongoing employees previous report period (2019-20)

	Male			Female			Indeterminate			Total
	Full time	Part time	Total male	Full time	Part time	Total female	Full time	Part time	Total indeterminate	
NSW	0	0	0	1	0	1	0	0	0	1
VIC	3	1	4	4	1	5	0	0	0	9
Total	3	1	4	5	1	6	0	0	0	10

Employment information based on classification level**A3.5 Australian Public Service Act ongoing employees current report period (2020-21)**

	Male			Female			Indeterminate			Total
	Full time	Part time	Total male	Full time	Part time	Total female	Full time	Part time	Total indeterminate	
SES3	0	0	0	0	0	0	0	0	0	0
SES2	0	0	0	0	0	0	0	0	0	0
SES1	2	0	2	1	0	1	0	0	0	3
EL2	14	0	14	6	0	6	0	0	0	20
EL1	26	1	27	13	1	14	0	0	0	41
APS6	19	1	20	12	1	13	0	0	0	33
APS5	7	0	7	8	0	8	0	0	0	15
APS4	0	0	0	5	0	5	0	0	0	5
APS3	2	0	2	6	2	8	0	0	0	10
APS2	0	0	0	3	0	3	0	0	0	3
APS1	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0
Total	70	2	72	54	4	58	0	0	0	130

A3.6 Australian Public Service Act non-ongoing employees current report period (2020-21)

	Male			Female			Indeterminate			Total
	Full time	Part time	Total male	Full time	Part time	Total female	Full time	Part time	Total indeterminate	
SES3	0	0	0	0	0	0	0	0	0	0
SES2	0	0	0	0	0	0	0	0	0	0
SES1	0	0	0	0	0	0	0	0	0	0
EL2	0	0	0	0	0	0	0	0	0	0
EL1	1	0	1	0	0	0	0	0	0	1
APS6	0	0	0	1	0	1	0	0	0	1
APS5	0	0	0	0	1	1	0	0	0	1
APS4	0	0	0	1	0	1	0	0	0	1
APS3	0	0	0	0	0	0	0	0	0	0
APS2	0	0	0	0	0	0	0	0	0	0
APS1	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0
Total	1	0	1	2	1	3	0	0	0	4

A3.7 Australian Public Service Act ongoing employees previous report period (2019-20)

	Male			Female			Indeterminate			Total
	Full time	Part time	Total male	Full time	Part time	Total female	Full time	Part time	Total indeterminate	
SES3	0	0	0	0	0	0	0	0	0	0
SES2	0	0	0	0	0	0	0	0	0	0
SES1	2	0	2	1	0	1	0	0	0	3
EL2	14	0	14	3	0	3	0	0	0	17
EL1	27	1	28	16	0	16	0	0	0	44
APS6	16	1	17	9	1	10	0	0	0	27
APS5	4	1	5	8	1	9	0	0	0	14
APS4	0	0	0	5	0	5	0	0	0	5
APS3	2	0	2	7	0	7	0	0	0	9
APS2	0	0	0	3	2	5	0	0	0	5
APS1	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0
Total	65	3	68	52	4	56	0	0	0	124

A3.8 Australian Public Service Act non-ongoing employees previous report period (2019-20)

	Male			Female			Indeterminate			Total
	Full time	Part time	Total male	Full time	Part time	Total female	Full time	Part time	Total indeterminate	
SES3	0	0	0	0	0	0	0	0	0	0
SES2	0	0	0	0	0	0	0	0	0	0
SES1	0	0	0	0	0	0	0	0	0	0
EL2	0	0	0	0	0	0	0	0	0	0
EL1	1	0	1	0	0	0	0	0	0	1
APS6	0	1	1	2	0	2	0	0	0	3
APS5	2	0	2	1	1	2	0	0	0	4
APS4	0	0	0	1	0	1	0	0	0	1
APS3	0	0	0	1	0	1	0	0	0	1
APS2	0	0	0	0	0	0	0	0	0	0
APS1	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0
Total	3	1	4	5	1	6	0	0	0	10

Employment information based on full time and part time status

A3.9 Australian Public Service Act employees by full time and part time status current report period (2020-21)

	Ongoing			Non-ongoing			Total
	Full time	Part time	Total ongoing	Full time	Part time	Total non-ongoing	
SES3	0	0	0	0	0	0	0
SES2	0	0	0	0	0	0	0
SES1	3	0	3	0	0	0	3
EL2	20	0	20	0	0	0	20
EL1	39	2	41	1	0	1	42
APS6	31	2	33	1	0	1	34
APS5	15	0	15	0	1	1	16
APS4	5	0	5	1	0	1	6
APS3	8	2	10	0	0	0	10
APS2	3	0	3	0	0	0	3
APS1	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0
Total	124	6	130	3	1	4	134

A3.10 Australian Public Service Act employees by full time and part time status previous report period (2019-20)

	Ongoing			Non-ongoing			Total
	Full time	Part time	Total ongoing	Full time	Part time	Total non-ongoing	
SES3	0	0	0	0	0	0	0
SES2	0	0	0	0	0	0	0
SES1	3	0	3	0	0	0	3
EL2	17	0	17	0	0	0	17
EL1	43	1	44	1	0	1	45
APS6	25	2	27	2	1	3	30
APS5	12	2	14	3	1	4	18
APS4	5	0	5	1	0	1	6
APS3	9	2	11	1	0	1	12
APS2	3	0	3	0	0	0	3
APS1	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0
Total	117	7	124	8	2	10	134

Employment information by location

A3.11 Australian Public Service Act employment type by location current report period (2020-21)

	Ongoing	Non-ongoing	Total
NSW	21	1	22
VIC	109	3	112
Total	130	4	134

A3.12 Australian Public Service Act employment type by location previous report period (2019-20)

	Ongoing	Non-ongoing	Total
NSW	22	1	23
VIC	102	9	111
Total	124	10	134

Indigenous employment information

A3.13 Australian Public Service Act Indigenous employment current report period (2020-21)

	Total
Ongoing	0
Non-ongoing	0
Total	0

A3.14 Australian Public Service Act Indigenous employment previous report period (2019-20)

	Total
Ongoing	0
Non-ongoing	0
Total	0

Employment arrangements

A3.15 Australian Public Service Act Employment arrangements current report period (2020-21)

	SES	Non-SES	Total
Enterprise Agreement	0	127	127
Individual Flexibility Arrangement	0	11	11
Common Law Contract	3	4	7
Total	3	142	145

A3.16 Australian Public Service Act employment salary ranges by classification level (min/max) current report period (2020-21)

	Min salary (\$)	Max salary (\$)
SES 3	-	-
SES 2	-	-
SES 1	215 275	231 577
EL2	128 269	162 705
EL1	104 972	120 780
APS6	84 971	97 193
APS5	78 573	82 497
APS4	73 001	76 284
APS3	63 342	70 875
APS2	55 630	61 069
APS1	47 516	51 010
Other	-	-
Total	851 549	953 990

Part 7: Index

Abbreviations

ACDS	Australian Clinical Dosimetry Service
AHPPC	Australian Health Protection Principal Committee
ANAO	Australian National Audit Office
ANRDR	Australian National Radiation Dose Register
AIIMS	Australasian Inter-service Incident Management System
ANSTO	Australian Nuclear Science and Technology Organisation
APS	Australian Public Service
ARPANS Act	<i>Australian Radiation Protection and Nuclear Safety Act</i>
ARPANSA	Australian Radiation Protection and Nuclear Safety Agency
CEO	Chief Executive Officer
CNS	Convention on Nuclear Safety
COVID-19	Coronavirus disease
CTBTO	Comprehensive Nuclear-Test-Ban Treaty Organization
DRLs	Diagnostic reference levels
EG	Executive Group
EME	Electromagnetic energy
enHealth	Environmental Health Standing Committee
EPR	emergency preparedness and response
FOI	Freedom of Information
FOI Act	<i>Freedom of Information Act 1982</i>
IAEA	International Atomic Energy Agency
IPL	Intense pulsed light
IRRS	Integrated Regulatory Review Service
ISO/IEC	International Organization for Standardisation/ International Electrotechnical Commission
KPI	Key performance indicators
LIMS	Laboratory Information Management System
NAA	National Archives of Australia
NATA	National Association of Testing Authorities
NIR	Non-ionising radiation

NORM	Naturally occurring radioactive material
NDRP2	National Directory for Radiation Protection (second edition)
NSC	Nuclear Safety Committee
OPAL	Open Pool Australian Lightwater
PBS	Portfolio Budget Statement
PGPA Act	<i>Public Governance, Performance and Accountability Act 2013</i>
PGPA Rule	Public Governance, Performance and Accountability Rule 2014
PSDL	Primary Standards Dosimetry Laboratory
RF	radiofrequency
RHC	Radiation Health Committee
RPF	Regulator Performance Framework
RPS	Radiation Protection Series
SES	Senior Executive Service
SMC	Strategic Management Committee
UVR	Ultraviolet radiation
WHS	Work Health and Safety
WHS Act	<i>Work Health and Safety Act 2011</i>

Glossary

5G	5G is the fifth generation of mobile telecommunications. It provides improved connectivity over a wide range of frequencies to mobile phones and other devices on the wireless network. In Australia, 5G will initially use the same radio waves as the fourth generation (4G). In the future 5G will use radio waves called ‘millimetre waves’ which have a shorter range than the microwaves used in 4G. 5G infrastructure and devices like mobile phones emit radiofrequency (RF) electromagnetic energy (EME). ARPANSA sets the safety standards for exposure to RF EME.
Anechoic chamber	A specialised room that absorbs electromagnetic waves designed to perform EME measurements, calibrations and research.
Australian Clinical Dosimetry Service (ACDS)	The ACDS is a national independent dosimetry auditing program, provided by ARPANSA, offering 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)	A national database of incidents and events related to radiation of radioactivity. The purpose of the database is to raise awareness on where, how and why incidents and events occur, and how they can be best prevented.
Comprehensive Nuclear-Test-Ban Treaty (CTBT)	The Treaty aims to eliminate nuclear weapons by restricting the development and qualitative improvement of new types of nuclear weapons. ARPANSA is responsible for carrying out Australia's radionuclide monitoring obligations under the treaty. Our radionuclide laboratory is used to run daily tests to detect the presence of radioactive particles that are characteristic of nuclear explosion.
diagnostic reference level (DRL)	is an indicative dose that is not expected to be exceeded under normal imaging conditions for a given diagnostic task such as a CT scan. A DRL is not a regulatory limit, it is a benchmark that provides a simple method of identifying situations where they are delivering an unusually high patient dose.
dose	A generic term which may mean absorbed dose, equivalent dose or effective dose depending on context.
electromagnetic energy	Energy that can travel through space in the form of electromagnetic waves. There are many forms of electromagnetic energy including gamma rays, X-rays, ultraviolet radiation, visible light, infrared radiation, microwaves and radiofrequency radiation.
Integrated Regulatory Review Service (IRRS)	A peer-review 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—the process in which an electron is given enough energy to break away from an atom. Ionising radiation has enough energy to cause chemical changes by breaking chemical bonds. This effect can cause damage to living tissue. Examples of ionising radiation include X-rays, electrons (beta radiation) and particles (e.g. alpha radiation).
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.
National Radioactive Waste Management Facility (NRWTF)	The proposed NRWTF will 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. More information can be found at: arpansa.gov.au/NRWTF-radioactive-waste .
non-ionising radiation	Radiation that does not produce ionisation—the process in which an electron is given enough energy to break away from an atom. When these radiations pass through the tissues of the body they do not have sufficient energy to damage DNA directly. Examples of non-ionising radiation include static and low frequency electric and magnetic fields, radio waves, visible light and ultraviolet radiation.
Personal Radiation Monitoring Service (PRMS)	The Personal Radiation Monitoring Service (PRMS) monitors potential ionising radiation exposure to workers in fields such as medical, dental, chiropractic, industrial and mining. PRMS provides and assesses monitors that measure Australian worker's occupational exposure to radiation to ensure that the recommended dose limit is not exceeded.
Primary standard	Primary standards are instruments or artefacts that allow for the determination of a quantity with the highest possible accuracy. ARPANSA maintains four primary standards for the dosimetry of ionisation radiation for Australia.
radiation	Electromagnetic waves or quanta, and atomic or sub-atomic particles, propagated through space or through a material medium.
radiofrequency	Part of the electromagnetic spectrum with frequencies in the range 3 kHz to 300 GHz.
radiofrequency radiation	Electromagnetic energy in the radiofrequency range.
Talk to a Scientist	ARPANSA's phone and email service that allows members of the public to talk directly to ARPANSA scientists on questions or concerns about radiation exposure and protection and nuclear issues.

Reporting requirements

PGPA Rule Reference	Part of report	Description	Requirement	Page
17AD(g)	Letter of transmittal			
17AI	Letter of transmittal	A copy of the letter of transmittal signed and dated by accountable authority on date final text approved, with statement that the report has been prepared in accordance with section 46 of the Act and any enabling legislation that specifies additional requirements in relation to the annual report.	Mandatory	5
17AD(h)	Aids to access			
17AJ(a)	Table of contents.	Table of contents.	Mandatory	1
17AJ(b)	Alphabetical index.	Alphabetical index.	Mandatory	142

17AJ(c)	Glossary	Glossary of abbreviations and acronyms.	Mandatory	132
17AJ(d)	Reporting requirements	List of requirements.	Mandatory	133
17AJ(e)	Publication Details	Details of contact officer.	Mandatory	2
17AJ(f)	Publication Details	Entity's website address.	Mandatory	2
17AJ(g)	Publication Details	Electronic address of report.	Mandatory	2
17AD(a)	Review by accountable authority			
17AD(a)	CEO Foreword	A review by the accountable authority of the entity.	Mandatory	8
17AD(b)	Overview of the entity			
17AE(1)(a)(i)	Role of ARPANSA	A description of the role and functions of the entity.	Mandatory	14
17AE(1)(a)(ii)	Organisational structure	A description of the organisational structure of the entity.	Mandatory	15
17AE(1)(a)(iii)	Our outcome and programmes	A description of the outcomes and programmes administered by the entity.	Mandatory	13
17AE(1)(a)(iv)	Purposes	A description of the purposes of the entity as included in corporate plan.	Mandatory	13
17AE(1)(aa)(i)	Responsible ministers and portfolio	Name of the accountable authority or each member of the accountable authority.	Mandatory	13
17AE(1)(aa)(ii)	Responsible ministers and portfolio	Position of the accountable authority or each member of the accountable authority.	Mandatory	13
17AE(1)(aa)(iii)	Chief Executive Officer	Period as the accountable authority or member of the accountable authority within the reporting period.	Mandatory	15
17AE(1)(b)	N/A	An outline of the structure of the portfolio of the entity.	Portfolio departments - mandatory	-
17AE(2)	N/A	Where the outcomes and programs administered by the entity differ from any Portfolio Budget Statement, Portfolio Additional Estimates Statement or other portfolio estimates statement that was prepared for the entity for the period, include details of variation and reasons for change.	If applicable, Mandatory	-
17AD(c)	Report on the Performance of the entity			19
Annual performance statements				
17AD(c)(i); 16F	Annual performance statement	Annual performance statement in accordance with paragraph 39(1)(b) of the Act and section 16F of the Rule.	Mandatory	19
17AD(c)(ii)	Report on financial performance			38
17AF(1)(a)	Financial performance	A discussion and analysis of the entity's financial performance.	Mandatory	38

17AF(1)(b)	Annual resource statement	A table summarising the total resources and total payments of the entity.	Mandatory	41
17AF(2)	N/A	If there may be significant changes in the financial results during or after the previous or current reporting period, information on those changes, including: the cause of any operating loss of the entity; how the entity has responded to the loss and the actions that have been taken in relation to the loss; and any matter or circumstances that it can reasonably be anticipated will have a significant impact on the entity's future operation or financial results.	If applicable, Mandatory.	-
17AD(d)	Management and accountability			47
Corporate governance				
17AG(2)(a)	Audit and fraud control	Information on compliance with section 10 (fraud systems).	Mandatory	52
17AG(2)(b)(i)	Letter of transmittal	A certification by accountable authority that fraud risk assessments and fraud control plans have been prepared.	Mandatory	5
17AG(2)(b)(ii)	Letter of transmittal	A certification by accountable authority that appropriate mechanisms for preventing, detecting incidents of, investigating or otherwise dealing with, and recording or reporting fraud that meet the specific needs of the entity are in place.	Mandatory	5
17AG(2)(b)(iii)	Letter of transmittal	A certification by accountable authority that all reasonable measures have been taken to deal appropriately with fraud relating to the entity.	Mandatory	5
17AG(2)(c)	Corporate governance	An outline of structures and processes in place for the entity to implement principles and objectives of corporate governance.	Mandatory	47
17AG(2)(d) – (e)	N/A	A statement of significant issues reported to Minister under paragraph 19(1)(e) of the Act that relates to non-compliance with Finance law and action taken to remedy non-compliance.	If applicable, Mandatory	-
	Audit Committee			
17AG(2A)(a)	Audit and Risk Committee	A direct electronic address of the charter determining the functions of the entity's audit committee.	Mandatory	48
17AG(2A)(b)	Audit committee members	The name of each member of the entity's audit committee.	Mandatory	49
17AG(2A)(c)	Audit committee members	The qualifications, knowledge, skills or experience of each member of the entity's audit committee.	Mandatory	49

17AG(2A) (d)	Audit committee members	Information about the attendance of each member of the entity's audit committee at committee meetings.	Mandatory	49
17AG(2A) (e)	Audit committee members	The remuneration of each member of the entity's audit committee.	Mandatory	49
External Scrutiny				
17AG(3)	External Scrutiny	Information on the most significant developments in external scrutiny and the entity's response to the scrutiny.	Mandatory	54
17AG(3)(a)	N/A	Information on judicial decisions and decisions of administrative tribunals and by the Australian Information Commissioner that may have a significant effect on the operations of the entity.	If applicable, Mandatory	-
17AG(3)(b)	Reports by the Auditor-General, Parliamentary Committee, or the Commonwealth Ombudsman.	Information on any reports on operations of the entity by the Auditor-General (other than report under section 43 of the Act), a Parliamentary Committee, or the Commonwealth Ombudsman.	If applicable, Mandatory	54
17AG(3)(c)	N/A	Information on any capability reviews on the entity that were released during the period.	If applicable, Mandatory	-
Management of Human Resources				
17AG(4)(a)	Human resources	An assessment of the entity's effectiveness in managing and developing employees to achieve entity objectives.	Mandatory	55
17AG(4) (aa)	Workforce statistics	Statistics on the entity's employees on an ongoing and non-ongoing basis, including the following: (a) statistics on full-time employees; (b) statistics on part-time employees; (c) statistics on gender; (d) statistics on staff location.	Mandatory	121
17AG(4)(b)	Workforce statistics	Statistics on the entity's APS employees on an ongoing and non-ongoing basis; including the following:	Mandatory	121

		<p>Statistics on staffing classification level;</p> <p>Statistics on full-time employees;</p> <p>Statistics on part-time employees;</p> <p>Statistics on gender;</p> <p>Statistics on staff location;</p> <p>Statistics on employees who identify as Indigenous.</p>		
17AG(4)(c)	Employment arrangements	Information on any enterprise agreements, individual flexibility arrangements, Australian workplace agreements, common law contracts and determinations under subsection 24(1) of the <i>Public Service Act 1999</i> .	Mandatory	129
17AG(4)(c)(i)	Employee arrangements	Information on the number of SES and non-SES employees covered by agreements etc identified in paragraph 17AG(4)(c).	Mandatory	129
17AG(4)(c)(ii)	Salary ranges by classification	The salary ranges available for APS employees by classification level.	Mandatory	62
17AG(4)(c)(iii)	Non-salary benefits	A description of non-salary benefits provided to employees.	Mandatory	56
17AG(4)(d)(i)	N/A	Information on the number of employees at each classification level who received performance pay.	If applicable, Mandatory	-
17AG(4)(d)(ii)	N/A	Information on aggregate amounts of performance pay at each classification level.	If applicable, Mandatory	-
17AG(4)(d)(iii)	N/A	Information on the average amount of performance payment, and range of such payments, at each classification level.	If applicable, Mandatory	-
17AG(4)(d)(iv)	N/A	Information on aggregate amount of performance payments.	If applicable, Mandatory	-
Assets Management				
17AG(5)	N/A	An assessment of effectiveness of assets management where asset management is a significant part of the entity's activities.	If applicable, Mandatory	-

	Purchasing			
17AG(6)	Purchasing	An assessment of entity performance against the <i>Commonwealth Procurement Rules</i>	Mandatory	38
Reportable consultancy contracts				
17AG(7)(a)	Consultants	A summary statement detailing the number of new contracts engaging consultants entered into during the period; the total actual expenditure on all new consultancy contracts entered into during the period (inclusive of GST); the number of ongoing consultancy contracts that were entered into during a previous reporting period; and the total actual expenditure in the reporting year on the ongoing consultancy contracts (inclusive of GST).	Mandatory	39
17AG(7)(b)	Consultants	A statement that <i>‘During [reporting period], [specified number] new reportable consultancy contracts were entered into involving total actual expenditure of \$[specified million]. In addition, [specified number] ongoing reportable consultancy contracts were active during the period, involving total actual expenditure of \$[specified million].’</i>	Mandatory	39
17AG(7)(c)	Consultants	A summary of the policies and procedures for selecting and engaging consultants and the main categories of purposes for which consultants were selected and engaged.	Mandatory	39
17AG(7)(d)	Consultants	A statement that <i>‘Annual reports contain information about actual expenditure on reportable consultancy contracts. Information on the value of reportable consultancy contracts is available on the AusTender website.’</i>	Mandatory	39
Reportable non-consultancy contracts				
17AG(7A)(a)	Consultants	A summary statement detailing the number of new reportable non-consultancy contracts entered into during the period; the total actual expenditure on such contracts (inclusive of GST); the number of ongoing reportable non-consultancy contracts that were entered into during a previous reporting period; and the total actual expenditure in the reporting period on those ongoing contracts (inclusive of GST).	Mandatory	39
17AG(7A)(b)	Consultants	A statement that <i>‘Annual reports contain information about actual expenditure on reportable non-consultancy</i>	Mandatory	39

		<i>contracts. Information on the value of reportable non-consultancy contracts is available on the AusTender website.'</i>		
17AD(daa)	Additional information about organisations receiving amounts under reportable consultancy contracts or reportable non-consultancy contracts			
17AGA	Expenditure on reportable non-consultancy contracts	Additional information, in accordance with section 17AGA, about organisations receiving amounts under reportable consultancy contracts or reportable non-consultancy contracts.	Mandatory	39
Australian National Audit Office Access Clauses				
17AG(8)	N/A	If an entity entered into a contract with a value of more than \$100 000 (inclusive of GST) and the contract did not provide the Auditor-General with access to the contractor's premises, the report must include the name of the contractor, purpose and value of the contract, and the reason why a clause allowing access was not included in the contract.	If applicable, Mandatory	-
Exempt contracts				
17AG(9)	N/A	If an entity entered into a contract or there is a standing offer with a value greater than \$10 000 (inclusive of GST) which has been exempted from being published in AusTender because it would disclose exempt matters under the FOI Act, the annual report must include a statement that the contract or standing offer has been exempted, and the value of the contract or standing offer, to the extent that doing so does not disclose the exempt matters.	If applicable, Mandatory	-
Small business				
17AG(10) (a)	Procurement initiatives to support small business	A statement that <i>'[Name of entity] 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's website.'</i>	Mandatory	40
17AG(10) (b)	Procurement initiatives to support small business	An outline of the ways in which the procurement practices of the entity support small and medium enterprises.	Mandatory	40

17AG(10)(c)	Procurement initiatives to support small business	If the entity is considered by the Department administered by the Finance Minister as material in nature—a statement that <i>‘[Name of entity] recognises the importance of ensuring that small businesses are paid on time. The results of the Survey of Australian Government Payments to Small Business are available on the Treasury’s website.’</i>	If applicable, Mandatory	40
Financial statements				
17AD(e)	Financial statements	Inclusion of the annual financial statements in accordance with subsection 43(4) of the Act.	Mandatory	66
Executive remuneration				
17AD(da)	Executive remuneration	Information about executive remuneration in accordance with Subdivision C of Division 3A of Part 2-3 of the Rule.	Mandatory	57
17AD(f) Other mandatory information				
17AH(1)(a)(i)	N/A	If the entity conducted advertising campaigns, a statement that <i>‘During [reporting period], the [name of entity] conducted the following advertising campaigns: [name of advertising campaigns undertaken]. Further information on those advertising campaigns is available at [address of entity’s website] and in the reports on Australian Government advertising prepared by the Department of Finance. Those reports are available on the Department of Finance’s website.’</i>	If applicable, Mandatory	-
17AH(1)(a)(ii)	Advertising and marketing research	If the entity did not conduct advertising campaigns, a statement to that effect.	If applicable, Mandatory	40
17AH(1)(b)	N/A	A statement that <i>‘Information on grants awarded by [name of entity] during [reporting period] is available at [address of entity’s website].’</i> .	If applicable, Mandatory	-
17AH(1)(c)	Disability reporting mechanisms	Outline of mechanisms of disability reporting, including reference to website for further information.	Mandatory	59
17AH(1)(d)	Freedom of information	Website reference to where the entity’s Information Publication Scheme statement pursuant to Part II of FOI Act can be found.	Mandatory	54

17AH(1)(e)	N/A	Correction of material errors in previous annual report.	If applicable, mandatory	-
17AH(2)	Appendix 1 and Appendix 2	Information required by other legislation.	Mandatory	107 114

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