



Australian Government

**Australian Radiation Protection
and Nuclear Safety Agency**



Quarterly Report
of the
Chief Executive Officer of ARPANSA

October to December 2017

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The Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) is the Australian Government's primary authority on radiation protection and nuclear safety. Our purpose is to protect the Australian people and the environment from the harmful effects of radiation, through understanding risks, best practice regulation, research, policy, services, partnerships and engaging with the community.

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Letter of transmittal

11 March 2018

Senator the Hon Bridget McKenzie
Minister for Sport, Rural Health and Regional Communications
House of Representatives
Parliament House
Canberra ACT 2600

Dear Minister

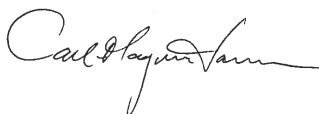
The *Australian Radiation Protection and Nuclear Safety Act 1998* (the Act) requires the Chief Executive Officer (CEO) of the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) to submit to the Minister, at the end of each quarter, a report on:

- the operations during the quarter of the CEO, ARPANSA, the Radiation Health and Safety Advisory Council (the Council), the Nuclear Safety Committee (the NSC) and the Radiation Health Committee
- details of directions given by the Minister to the CEO under section 16 of the Act
- details of directions given by the CEO under section 41 of the Act
- details of improvement notices given by inspectors under section 80A of the Act
- details of any breach of licence conditions by a licensee, of which the CEO is aware
- details of all reports received by the CEO from the Council and the NSC under Part 4, paragraphs 20(f) or 26(1)(d) of the Act, and
- A list of all facilities licensed under Part 5 of the Act.

I am pleased to provide you with a report, meeting the requirements of the Act, covering the period 1 October to 31 December 2017.

Please note that subsection 60(6) of the Act requires you to cause a copy of the report to be laid before each House of the Parliament within 15 sitting days of the day on which this report was given to you.

Yours sincerely



Carl-Magnus Larsson
CEO of ARPANSA

The operations of the CEO and ARPANSA

ARPANSA sits within the Department of Health portfolio.

ARPANSA has a single outcome, as set out in the 2017-18 Portfolio Budget Statements (2017–18 PBS):

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

The Radiation Protection and Nuclear Safety Program, contained within the 2017–18 PBS, describes four performance objectives against which ARPANSA seeks to achieve its outcome. These criteria are:

- protecting the public, workers and the environment from radiation exposure
- promoting radiological and nuclear safety and security, and emergency preparedness
- promoting the safe and effective use of ionising radiation in medicine
- ensuring risk-informed and efficient regulation.

The report on the operations of the CEO and ARPANSA focuses on these criteria.

Protecting the public, workers and the environment from radiation exposure

Australian National Radiation Dose Register

ARPANSA maintains the Australian National Radiation Dose Register (ANRDR) which stores, maintains and reviews radiological dose histories for occupationally exposed workers in Australia.

The ANRDR holds dose history records for more than 38 000 workers. This includes full coverage of workers from all 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.

ARPANSA is working to expand the ANRDR, with a goal to ultimately include all occupationally exposed workers. During the quarter, the Radiation Health Committee (RHC) approved the ANRDR as a central record keeping agency, as defined in the *Code for Radiation Protection in Planned Exposure Situations* (Radiation Protection Series (RPS) C-1). This is a significant step to establish the legal framework for the submission of dose records from organisations operating under state and territory regulatory control, in accordance with RPS C-1.

During the quarter, a major mineral sand mining organisation commenced the submission of dose records from one of their worksites into the ANRDR.

The ANRDR team continued to work with Commonwealth licence holders for whom the submission of dose records to the ANRDR is now a mandatory requirement. Each organisation has implemented work required for the submission of their dose records within reasonable timeframes.

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Monitor and mitigate population exposures to electric and magnetic fields and electromagnetic radiation

There was a meeting of the Electromagnetic Energy Reference Group (EMERG) on 19 October 2017. EMERG meets twice annually to receive input from the community and other stakeholders and discuss and advise on issues relating to EME and health (<https://www.arpansa.gov.au/about-us/what-we-do/national-collaboration/emerg>). In particular, this meeting noted an update on discussions between government stakeholders on the future of funding for electromagnetic energy (EME) research and related activities. It also noted a decline in EME enquiries to ARPANSA over recent years, attributable to the availability of information on its website. ARPANSA provided an overview of its new website and EMERG agreed that the special topic for the next meeting would be the emergence of 5G technology.

On 19 October 2017, ARPANSA staff attended the Science and Wireless Workshop hosted by the Australian Centre for Electromagnetic Bio-effects Research at RMIT University (<https://acebr.uow.edu.au/content/groups/public/@web/@acebr/documents/doc/uow239146.pdf>). The Workshop provided an opportunity to learn about current EME research in Australia.

Solar ultraviolet radiation and sun protection

ARPANSA measures solar ultraviolet radiation (UVR) at eleven sites around Australia and four sites in the Australian Antarctic territories. During this quarter, ARPANSA continued the replacement of UV monitoring infrastructure around Australia. Two of the mainland stations have had infrastructure replaced during the quarter, bringing the total to date to six. The UVR index data generated by the network is used to raise awareness in Australia of the levels of UVR exposure and the risks associated with excessive sun exposure.

Standards development

The draft Code for Disposal of Solid Radioactive Waste (RPS C-3) was released for public comment; the consultation period ends on 23 February 2018. This Code sets out the requirements in Australia for the protection of occupationally exposed persons, the public and the environment when disposing of solid radioactive waste.

The draft Code for Radiation Protection Requirements for Industrial Radiography (RPS C-4) was released for public comment with the consultation period ending on 26 February 2018. This Code sets the specific radiation protection requirements in Australia for the protection of occupationally exposed persons and the public in planned exposure situations involving industrial radiography. It complements the overarching requirements contained in Radiation Protection in Planned Exposure Situations (RPS C-1).

ARPANSA hosted a one-day workshop on 6 October to consider the application of the draft Emergency Exposure Guide (RPS G-3). The scenario-based workshop was attended by representatives from the Commonwealth, states and territories, including first response agencies. Outcomes from the workshop will help to improve the draft Emergency Exposure Guide prior to its release for public comment during the next quarter.

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Promoting radiological and nuclear safety and security, and emergency preparedness

Security of nuclear facilities, radioactive material and associated facilities

ARPANSA attended the biennial Radiological Security Risk Workshop in Albuquerque, New Mexico, USA. A number of emerging security risks were discussed and shared with international partners. This facilitated a request for ARPANSA's counterpart to conduct a peer review of ARPANSA's practice-specific security guides for radioactive material.

ARPANSA participated in discussions regarding nuclear and radiological emergency detection technologies with the US Department of Energy National Nuclear Security Administration. These discussions focussed on identifying pathways for technical and operational reviews of emerging technologies.

ARPANSA met with the Queensland, Northern Territory and Western Australian regulators to discuss their use of nationally accredited assessors to implement the requirements of the ARPANSA Code of Practice on the Security of Radioactive Sources (RPS-11).

International monitoring system

As part of Australia's ongoing commitment to the Comprehensive Nuclear-Test-Ban Treaty (CTBT), ARPANSA operates and maintains the Australian CTBT laboratory in Melbourne and radionuclide air particulate monitoring stations that are part of the CTBT International Monitoring System. Stations are located in Melbourne, Perth, Townsville, Darwin, the Cocos Islands, Macquarie Island, and Mawson Base (Antarctica). Two noble gas monitoring facilities are co-located with air particulate monitoring stations in Melbourne and Darwin.

The Australian CTBT Radionuclide Laboratory was in service for the entire quarter. Seven samples were analysed during this period. A proficiency test exercise sample was also analysed.

Emergency preparedness

ARPANSA and the International Atomic Energy Agency (IAEA) hosted a General Safety Requirements Part 7 (GSR Part 7) regional workshop in Melbourne from 2-5 October 2017. The workshop was attended by 20 representatives from seven Australian jurisdictions as well as from Georgia, India, Indonesia, Jordan, Malaysia, Myanmar, New Zealand and Vietnam. Lecturers and facilitators from Australia, Germany and United States of America as well as from IAEA supported the conduct of the workshop.

ARPANSA participated in an IAEA ConvEx-2b emergency exercise on 6–7 December 2018. Assessments, communications and reporting mechanisms were successfully tested.

Promoting the safe and effective use of ionising radiation in medicine

Radiotherapy

As a part of the ARPANSA Radiotherapy section's regular calibration services for radiotherapy providers and industry users of radiation, ARPANSA calibrated six therapy dosimeters and one

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neutron monitor. In support of these services and the measurement of dose in radiotherapy, ARPANSA has been developing computer models of the response of common radiotherapy detectors. The first of these models was completed in December 2017 and the results submitted to an international review. The ability to model detectors is a milestone for the Radiotherapy section and means that a much wider set of questions in dosimetry can now be addressed.

Australian Clinical Dosimetry Service

The Australian Clinical Dosimetry Service (ACDS) provides radiation specialists with a source of independent checks for equipment and patient doses. This enables an integrated national approach to promoting safety and quality in radiotherapy, which is expected to lead to further improvements in radiotherapy treatment outcomes. The ACDS transitioned to a full cost recovery user-pays service on 1 January 2017 and is in the process of negotiating service level agreements with radiotherapy facilities. Sixty-nine percent of Australian facilities have subscribed to the user-pays model of the ACDS and another 8 per cent are finalising their service agreements. During the quarter, the ACDS completed 31 audits of radiotherapy equipment. In December, the ACDS performed the first field trial audits on a Halcyon, a new type of medical linear accelerator, which is being deployed in Australia.

Medical Imaging

ARPANSA's National Diagnostic Reference Level Service collects data from surveys and uses it to calculate Australian Diagnostic Reference Levels (DRLs) for common multi-detector computed tomography (MDCT) protocols. The size of the data sample collected via the surveys improves the confidence in the DRLs that ARPANSA sets. An extra 1660 survey reports were submitted in the quarter. Twenty-two new registrants signed up to participate.

The Preliminary Assessment for the revised draft of the Medical Exposure Code, along with an updated gap analysis comparing it to the existing codes, was submitted to the Office of Best Practice Regulation (OBPR) in November 2017. The OBPR agreed with the assessment that the changes were minor in nature and a consultation regulatory impact statement was not required. The code will be released for a period of public comment early in 2018.

Ensuring risk-informed and efficient regulation

Regulatory guides

The following guides, which assist applicants and licence holders, were revised and reissued:

- Regulatory Guide: Applying for a source licence
- Regulatory Guide: How to determine whether a UV source is controlled apparatus
- Regulatory Guide: UV emitting apparatus – case studies

Significant licencing activities

ARPANSA investigated an event on 22 August 2017 at the Australian Nuclear Science and Technology Organisation (ANSTO), specifically ANSTO Health, which resulted in a significant skin dose of radiation (above the statutory dose limit) to a worker. ARPANSA has monitored the implementation of immediate actions it requested and assessed the event to be a Level 3 – serious Incident on the

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International Nuclear and Radiological Event Scale (INES). The scale ranges from Level 0 to 7, where Level 1 events are anomalies with a low safety significance and Level 7 events are major accidents such as the nuclear accidents at Chernobyl and Fukushima. ARPANSA's classification was based on the exposure causing non-lethal radiation effects (tissue reactions) on a single worker. Accidents with similar consequences involving several workers would be subject to higher classification. This is the first time ARPANSA has classified an event among its licence holders at Level 3 on the INES scale. See 'Details of any breach of licence conditions by a licensee' below for further information.

An event occurred in September 2017 at the Little Forest Legacy Site (LFLS), near the main ANSTO site at Lucas Heights NSW, where a helicopter made an unscheduled landing on the site. Whilst the landing site was within the fenced area of the LFLS, it was away from the trenches where low level radioactive waste was buried in the 1960s. ANSTO has provided an investigation report into the event. This has been reviewed and a series of further questions raised. ARPANSA is currently awaiting additional information from ANSTO.

Inspections

During the quarter, ARPANSA completed nine inspections of radiation sources and facilities. This consisted of six scheduled inspections, two augmented inspections, and one inspection that was postponed from the previous quarter. Additionally, ARPANSA undertook 14 site visits. The inspection reports can be found on ARPANSA's website at arpansa.gov.au/regulation/inspections/reports.

Stakeholder engagement

On 21 December 2017, the CEO published his intention to declare an exemption from a siting licence for ARPANSA's Medical Radiation Services. The siting exemption decision was also reviewed by an external state regulator (Queensland Department of Health) at ARPANSA's request to manage any potential conflict of interest. The exemption relates to the planned installation of a new medical linear accelerator in the existing facility.

ARPANSA participated in meetings with the Sutherland Shire City Council regarding the development and review of their Lucas Heights Sub-Plan Emergency Plan. The focus of these discussions was to ensure that the revised plan meets the requirements of the newly published IAEA GSR Part 7.

Radioactive material import permits

The importation of radioactive material into Australia requires permission under Regulation 4R of the Customs (Prohibited Imports) Regulations 1956. These regulations are made under the *Customs Act 1901*. Under the Customs (Prohibited Imports) Regulations 1956, the Minister for Health may authorise ARPANSA officers to issue import permits.

ARPANSA's-authorised officers approved 85 permits for non-medical radioisotopes in the form of 44 urgent permits, 40 standard permits and a one year permits.

ARPANSA's-authorised officers approved 151 permits for medical radioisotopes in the form of 4 one-year permits and 147 single shipment permits.

Thirteen export permits were approved.

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Transport of radioactive material

ARPANSA endorsed three security plans for transport of radioactive material.

ARPANSA issued a certificate of approval for a package design for transport of radioactive material. The package was manufactured by NTP Radioisotopes SOC Ltd in South Africa.

ARPANSA issued two validation certificates endorsing the original revised certificate of approval by the Czech Republic Competent Authority for a Type B(U) package and the original certificate issued by the Canadian Competent Authority for a Type B(U) package. The Czech Republic package will be used for transporting disused radioactive sources and the Canadian package will be used for transporting medical radioisotopes overseas.

ARPANSA approved two shipments of OPAL target plates from Sydney Airport to Lucas Heights by road. The target plates will be used for the production of medical radioisotopes.

International engagement

ARPANSA's international engagement provides the agency with the means of influencing the international radiation protection and nuclear safety and security framework, and for taking stock of international developments. ARPANSA's regulatory framework and radiation protection standards are based on international risk assessments and best practice. It strengthens ARPANSA's engagement with domestic stakeholders in order to grow awareness and collaboration on national interests and policy objectives. The following is a summary of key international engagement activities undertaken in this quarter.

International Atomic Energy Agency (IAEA) Response and Assistance Network (RANET) Joint Assistance Team (JAT) Exercise 1-6 October 2017, Fukushima, Japan

As part of the IAEA's strategy for supporting practical implementation of the Assistance Convention, the Incident and Emergency Centre manages the IAEA RANET, a network for providing international assistance, upon request from a State, following a nuclear or radiological incident or emergency. ARPANSA participated in this exercise to conduct an IAEA Assistance Mission with a JAT made up of different Member States registered in RANET. The exercise aimed to identify any operational and compatibility issues that may arise during a JAT assistance mission. The objectives also included testing the IAEA's Harmonization Guide (a document on the harmonization of the products generated through the provision of assistance). The IAEA and ARPANSA co-funded this travel.

Meetings of the International Commission on Radiological Protection (ICRP) 6-15 October 2017, Paris France

ARPANSA CEO Dr Carl-Magnus Larsson and Deputy CEO Dr Gillian Hirth attended various meetings of the ICRP. Dr Larsson is one of 13 members of the ICRP's Main Commission and Dr Hirth is a member of Committee 4 on the Application of the System for Radiological Protection. The meetings coincided with the ICRP's 4th International Symposium on the System of Radiological Protection, and the 2nd European Radiological Protection Research Week. Key outcomes included publication of new dose coefficients for a variety of elements, including radon and its progeny, which is of significance in the Australian mining environment. Recommendations under development include management of waste containing naturally occurring radioactive material, remediation and near-surface disposal

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facilities. There were also significant discussions on the safety of imaging procedures and radiation therapy. ARPANSA funded this travel.

IAEA Integrated Regulatory Review Service (IRRS) Follow-Up Mission to the nuclear regulator Autorité de Sûreté Nucléaire (ASN) 1-9 October 2017, Montrouge, France

An ARPANSA officer participated in an IAEA IRRS follow-up mission as part of a team of international experts. The object of the mission was to improve the French regulatory framework for nuclear and radiation safety by assessing the status of the findings from the 2014 IRRS mission. It concluded that ASN had made significant progress in enhancing its management system and has developed policy statements incorporating safety culture aspects in training, self-assessment and management. The IAEA and ARPANSA co-funded this travel.

IAEA Integrated Regulatory Review Service (IRRS) Follow-Up Mission to the Energy and Minerals Regulatory Commission, 14-22 October 2017, Amman, Jordan

An ARPANSA officer participated in an IAEA IRRS follow-up mission as part of a team of international experts. The ARPANSA officer joined the mission as Deputy Team Leader and expert reviewer. The mission reviewed Jordan's progress in implementing the recommendations and suggestions from an initial IRRS mission to the country in 2014. The mission found that Jordan either fully implemented all the recommendations and suggestions from 2014 or made considerable progress towards that goal. The IAEA and ARPANSA co-funded this travel.

IAEA 42nd meeting of the Commission on Safety Standards (CSS), and various Safety Standard Committees' meetings, from 30 October-3 November 2017, Vienna, Austria

ARPANSA CEO Dr Carl-Magnus Larsson as the Australian member of CSS, and Dr Geoff Williams as Chair of the Waste Safety Standards Committee (WASSC), attended these meetings. CSS sets the policy direction for the five IAEA Safety Standards Committees on radiation, nuclear, waste and transport safety, and on emergency preparedness and response. The revised Specific Safety Requirements (SSR)-6 (*Regulations for the Safe Transport of Radioactive Material*) was adopted, as well as guidance on how to transition from a radiation or nuclear emergency. The CSS also approved a large number of document preparation profiles for new and updated safety standards. Dr Larsson led discussions on how recent publications by the United Nations Scientific Committee on the Effects of Atomic Radiation (UNSCEAR) should be reflected in the safety standards. The CSS resolved to undertake a review of the implications of UNSCEAR's work. CSS will also commence work on the how the framework for safety applies to 'barged' nuclear power plants, which are now being built in the Russian Federation and elsewhere. The IAEA and ARPANSA co-funded this travel.

IAEA 5th Meeting of Emergency Preparedness and Response Standards Committee (EPReSC) and Seibersdorf Laboratory Visit 6-9 November 2017, Vienna, Austria

This meeting discussed the progress of a number of IAEA safety standards under development were considered. The plans for future emergency preparedness and response documents in the fields of development of a protection strategy, medical response, and field monitoring were presented. An ARPANSA officer was appointed as a corresponding member to a working group on the implications for the IAEA safety standards of recent publications by the United Nations Scientific Committee on the Effects of Atomic Radiation concerning attributing health effects to ionizing radiation exposure

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and inferring risks. This group will report to the Commission for Safety Standards. ARPANSA funded this travel.

US Department of Energy (DOE) National Nuclear Security Administration (NNSA) and Sandia National Laboratories (SNL) 31 October-10 November 2017, Carlsbad/Albuquerque NM, USA

ARPANSA officers visited the DOE NNSA Waste Isolation Pilot Plant (WIPP) and participated in the SNL's Radiological Dispersal Device and Radiation Security Risk Workshop. ARPANSA staff were briefed on a number of technical and regulatory aspects of the WIPP facility and were also provided a physical tour and inspection of their permanent disposal operations. At SNL, the workshop focussed upon emerging radiation security threats and sharing information. ARPANSA funded this travel.

43rd Meeting of the Radiation Safety Standards Committee (RASSC) 14-15 November 2017, Vienna, Austria

The 43rd RASSC included a session on radiation exposure in airline and space travel. Commercial airlines now fly at higher altitudes, resulting in increased cosmic radiation doses. A number of commercial companies are also offering space travel, to commence within the next few years. It is important to assess the implications of the radiation doses which workers and the public are likely to receive, and to develop appropriate guidance. This was flagged as a possible priority issue for the next term of RASSC. Another priority issue important to Australia is the use of a graded approach to regulation, particularly in relation to naturally occurring radioactive material. ARPANSA funded this travel.

IAEA 44th Waste Safety Standards Committee (WASSC) and joint WASSC-Radiation Safety Standards Committee (RASSC) meetings, 13-17 November 2017, Vienna, Austria

An ARPANSA officer chaired this meeting of WASSC, which enables Australia to be involved in the development of international best practice standards in radioactive waste safety. This supports ARPANSA's role in developing nationally uniform safety standards to manage and dispose of Australia's radioactive waste safely and with community support. Waste safety standards under development of importance for Australia include those on the exemption and clearance of material from radiological regulation, and the new IAEA safety guide on Management of Radioactive Residues from Uranium Production and Other NORM Activities. The joint WASSC-RASSC meeting approved a number of document proposals and draft safety guides for advancement. The IAEA and ARPANSA co-funded this travel.

Asia Pacific Metrology Program (APMP) Technical Committee for Ionizing Radiation (TCRI) 23-28 November 2017, New Delhi, India

The APMP is a technical exchange between the standards laboratories in the Asia-Pacific region on the measurement of ionizing radiation. This committee arranges comparisons, reviews comparisons from other regions, and provides feedback on the international system which underpins the equivalence of radiation measurements around the world. ARPANSA staff member Duncan Butler was appointed to the position of Vice Chair, APMP-TCRI during the meeting. ARPANSA funded this travel.

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Comprehensive Nuclear Test Ban Treaty Organisation (CTBTO) Technical Training Program for Radionuclide Station Operators 23-29 October 2017, Oakridge TN, USA

ARPANSA participated in this training program for radionuclide station operators with ORTEC™ equipment. The course provided hands-on training and practical lessons on the operation, maintenance and repair of the ORTEC gamma detector system. The CTBTO and ARPANSA co-funded this travel.

35th Meeting of the IAEA Transport Safety Standard Committee (TRANSSC) 11-15 December 2017, Vienna, Austria

ARPANSA attended this meeting which focussed on the 2018 edition of IAEA's Specific Safety Requirements (SSR)-6 (*Regulations for the Safe Transport of Radioactive Material*) and finalising the associated Specific Safety Guidance (SSG)-26. The 2018 edition of SSR-6 will be important for Australia because it is currently adopted as the ARPANSA Code of Practice for the Safe Transport of Radioactive Material. Compliance with this Code is an Australian regulatory requirement, and the related safety guides are important for applying the requirements. ARPANSA funded this travel.

Details of directions given by the Minister

No directions were given by the Minister under section 16 of the Act.

Details of directions given by the CEO

No directions were given by the CEO under section 41 of the Act.

Details of improvement notices given by inspectors

No improvement notices were issued by ARPANSA under section 80A of the Act.

Details of any breach of licence conditions by a licensee

Four minor breaches were recorded in the quarter. Two breaches were related to non-compliance with codes of practice listed in the licence conditions, one for non-compliance with a code of practice listed in regulation 48, and one for non-compliance with the organisation's own plans and arrangements.

Three breaches with significant safety implications were recorded in the quarter. One of the breaches involved the unauthorised transfer of controlled material by the Department of Defence, while the remaining two breaches were found as a result of a contamination accident at ANSTO Health on 22 August 2017. See 'significant licencing activities' above for further information.

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Facilities licensed under Part 5 of the ARPANS Act

No facility licences were issued in the period.

The operations of the Council and Committees

Radiation Health and Safety Advisory Council

The Radiation Health and Safety Advisory Council (Council) met on 16-17 November in Sydney. It discussed ARPANSA's activities to promote UV radiation protection, including further areas of opportunity. Council also discussed a radiation risk management concept for ARPANSA, to be incorporated into ARPANSA publications, as well as ARPANSA's potential roles in providing advice on radiological emergencies, in particular the importance of education and awareness prior to an emergency.

Council endorsed a letter of support to the CEO of ARPANSA to pursue as a priority a Radiation Health Committee project to consider options for a redesign of Australia's radiation regulatory system to improve national uniformity.

Council also discussed terms of reference for a new working group on issues of naturally occurring radioactive materials, and feedback was given on ARPANSA's media strategy, a proposed scientific and technical knowledge and skills framework for the agency, and a draft code on radioactive waste disposal.

The minutes of the meeting are on ARPANSA's website at www.arpansa.gov.au/rhsac. The next meeting is in Melbourne on 7-8 March 2018.

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

The RHSAC did not provide any reports to the CEO during this quarter.

Radiation Health Committee

The Radiation Health Committee (RHC) met on 15 November 2017 in Sydney.

Members noted the updated status of Amendment 8 to the National Directory for Radiation Protection (NDRP). The revised draft of the NDRP Amendment 8 would be circulated to members by mid-February 2018.

The RHC agreed to the submission of the preliminary assessment on the draft Medical Exposure Code (MEC) to the OBPR to determine whether or not a RIS would be required. Members approved release of the MEC for public comment subject to the OBPR decision.

Members noted that current understanding of the potential magnitude of intense pulsed light (IPL) lasers in cosmetic treatments is limited due to the non-harmonised approach for incident reporting. In order to reduce this gap in knowledge a nationally uniform mechanism is required for reporting injuries resulting from lasers during cosmetic treatments. It was agreed that ARPANSA would lead the development of a proposal for capturing incidents related to lasers and IPLs in cosmetic

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treatments. Members considered that it would be beneficial if ARPANSA writes on behalf of the RHC to relevant health jurisdictions to explore whether registers of such incidents are available.

Members noted that the ICRP has recently re-evaluated the dose coefficients for radon progeny and intends to publish Publication 137 Occupational Intakes of Radionuclides: Part 3 (OIR Part 3) that includes the revised dose coefficients. Members considered a draft advisory note on radon dose coefficients as well as a draft RHC statement and agreed to their release after the publication of OIR Part 3 in early 2018.

Members noted the status of the draft Disposal Code based on the IAEA's Specific Safety Requirement (SSR)-5) and the transition roadmap from the existing Radiation Health Series (RHS) 35, Code of Practice for the Near-surface Disposal of Radioactive Waste in Australia (1992), to the new Disposal Code. Members noted OBPR advice that no consultation RIS is needed and approved the release of the draft Disposal Code for public consultation.

Members noted the revised draft Industrial Radiography Code (RPS C-4), the resolution of comments from members, and the OBPR preliminary assessment. Members agreed to release the draft for public comment subject to the OBPR decision that a consultation RIS is not required. Following the meeting, the OBPR advised that no consultation RIS is required and the Code was subsequently released for public comment.

The next RHC meeting will be held on 13-14 March 2018 in Melbourne. The full minutes of RHC meetings are available on the ARPANSA website: www.arpansa.gov.au/rhc.

Nuclear Safety Committee

The Nuclear Safety Committee (NSC) met on 20 October 2017 in Sydney. A range of regulatory issues were discussed. The NSC reviewed and provided external validation to ARPANSA's Regulator Performance Framework (RPF) Annual Self-Assessment Report. The NSC concluded that the report appropriately reflects ARPANSA's performance against the Key Performance Indicators over the assessment period and that ARPANSA is working within the Government's RPF. A number of important initiatives for improvement were identified that will strengthen performance.

The NSC noted the reported accident at ANSTO Health that involved radiological contamination to a worker's hands that exceeded statutory dose limits. See 'Significant licencing activities' and 'Details of any breach of licence conditions by a licensee' for further information.

The NSC also noted an update on the regulatory activities of the ANSTO OPAL Reactor since the previous meeting and system performance evaluations carried out during the September shutdown. No significant regulatory issues or safety concerns were raised by NSC members.

The NSC also discussed the Code for Radiation Protection in Planned Exposure Situations and construction and commissioning progress for the ANSTO Nuclear Medicine Facility.

The full minutes of NSC meetings are available on the ARPANSA website: arpansa.gov.au/nsc.

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

The NSC did not provide any reports to the CEO during this quarter.

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