



Radiation Health and Safety Advisory Council

Meeting Summary

Date:	16 June 2022
Time:	09:00 AM - 04:00 PM
Location:	ARPANSA, 619, Lower Plenty Road, Yallambie, VIC, 3085
Chair:	Dr Roger Allison
Present:	Mr Keith Baldry, Mr John Piispanen, Dr Peter Karamoskos, Dr Jane Canestra, Prof Mel Taylor(virtually), Prof Pam Sykes (virtually), Dr Trevor Wheatley, Ms Melissa Holzberger, Mr Jim Hondros (virtually), Dr Rick Tinker (representing Dr Gillian Hirth in her role as CEO of ARPANSA).
Absent:	Prof Adele Green, Dr Hugh Heggie, Dr Gillian Hirth.
Note Taker:	Ms Helen Alexander.
Observers:	Observers: Dr Charles Pain representing Dr Hugh Heggie as the Nominee of NT Chief Minister (virtually), Tone Doyle, Nathan Wahl, Jim Scott (virtually), Dr Ivan Williams, Ben Paritsky, Dr Chris Brzozek, Kelly Daniell, Julie Murray, Dr Peter Thomas, Mr James Wheaton.

Meeting open and housekeeping

The Chair opened the formal meeting with an acknowledgement of country. No conflicts of interest were reported and the minutes from the 3 and 4 March 2022 meeting were noted. No correspondence was noted. The Council agreed to the drafting of a letter noting the contributions former CEO of ARPANSA, Dr Carl-Magnus Larsson made during his twelve-year tenure.

ARPANSA CEO Introduction

The thoughts of ARPANSA's new CEO were relayed to the Council, underscoring the value of its role was in terms of frank and fearless advice and environmental scanning for emerging issues that ARPANSA should consider. Council was also given a summary of the work that ARPANSA has been immediately underway since Dr Hirth was engaged as CEO in March 2022, with the necessary focus on AUKUS-related activities, ensuring that radiation safety and the common themes of capability and capacity in Australia's radiation workforce are at the forefront of these discussions.

Update on the activities of ARPANSA, Radiation Health Committee (RHC) and Nuclear Safety Committee (NSC)

The Council received an update on AUKUS related activity, noting that ARPANSA has ongoing input to discussions in Government (with one staff member embedded in the Nuclear-Powered Submarine Taskforce), including on the topics of regulation, health, emergency preparedness and waste. The Council discussed workforce implications for a relatively small and finite pool of expertise on radiation protection within Australia. The Council heard that this is already having a flow on effect in industry with the shortages already being notable for radiation safety officers in the mining industry.

The Council received an update on the safety issues experienced at ANSTO since 2017, including noting that there is currently no negative impact on nuclear medicine supply. It noted that any aging facility will be expected to require increased regulatory intervention over time, and the implications of this for ARPANSA's regulatory workforce planning.

The Council heard that in May 2022 the NSC successfully held its first face to face meeting since the Covid pandemic and that the day included a presentation from the Australian Radioactive Waste Agency (ARWA). ARPANSA provided an update on its work relating to ARWA and the National Radioactive Waste Management Facility (NRWMF). It was noted that there are plans for ARPANSA and ARWA to meet before the end of the year, including to discuss ARWA's forthcoming public consultation. The Council heard that ARWA provide updates on their progress during regular technical meetings with ARPANSA representatives.

The Council heard that the University of Adelaide, University of New South Wales (NSW) and Australian National University (ANU) are all preparing nuclear-focused programs and courses, but that these will take some time to put in place and the interest from the media and the public is not yet clear, with the media focus remaining on the broader AUKUS program. Council members discussed possible ways that the profile and popularity of training and careers in the nuclear sector, particularly for safety, could be improved and that Australia will likely need to look at attracting international students from countries with nuclear programs or the possibility of including nuclear modules in courses in other disciplines to avoid the wait for students enrolling in a newly developed course. The Council discussed this in detail encompassing points around attracting high school students to the sector while Australia's plans are still in the inception phase, the facilitating of university students to attend nuclear-related conferences and present their work, and the possibility of specialised visa programs to bring in overseas talent.

The Council received an update of the topics discussed at the recent RHC meeting. These included considerations around the future of the Radiation Protection Series (RPS) framework, and efforts to prioritise the revision of existing codes.

The Council was presented with ARPANSA's public enquiries dashboard and heard that the enquiries received in the past quarter from members of the public are in line with those received previously, with electrical supply infrastructure and communications infrastructure being the most common areas covered. The media enquiries dashboard was also presented, noting these have been wide-ranging and primarily linked to ARPANSA's media releases, which included topics on the ineffectiveness of aerosol sunscreens, the lack of regulation of cosmetic lasers in Australia, the new CEO of ARPANSA and the proposal to send radiation monitoring equipment to Ukraine.

The Council also heard that an International Atomic Energy Agency (IAEA) Integrated Regulatory Review Service (IRRS) review mission to Australia is scheduled to take place in October 2023, and that preparations are now underway. The scope of the review will be the same as that of the original mission in 2018, and the 2023 IRRS Mission will review actions taken to address the findings of the 2018 mission. Dr Carl-Magnus Larsson, who was CEO of ARPANSA in 2018, is working for ARPANSA to review the progress that Australia has made against the 2018 findings. A preparatory meeting is planned for April 2023 with a pre-review submission to be made to the IAEA in August 2023. The preparations are a combined effort between the Commonwealth, states and territories.

Nuclear-propelled submarines

The Council's working group provided an update on their progress and explained their aims for a draft letter that is being prepared to advise the CEO of ARPANSA. It was noted that the working group aims to finalise the letter at the August 2022 Council meeting.

Member representing the interests of the general public

There were no enquiries or correspondence from the general public to note. The member representing the interests of the general public noted the South Australian Government's commitment to veto for the Barngala people while also noting that this is a federal Government facility. The Council also discussed the new federal Government's commitment to having an indigenous voice in Parliament.

National Strategy for Radiation Protection update

Following the consultation which closed at the end of 2021, an analysis of submissions has been completed and key areas have been identified. The non-ionising radiation industry have made clear their desire to be more involved and want to see their role within the framework. The Council were reminded that the National Strategy was coincidentally released at the same time as the AUKUS announcement was made. There is still the opportunity to submit comment which could therefore take AUKUS into consideration before the final publication which is scheduled for the end of 2022.

The Council discussed that there is an issue around resourcing the efforts to deliver the strategy, and that an inter-governmental agreement (IGA) may be necessary for this to advance significantly. It was noted that so far there has been no discussion on implementation of the strategy's deliverables.

International Commission for Radiological Protection (ICRP) working group update

The working group provided a brief update on their discussions in their first meeting, and it was noted that a representative from ARPANSA will be attending the ICRP's Vancouver meeting in November 2022.

The working group noted the ICRP's lengthy timeframe for its review of the system for radiological protection, and that it felt the scope of their input to this review should be in-depth and principles-based, including assessing whether the current ICRP 103 is fit for purpose. It explained that, in general, the science falls into the United Nation Scientific Committee on the Effects of Atomic Radiation (UNSCEAR) remit, whereas policy and philosophical considerations remain with ICRP.

It was noted that in the milieu of non-ionising radiation, the International Commission for Non-Ionising Radiation Protection (ICNIRP) found that their current system was not fit for purpose and have given themselves a 2-year period to resolve this.

The working group questioned how to involve the public in the ICRP's review process and sought advice from the Council and the CEO of ARPANSA on the focus they should take for their submission. The Council advised the working group that outlining examples of what is not currently working in the system would enable the reflection on what could be considered for change. The discussion also encompassed how the ICRP's audience has changed since its inception in 1924 and the fact that although it is essentially a private body (and registered charity) the IAEA largely follows the ICRP system, so its influence is far reaching. It was agreed that the effective audience of ICRP is everyone involved in radiation protection worldwide and the working group are looking for the best way to make their opinions heard by ICRP. The question of the ICRP's funding sources and the potential for influence relating to this was also discussed.

Action: Dr Hirth to be invited to the ICRP working group's next meeting. Additional Council members who wish to join the working group are invited to do so.

Fukushima update and United Nations Scientific Committee on the Effects of Atomic Radiation (UNSCEAR) presentation

Council received a general update on Japan's plans for the release of wastewater (following the clean-up of the Fukushima-Daiichi Nuclear Power Plant) into the sea in 2023. It was noted that an ARPANSA staff member is among [international experts supporting an IAEA Task Force](#), in their individual professional capacity, to help ensure an IAEA review of Japan's actions is comprehensive, and benefits from the best international expertise and includes a diverse range of technical viewpoints.

The Council heard that this release is required to allow the physical space to commence decommissioning the plant. The Council discussed UNSCEAR's recently published report and findings which are the same as in its 2013 report, noting that no adverse health effects among Fukushima residents have been documented that could be directly attributed to radiation exposure from the accident. Council discussed the permitted levels of tritium in drinking water in different countries and the learnings, for both the operator and the regulator, being taken from this incident in terms of the impact of a nuclear power plant incident on the public and the environment. The topic of long-term environmental monitoring was also discussed.

Radiation protection in the Asia-Pacific

The Council discussed a 2021 article from the *Journal of Medical Imaging and Radiation Oncology* entitled 'The status of radiation protection in medicine in the Asia-Pacific region' and heard from ARPANSA about the work it has been doing in relation to the Marshall Islands and broader Pacific. Issues of non-uniformity between countries were discussed, noting the full range of none to excellent facilities and capability in place across the region. The Council discussed the predicted rise in tumours suffered by humans linked to lifestyle factors, and the issues these pose.

Council members discussed the importance of education and training and appropriate equipment, and challenges addressing issues raised where there is a lack of regulatory structures or disparate legal frameworks. The Council discussed what Australia can do to help build capability and capacity in the region. It was agreed that Council would continue to consider the issues discussed, noting a renewed Australian Government interest in this area.

Laser update

The Council discussed the fast-developing issue of increasingly powerful lasers being available through online marketplaces at reducing cost, which are not covered by regulations. The members heard details of the capability new laser products have for damage despite not being recognised as weapons. The Council heard that a possible next step is the Australian adoption of the European Consumer Laser Safety Standard EN 50689, but also other options for liaising with other government bodies such as the Australian Border Force (ABF) and the Australian Federal Police (AFP) as well as ARPANSA's existing relationships with the Australian Competition Consumer Commission (ACCC).

Council also heard an update on ARPANSA's work, in addition to cosmetic laser safety, on liaising with online marketplaces and the Freight and Trade Alliance around laser pointers safety.

Action: The Council members agreed that they need to write a letter to the CEO of ARPANSA with an update on recent changes to availability of higher-powered consumer lasers.

Medical Imaging Diagnostic Reference Levels (DRLs)

The Council discussed the issue of DRL reference ranges on medical equipment and manufacturers obligations to include dose-minimisation technology as a standard feature on medical scanners. This item was raised for Council to discuss and decide if the ARPANSA CEO should be asked to raise the issue with RHC for their consideration.

The Council discussed various questions raised, the lack of DRLs in New Zealand (which anecdotally may result in doses to patients that are higher than those received in Australia), the lack of a compliance code placing obligations on manufacturers to limit dose where possible, and the importance of an independent measurement of a manufacturers' DRLs.

The Council agreed that this is an issue which requires more research and engagement with manufacturers to understand the capabilities of this optional feature on their equipment. It also discussed whether this issue is relevant to other fields, and it was suggested that a Royal Australian and New Zealand College of Radiologists (RANZCR) paper on the adoption of digital tools be considered by the Council members.

Action: This agenda item is to be included in the agenda again at the Council's next meeting.

Other Business

The Council reviewed the outcomes of the meeting and toured ARPANSA's Personal Radiation Monitoring Service (PRMS) and linear accelerators. The next meeting is set for August 2022.