



Australian Government

**Australian Radiation Protection
and Nuclear Safety Agency**

Quarterly Report

of the

Chief Executive Officer of ARPANSA

April to June 2016

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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. ARPANSA regulates Commonwealth entities using radiation with the objective of protecting people and the environment from the harmful effect of radiation. ARPANSA undertakes research, provides services, and promotes national uniformity and the implementation of international best practice across all jurisdictions.

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Letter of transmittal

30 August 2016

The Hon Sussan Ley
Minister for Health and Aged Care
Parliament House
Canberra ACT 2600

Dear Minister

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

- the operations during the quarter of the CEO, ARPANSA, the Radiation Health and Safety Advisory Council (the Council), the Nuclear Safety Committee (the NSC) and the Radiation Health Committee (the RHC)
- details of any direction given by the Minister to the CEO under section 16 of the Act
- details of any direction given by the CEO under section 41 of the Act
- details of improvement notices given by inspectors under section 80A
- any breach of licence conditions by a licensee, of which the CEO is aware
- 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
- the facilities licenced 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 April to 30 June 2016.

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 is an agency within the Department of Health portfolio focused on delivering the outcome and programme described in its Portfolio Budget Statement.

Outcome for the Australian community:

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

To deliver this outcome, the agency undertakes a planned set of activities collectively referred to as the **Radiation Protection and Nuclear Safety programme**. This programme is made up of four components:

- protect the public, workers and the environment from radiation exposure
- ensure radiological and nuclear security, and emergency preparedness
- promote the effective use of ionising radiation in medicine, and
- ensure effective and proportionate regulation and enforcement activities.

The report on the operations of the CEO and ARPANSA is based on these components.

Protect the public, workers and the environment from radiation exposure

Australian National Radiation Dose Register (ANRDR)

ARPANSA maintains the Australian National Radiation Dose Register (ANRDR) which collects, stores and reviews radiological dose histories for occupationally exposed workers in Australia. The Dose Register currently has full coverage of all licenced uranium mining and milling operations, and partial coverage of Commonwealth licence holders and the mineral sands mining and processing industry.

The ANRDR currently holds dose history records for more than 35,000 workers. Over the last quarter, a review of how stakeholders join the ANRDR was completed and a service agreement approach is being added as an option. ARPANSA continues to expand the ANRDR with the aim of including all occupationally exposed workers. Progress continues to be made in the aviation sector and an initial stakeholder identification process identifying key industry representative groups has been completed for the medical sector.

Monitor and Mitigate Population Exposures to Electric and Magnetic Fields and Electromagnetic Radiation

In May 2016 there was a meeting of the Electromagnetic Energy Reference Group (EMERG). EMERG meets twice a year to receive community and other stakeholder input, and discuss and advise on issues relating to EME and health (www.arpansa.gov.au/AboutUs/collaboration/emerg.cfm). The most recent meeting focused on dealing with uncertainty in science and communicating EME risks.

ARPANSA is undertaking the first comprehensive measurement study of exposure levels from Wi-Fi in Australian schools. This study will provide an assessment of the typical levels of exposure to RF EME in the Australian school setting to demonstrate that exposure levels are very low and improve community understanding. Measurements in schools began late in June 2016 and are expected to continue over the next few months.

Solar Ultra Violet Radiation and Sun Protection

Currently ARPANSA measures solar ultraviolet radiation (UVR) at 11 sites around Australia and during this quarter, ARPANSA continued trials and assessment of new equipment to modernise the operation of the network. The UV Index data generated by the network is used to raise awareness in the Australian population of the levels of UV exposure and the risks associated with excessive sun exposure.

Standards Development

During this quarter, ARPANSA, working with Standards Australia, led the drafting work to update *AS/NZ 2243.4 Safety in Laboratories: Ionising Radiation*. As the standard had not been updated for over a decade, this was a major revision of the document. The Standards Australia Technical Committee reviewed the draft document and requested a further review by the drafting committee. The drafting committee produced a further draft, which was approved by the Technical Committee and passed to the Standards Australia editorial process. The editors returned the draft to the drafting committee seeking clarification of several points and approval of editorial changes. The draft document is expected to go out for public comment in the third quarter of 2016.

An ARPANSA expert chaired the Standards Australia Committee TE-007 – Human Exposure to Electromagnetic Fields. The Committee met via teleconference to discuss the ballot draft of the joint Australian and New Zealand Standard *AS/NZS 2772.2 "Radiofrequency fields – Part 2: Principles and methods of measurement and computation – 3 kHz to 300 GHz"* and the International Electrotechnical Commission (IEC) draft standard IEC 62232 "*Determination of RF field strength and SAR in the vicinity of radiocommunication base stations for the purpose of evaluating human exposure*". The ballot draft of AS/NZS 2772.2 was subsequently approved and has been published this quarter. TE-007 was one of twelve national committees that provided significant comments to the review of IEC 62232 which aims to broaden the scope to harmonise with existing standards.

ARPANSA has revised Schedule 5 of Radiation Protection Series 3 (RPS3) by extending the scope to include equipment operating up to 6 GHz. The revision is intended to reduce compliance costs for suppliers of low-powered mobile or portable transmitting equipment. The revision does not affect the requirements of this equipment in meeting the human exposure limits.

An ARPANSA expert participated in the Standards Australia Committee revising the Australian and New Zealand Standard *AS/NZS4399 Sun Protective Clothing*. ARPANSA also provided expert advice to Standards Australia on the proposal to change the UV wavelength upper limit to 380 nm from 400 nm in the Australian and New Zealand Standard *AS/NZS1067 Sunglasses and Fashion Spectacles*.

Ensure radiological and nuclear security, and emergency preparedness

Security of Radioactive Material

ARPANSA met with the NSW Environmental Protection Agency (EPA) to provide an update on the Australian Government's progress on the development of a National Nuclear and Radiological Detection Strategy. EPA representatives provided valuable insight into their practical experience with portal monitoring for the scrap metal industry and are likely to be called on to support future development of particular aspects of the strategy.

ARPANSA continued its cooperation with the Attorney General's Department Protective Security Training College to assess assignments for the recent cohort of Radiation Security Advisor students. It is expected that all eight students will meet the requirements to be accredited for the National Radiological Security Advisor Accreditation Scheme before the end of 2016. This will mean there are 13 trained and accredited assessors available to assist State and Territory radiation regulators in the development and assessment of transport security plans and source security plans for industry.

International Monitoring Network

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

ARPANSA continued to operate the Australian CTBT Radionuclide Laboratory which is a certified laboratory for the analysis of air particulate samples. A total of six samples were analysed by the laboratory this quarter. The laboratory also analysed five additional samples issued for training purposes and completed the analysis of the sample issued by the CTBTO as part of the Proficiency Test Exercise for 2016.

Emergency Preparedness

ARPANSA participated in two International Atomic Energy Agency (IAEA) international exercises. A ConvEx-1c exercise in April and a ConvEx-2b exercise in June. The aim of these exercises is to test access and communication using the IAEA communication website. The website is used to exchange urgent information during nuclear and radiological incidents and emergencies, to request and offer assistance during an emergency and to post information on radiological events. These exercises also served to test components of ARPANSA's own emergency preparedness and response plans.

Promote the effective use of ionising radiation in medicine

Calibration Services

As a part of the Agency's regular calibration services for radiotherapy providers and industry users of radiation, ARPANSA calibrated one survey meter and twelve therapy dosimeters in the current quarter. Source output calibrations were also performed on site at two locations.

Small-field dosimetry comparison for radiotherapy users

Accurate small field dosimetry, although internationally recognised as being difficult to perform, is essential for a class of promising treatment approaches. In April 2016 fifteen radiotherapy providers from around Australia and New Zealand sent representatives to ARPANSA to measure the radiation dose in a 5 mm diameter field on ARPANSA's National Medical Linear Accelerator (NMLA). Twenty-five separate measurements were made with ten different detector types. The results show the consistency of small-field dosimetry currently being performed in the region. The cross-comparison will assist these radiotherapy providers to improve their dosimetry methods for small radiation beams and give a national benchmark for all providers intending to provide treatments in this area.

Australian Clinical Dosimetry Service

The Australian Clinical Dosimetry Service (ACDS) is a joint initiative between the Department of Health and ARPANSA to provide 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. During this quarter, the ACDS finalised 34 audits of radiotherapy equipment which met the audit target frequency agreed to with the Department of Health. The ACDS has also developed an audit to include IMRT and IMRT FFF modalities by conducting field trials and developing and validating new analysis software. The new level II audit will be available in July 2016. The ACDS has prepared its quality management system for assessment by NATA against the ISO-17025 standard for certification. Assessment will take place in July 2016.

The ACDS held a third stakeholder engagement meeting with jurisdictional, professional and patient representatives. The ACDS auditing outcomes and clinical recommendations to radiotherapy facilities were presented and reviewed. The planned audit developments and on-going role for the ACDS were also discussed and modifications for some protocols recommended.

Medical Imaging

Data submission to the National Diagnostic Reference Level Service in relation to computed tomography procedures has been strong with 442 surveys received as at the end of June, more than twice the level of submission in the previous two years. Anecdotal evidence suggests that this increased activity is related to the formal inclusion of the diagnostic reference level process in the Department of Health's Diagnostic Imaging Accreditation Scheme. Discussions on proposals to revise reference levels for nuclear medicine procedures were held with relevant professional bodies.

Ensure effective and proportionate regulation and enforcement activities

Planning for the self- assessment of ARPANSA's regulatory performance, as required under the Government's Regulator Performance Framework, was finalised. The self-assessment is planned for late July 2016, and the externally validated report will be presented to the Minister by December 2016.

Regulatory Guides

Work continued on additional guidance covering an expected licence application for the National Radioactive Waste Management Facility. It is expected that this guide will be available for use by all interested parties by September 2016.

Significant Licensing Activities

Approvals were given under Regulation 51 and 54 for:

- ANSTO Health (F0262) to modify the Molybdenum-99 production process to increase production capacity from 4 to 5 runs per week with 12 irradiated target plates per run.
- ANSTO OPAL (F0157) to commission the process for irradiation of 12 target plates for Molybdenum-99 production.
- ANSTO Nuclear Medicine Molybdenum-99 Facility (F0285) to construct an item Important for safety, namely, Process Containment.

Inspections

During the quarter, ARPANSA completed 25 inspections in accordance with its Regulatory Delivery Model. Inspection reports are posted on the ARPANSA website at:

www.arpansa.gov.au/regulation/inspections.

Four licence holders were found to be non-compliant during inspections this quarter. In addition, 54 performance deficiencies were identified. These were provided to the licence holder to support continuous improvement. Inspection outcomes are reviewed and trended to inform the future inspection programme.

Stakeholder Engagement - Licences

ARPANSA met with representatives of:

- Department of Defence to discuss application of the Code of Practice for Security of Radioactive Sources at Defence facilities.
- CSIRO to discuss licensing requirements for a linear accelerator for mining exploration.
- ANSTO to discuss periodic quarterly updates in relation to licences for the OPAL reactor, ANSTO Waste Operations, and ANM construction.

Stakeholder Engagement - Regulatory Documents

Comments received during the public consultation process and incorporated in a new draft of the Planned Exposure Situations Code, plus comments received from Radiation Health Committee (RHC) members on the resolution process of those comments, were finalised and tabled at the June RHC meeting. For the Medical Exposure Situations Code, comments were sought from other regulators and are being incorporated into a revised draft.

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 approve import permissions.

During this quarter, ARPANSA authorised officers issued 124 non-medical radioisotope permits including: 71 urgent permits, 45 standard permits and 8 twelve-month permits.

During this quarter, ARPANSA authorised officers issued 323 permits for medical radioisotopes including zero urgent permits, five twelve-month permits and 318 single shipment permits.

Transport of Radioactive Material

No approvals were issued for design and validation of packages or shipments of radioactive material. Three (3) transport security plans were endorsed.

International engagement

ARPANSA's international engagement provides the Agency with the means of influencing the international radiation protection and nuclear security and safety framework, and strengthens our 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 the current quarter.

Expert meeting on atmospheric transport modelling in Vienna, Austria, 5-7 April 2016

ARPANSA attended a Comprehensive Test Ban Treaty Organisation (CTBTO) expert meeting on atmospheric transport modelling (ATM) for on-site inspections (OSI). This group will create a report to recommend how ATM and forecasting can be used for OSI. The travel was partly CTBTO funded.

ARGOS user group meeting in Tallinn, Estonia, 12-13 April 2016

ARPANSA attended the meeting of the Accident Reporting Guidance and Operating System (ARGOS) user group, which was attended by eight consortium member countries, as well as PDC-ARGOS (the software vendor). Denmark proposed to move to disband the consortium and move to having licence agreements directly with PDC-ARGOS, while still maintaining an active user community through establishing a user forum. This proposal will be decided upon at the next consortium meeting.

Visit to Norwegian Radiation Protection Authority in Oslo, Norway, 14-15 April 2016

ARPANSA visited the Norwegian Radiation Protection Authority (NRPA) to further advance collaborative projects in the area of nuclear powered vessel port visits and radon mapping.

Commission on Safety Standards (CSS) in Vienna, Austria, 6-8 April 2016

The CEO of ARPANSA (as the Australian Representative to the IAEA Commission on Safety Standards, CSS) and a staff member of ARPANSA (in their capacity as Chair of the IAEA Waste Safety Standards Committee, WASSC) attended the 39th session of CSS. Twenty five IAEA Members States were invited to the CSS by the IAEA Director General for this 6th term of the CSS. The meeting discussed the long-term priorities of the safety standards, integration between safety and security, and approved the only outstanding general safety requirement (GSR) publication: *Leadership and Management for Safety*. The safety standards form an important element of trusted international standards and ARPANSA is working with state and territory regulators to implement the safety standards nationwide in Australia.

International Conference on Effective Nuclear Regulatory Systems in Vienna, Austria, 11-15 April 2016

ARPANSA attended this IAEA-sponsored conference, the fourth in a series beginning in 2006, aimed to build upon recent improvements in effective regulation. Topics that were of most benefit to ARPANSA included the communication of lessons learnt, strengthening regulatory competence, and promoting international cooperation. This conference was particularly relevant in light of Australia's Integrated Regulatory Review Service (IRRS) mission planned for 2018. A poster and paper entitled "Innovations in the Delivery of Regulatory Services in Australia" were provided to the conference by ARPANSA.

The 2016 meeting of the Australian and New Zealand Society of Nuclear Medicine in Rotorua, New Zealand, 22-25 of April 2016

ARPANSA attended the meeting where a report was issued from ARPANSA to the physics special interest group and a poster relating to the progress in diagnostic reference levels was presented.

3rd International Workshop on Occupational Radiation Protection in the Uranium Mining and Processing Industry, Cape Town, South Africa, 5-7 May, 2016

ARPANSA participated in the 3rd International Workshop on Occupational Radiation Protection in the Uranium Mining and Processing Industry, jointly hosted by the IAEA and the National Nuclear Regulator of South Africa. The purpose of this workshop was to further develop the draft safety report on Occupational Radiation Protection in the Uranium Mining and Processing Industry. The draft was commenced at the 2nd Workshop hosted jointly by ARPANSA and the IAEA in Adelaide in October 2015. ARPANSA and other Australian stakeholders are playing a leading role in the development of this safety report as Australia is recognised as an international leader in best practice in uranium mining practices. This travel was partly funded by the IAEA.

14th International Radiation Protection Association congress in Cape Town, South Africa, 9-13 May 2016

ARPANSA attended the meeting which covered a vast array of radiation protection topics and was an opportunity for ARPANSA to present work being carried out in Diagnostic Reference Levels space, in particular nuclear medicine. The medical area of the meeting revisited the Bonn Call for Action and outlined a plan to tackle the increasing use of radiation in medicine and what this means for patients, staff and members of the public.

International Commission on Non-Ionizing Radiation Protection (ICNIRP) South Africa, 9-11 May 2016

ARPANSA attended the ICNIRP 8th International Non-Ionising Radiation (NIR) Workshop in Cape Town. High on the agenda for the Workshop was an update of the ICNIRP High Frequency Guidelines that are currently under revision and the related development of the World Health Organisation (WHO) Environmental Health Criteria on RF Fields. Other topics include laser radiation, visible and infrared radiation, the UV Index, induced electric fields, epidemiological and experimental studies, exposure assessment and dosimetry, mechanisms of interaction, NIR applications in medicine, and safety issues for mobile telecommunication.

Biannual meeting of the Main Commission of the International Commission on Radiological Protection (ICRP) in Cape Town, South Africa, 14-17 May 2016

The CEO of ARPANSA attended the meeting. The ICRP publications are sources of international best practice in radiation protection and are reflected in the IAEA framework for radiation protection and safety, e.g. in the Basic Safety Standards. The meeting approved a report on computational models for radiation protection of workers for publication, and two reports (on dosimetry for protection of the environment; and on occupational intake of radioactivity) for public consultation. The ICRP will this year invite nominations for membership for 1 July 2017 to 30 June 2021.

IAEA 'International Conference on Advancing the Global Implementation of Decommissioning and Environmental Remediation Programmes' in Madrid, Spain, 23-25 May 2016

ARPANSA attended the conference, an outcome of which will be an IAEA 'plan of action' for identified needs and deficiencies in decommissioning and remediation (including post-accident recovery) – both in the practice (technology) and in relevant safety standards – over the next 10 years. The conference outcomes and resulting actions will determine international best practice in the areas of decommissioning (important with regard to the future decommissioning of the HIFAR research reactor at ANSTO in Sydney), and for environmental remediation which is important for Australia in crafting a new 'Existing Exposure Code' and relevant guidance for remediation of legacy sites. Travel was fully funded by the IAEA.

WHO 4th Meeting of the Steering Committee for NIR Basic Safety Requirements (BSR); 5th International Committee Meeting of the WHO INTERSUN Program; and 21st International Advisory Committee (IAC) Meeting for WHO International EMF Project, Brussels, Belgium, 30 May -3 June 2016

ARPANSA is an international WHO Collaborating Centre (WHOCC) on Radiation Protection and a member of the WHO Electromagnetic Fields (EMF) and WHO Intersun (UV) Projects. The Annual

International Advisory Committee meeting of the WHO aims to review and identify gaps in the scientific research literature, encourage harmonised standards and to promote a focused agenda for future research. In the absence of broadly accepted set of standards and policies on EMF, UV radiation and precaution, accurate information about activities and policies in other countries is essential. The WHO work on the development of the Non-Ionising Radiation Basic Safety Requirements and Fundamental Safety Principles will strongly influence the development of similar guidance in Australia.

8th Meeting of the Representatives of Competent Authorities held in Vienna, Austria, 6-10 June 2016

ARPANSA staff (including the CEO) attended the meeting which presented a series of national presentations from member states (including Australia) party to the early notification and assistance conventions on selected topics of radiological and nuclear emergency preparedness and response. The meeting produced a set of agreed outcomes and action items to be progressed by member states over the next two years. The meeting was chaired by the CEO of ARPANSA. This travel was partly funded by the IAEA.

32nd Meeting of the International Atomic Energy Agency (IAEA)'s Transport Safety Standards Committee (TRANSSC) held in Vienna, Austria, 13-15 June 2016

ARPANSA attended the TRANSSC meeting focussed on the revised IAEA Regulations for the Safe Transport of Radioactive Material and the revision of the Advisory Material for the IAEA Regulations. The meeting decided to send some of the revised regulations to member states for comments. One of the regulations (SSR-6 20xx Edition, Format and Content of the Package Design Safety Report (PDSR) for the Transport of Radioactive Material, Specific Safety Guide) will be very important since it is currently adopted as ARPANSA Code of Practice for the Safe Transport of Radioactive Material.

Visit to the Nuclear Technology Products (NTP) Fission Molybdenum-99 Production Facility and National Nuclear Regulator of South Africa Johannesburg, 16-17 June 2016

ARPANSA visited the NTP Fission Molybdenum-99 Production Facility and National Nuclear Regulator of South Africa, as part of ARPANSA's ongoing consideration of proven design and engineering practice, and international best practice in the regulatory process.

Waste Safety Standards Committee (WASSC) / Radiation Safety Standards Committee (RASSC), held at the IAEA in Vienna, June 2016

ARPANSA staff attended as Australia's representative and chair of the WASSC41 and Joint RASSC/WASSC meetings. A draft safety guide on *Management of Radioactive Residues from Uranium Production and other NORM Activities* (DS459) was approved for submission to Member States for comment. This standard is directly relevant to Australia's uranium mining industry and comments will be widely canvassed from all relevant government and industry stakeholders. Useful recommendations for uniform and commensurate regulations for Naturally Occurring Radioactive Material (NORM) activities were provided in the session 'Challenges in Regulating NORM Industries'.

The draft safety guide on *Remediation Process for Areas Affected by Past Accidents and Activities* is now the only IAEA safety standard specifically dealing with remediation. WASSC discussed its

progress and proposed to complete the draft (with input from ARPANSA) for submission to WASSC in November for approval to go for Member State comments. This standard will find application in Australia in remediation of legacy uranium mining sites. Travel was funded by ARPANSA.

United Nations Scientific Committee on the Effects of Atomic Radiation (UNSCEAR) held in Vienna, Austria, 27 June – 01 July 2016

The CEO of ARPANSA, accompanied by an alternate (to the representative) and an advisor attended the 63rd session of UNSCEAR. Four draft scientific annexes and one White Paper were reviewed, discussed in detail and approved for publication by the Committee. Progress reports were received on a number of other documents currently under development and activities being undertaken by the secretariat. The Committee also marked the 60th anniversary of its first session, which was held in 1956, with a reception hosted by the Mayor and Governor of Vienna, Michael Häupl, on 27 June 2016. This was attended by high-level dignitaries, diplomats, delegates, scientists and messages were received from United Nations Secretary-General Ban Ki-moon, the United Nations, WHO, IAEA, CTBTO, UNEP and UNSCEAR.

At the end of the 63rd session the Committee elected officials to the Executive Bureau for the 64th and 65th sessions of the Committee. This included a representative for Australia from ARPANSA who will serve as the Rapporteur to the Committee from December 2016. Looking forward, UNSCEAR will continue work on the surveys on medical and occupational exposures and will develop its survey on public exposures to radiation. ARPANSA has been a primary contributor to the medical exposure survey and will provide data and support to the occupational and public surveys. This travel was funded by ARPANSA and UNSCEAR.

Emergency Preparedness and Response Standards Committee (EPRaSC) in Vienna, Austria, 27 June – 01 July 2016

ARPANSA attended the EPRaSC during which the progress of a number of safety standards under development was considered. Documents relating to the termination of a radiological or nuclear emergency, and communication during such an emergency are of particular interest. ARPANSA experts are engaged in working groups related to each of these Safety Standards, and it is intended, in line with Australian Government policy, to adopt the published documents as Trusted International Standards (TIS). The third meeting of EPRaSC will be held from Tuesday 29th November to Friday 2nd December, 2016 in Vienna. This travel was funded by ARPANSA.

Details of directions given by the Minister

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

Details of directions given by the CEO

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

Details of improvement notices given by inspectors

No improvement notices were given by inspectors under section 80A of the Act during the quarter.

Details of any breach of licence conditions by a licensee

The CEO is not aware of any breaches with significant safety implications during the quarter.

Breaches of licence conditions with minor safety or security implications were identified:

- A licence holder failed to inform ARPANSA within the appropriate timeline of a change to its organisational structure.
- A licence holder exceeded its activity holding limit.
- A licence holder failed to have an accredited assessor endorse its security plan. This occurred at two separate facilities operated by the licence holder resulting in **two** non-compliances.
- A licence holder did not conduct a risk assessment for controlled apparatus.
- A licence holder failed to undertake testing of an X-ray unit at the correct frequency.

Facilities licenced under Part 5 of the ARPANS Act

Facility licence F0303 was issued to the Department of Immigration and Border Protection to operate a mobile container inspection system.

The operations of the Council and Committees

Radiation Health and Safety Advisory Council

The Radiation Health and Safety Advisory Council (RHSAC) met in Sydney on 23-24 June 2016. Meeting minutes are available when confirmed at www.arpansa.gov.au/AboutUs/Committees.

The Council discussed current issues in radiation protection including:

- establishing reference levels for emergency exposure situations, including the need for reference levels and the social costs and benefits of evacuation
- the work being undertaken by ARPANSA in preparation for the Integrated Regulatory Review Service (IRRS) mission to be held in Australia in 2018
- ARPANSA's role in the National Radioactive Waste Management Facility project
- a short position paper on the use of the Linear-No-Threshold approach in regulation

Members also discussed the progress made by each of the five Council working groups. A number of changes to the groups were proposed to ensure continued alignment with ARPANSA's requirements and strategies.

Reports to the CEO from the Radiation Health and Safety Advisory Council 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 June 2016 in Sydney.

National Radioactive Waste Management Facility

Representatives from the Department of Industry, Innovation and Science (DIIS) provided an overview of the National Radioactive Waste Management Facility project and the establishment of a Waste Acceptance Criteria (WAC) Working Group. Over the next 12 months DIIS will develop the WAC while continuing their consultation with the community and development of a detailed business case for the Government.

Separately, the Committee was also briefed on the outcome of a meeting with the Traditional owners of the land surrounding the proposed NRWMF site. The nominated site is freehold, however there is native title on the bordering properties and the Traditional owners have expressed their opposition to the location of the NRWMF at the proposed site for a number of reasons. The Committee noted the concerns, but concluded that they were largely for the DIIS to consider.

International Regulatory Review Service (IRRS) mission

Confirmation of participation in the 2018 IRRS mission has been received from Tasmania and the Northern Territory. Consultation with other jurisdictions is ongoing, with South Australia expressing strong interest. An IRRS plan has been completed with suitable dates for self-assessment training to be advised.

Development of Codes and Standards

The Committee was advised that five RHC projects on the development of codes are underway; Amendment to Schedule 5 of RPS 3 has been concluded and published on the ARPANSA Website, and NDRP Amendment 7 on User Disposal is currently before the COAG Health Council for out-of-session approval.

For the draft Medical Exposure Code, the 180 comments received were still being resolved, and the Preliminary Assessment for the consideration of the Office of Best Practice Regulation (OBPR) was still under preparation.

A new version of Planned Exposure Code was also tabled, along with comments resolution table addressing 193 comments from states and territories. Concerns relating to a graded approach and the role of the government have been resolved.

An overview of progress on the Existing Exposure Code and the Emergency Exposure Code was provided to the Committee and feedback requested.

A verbal update of progress on the Intense Pulsed Light (IPL) guide was provided to Members, where the comments resolution table is currently at 447 pages and a fulsome analysis is still to be completed. The issues raised are numerous and complex and the resolution process is therefore

lengthy, with many of the issues raised being wider than the radiation protection issues typically of concern to the RHC.

Australian Radiation Incident Register

An overview of 2014 reports to the Australian Radiation Incident Register (ARIR) was provided. There are variations in reporting levels between jurisdictions but generally improved reporting has seen the numbers of incident reports increase by 200% in the past three years. This is a reflection of improved reporting, not an increase in the number of incidents. The improved reporting allows for more effective analysis of incident trends and offers a more valuable source of information that can be used to promote best practices.

The full meeting minutes are available at: <http://www.arpansa.gov.au/AboutUs/Committees/rhc.cfm>

The next RHC meeting will be held in Brisbane on 16 November 2016.

Nuclear Safety Committee

The Nuclear Safety Committee (NSC) met on 17 June 2016 in Sydney.

ARPANSA Corporate Brand Identity

Members provided positive feedback on a project to optimise the ARPANSA brand identity and upgrade the ARPANSA website to improve the delivery of quality, independent, and trusted scientific advice on radiological health and safety to the community. The Committee was requested to continue to provide feedback as the project develops.

South Australian Royal Commission Final Report

The Committee was briefed on the Commission's final report (6 May 2016) and actions announced by the SA Premier, The Hon Jay Weatherill, on 9 May, 2016. No significant issues were raised.

National Radioactive Waste Management Facility Communications

The Committee was updated on the ARPANSA NRWMF project and how ARPANSA seeks to understand the varying stakeholder views on the facility. A paper on the ways that industries have tried to obtain and maintain a 'social licence' to operate was discussed. A social licence is different from regulatory approval; failure to obtain a social licence (essentially the agreement or acceptance of directly concerned stakeholders) makes it difficult to progress even with regulatory approval.

A Communications Protocol with the Department of Industry, Innovation and Science (DIIS), the Issues paper and the Stakeholder Engagement Plan were noted. The development of a licence applicant's guide was also discussed.

Quality Management in Regulatory Services

The Committee was briefed on and endorsed a project to conduct a review of the Regulatory Services Quality Management System against the requirements of ISO/IEC 17020:2012 *Conformity assessment – Requirements for the operation of various types of bodies performing inspection*. This is an internationally recognized standard for inspection bodies that focuses on the independence, impartiality and integrity of inspection body; and technical competence of people and processes.

Regulator Performance Framework Self-Assessment

Members provided feedback on the Regulatory Services Branch annual Focused Self-Assessment (FSA), scheduled for July 2016, noting that whilst it is ARPANSA driven, the use of external resources was considered appropriate as it is a first of a kind project. The Committee requested the results of the assessment be provided for review at the November 2016 meeting.

Update on Controlled Facilities

Members were briefed on developments associated with controlled facilities, including the ANSTO OPAL reactor and an application to increase the production capacity of the medical radioisotope molybdenum-99.

The Committee was also informed that a project to document the current licensing bases for all ARPANSA licences had been completed on schedule.

The minutes of the meeting are available at:

<http://www.arpansa.gov.au/AboutUs/Committees/nscmt.cfm>

The next NSC meeting will be held on 4 November 2016.

Reports to the CEO from the Nuclear Safety Committee under paragraph 26(1)(d) of the Act

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