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# Radiation Health and Safety Advisory Council

## Meeting Minutes

<b>Date</b>	30 March 2023
<b>Time</b>	11:00 AM to 5:00 PM AEDT
<b>Location</b>	ARPANSA Yallambie, Victoria
<b>Present</b>	Dr Roger Allison, Dr Gillian Hirth, Mr John Piispanen, Prof Adele Green, Prof Mel Taylor, Prof Pam Sykes, Ms Melissa Holzberger, Dr Jane Canestra, Mr Jim Hondros, Dr Peter Karamoskos, Dr Christine Connors
<b>Apologies</b>	Dr Trevor Wheatley, Mr Keith Baldry
<b>Secretariat</b>	James Wheaton, Adrian Hawley
<b>Invitees</b>	Nathan Wahl, Peter Johnston, Rick Tinker, Ivan Williams, Ryan Hemsley, Marcus Grzechnik, Chennell Allan, Scott Muston, Sarah Loughran, Jenni Stiffe, Chris Brzozek (all from ARPANSA), Katie Volter (Commonwealth Department of Health).

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### 1 - Meeting open and housekeeping

The Chair opened the meeting by respectfully acknowledging the traditional owners and custodians of the land of which the meeting was held, and paying respects to their Elders, past, present, and emerging. The Council welcomed Dr Christine Connors as the incoming member nominated by the Chief Minister of the Northern Territory and welcomed observer Peter Johnston, Principal Advisor to the CEO and ARPANSA invitee after his return from work with the International Atomic Energy Agency (IAEA). No conflicts of interest were reported. Actions from the previous meeting were reviewed, including one action that was carried over. The Council noted one item of correspondence to the Chair on the topic of Smart Meters and agreed to refer the item to ARPANSA for consideration of any response.

**Task:** Secretariat to forward incoming correspondence to ARPANSA for consideration of a response.

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

The ARPANSA CEO gave an update on the agency's activities since November 2022. The NSC has considered regulatory guidance for radioactive waste management, and separately noted that ARPANSA's nuclear regulatory guidance has historically focused on the Australian Nuclear Science and Technology Organisation

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(ANSTO) as the only operator of a nuclear reactor in Australia. The NSC noted that such guidance may now need to be broader to account for a future where Australia operates nuclear-powered submarines, and it reviewed its 2015 advice to the CEO and a 2022 letter from the Council on the *Principles and attributes of an effective independent regulator for nuclear-powered submarines*.

The CEO noted the RHC was due to meet next week in April 2023, and would discuss the January 2023 lost source incident in Western Australia (WA) and the subsequent investigation by the state radiation regulator. The CEO also noted the RHC continues to review a range of standards, guidance and regulatory advice including a dosimetry service provider standard; advice on occupational exposure dose limits; advice on occupational compensatory arrangements; and Medical Exposure Code (MEC) guidance. The RHC also continues to revise various Radiation Protection Series (RPS) codes and consider new issues such as mobile computed tomography (CT) system regulation.

The CEO advised that she met the Australian Radioactive Waste Management Agency (ARWA) CEO in February 2023 as part of the ARPANSA-ARWA liaison forum. Noting ARPANSA has no regulatory role at this time, ARWA advised that the proposed National Radioactive Waste Management Facility (NRWWMF) is still subject to two ongoing legal challenges. ARWA continues to work on preliminary site characterisation required for any future regulatory application and continues its community engagement. The Council discussed at a high level ARWA's indigenous engagement activities and cultural heritage management plan.

The CEO updated the Council on the IAEA Integrated Regulatory Review Service (IRRS) Follow Up Mission to Australia schedule for October 2023. Initial planning meetings had occurred in Vienna in March 2023. ARPANSA's focus over coming months will be to coordinate preparation of Advanced Reference Material (ARM) that will go to the IRRS team prior to the Mission. It was noted that some topics identified for improvement in the 2018 IRRS mission remain highly relevant in 2023, especially national uniformity, and workforce.

The Council noted that new Commonwealth priorities, such as to develop an Australian Centre for Disease Control and a national Environment Protection Authority, are relevant to issues raised in the 2018 IRRS findings. Their progress may be useful to improve national uniformity in radiation regulation. The Council also noted other successful precedents in national uniformity efforts such as in rail safety, maritime safety, food standards, and heavy vehicle model legislation. The Council agreed that workforce issues were an ongoing and increasing concern, which lack of national uniformity exacerbates as it inhibits the sharing of staff or resources between jurisdictions. ARPANSA noted that workforce issues are also being discussed across government in the context of future requirements to support the implementation of nuclear-powered submarines.

ARPANSA presented on the number and nature of public and media enquiries received. 2022 had a slightly lower number of public enquiries than preceding years, however the first quarter of 2023 had seen a notable increase in enquiries. ARPANSA had sought to start identifying public enquiries on AUKUS, but the agency had not received any to date. Interest in 5G safety was the leading topic which included advice to three local governments, and more recently eye safety for the upcoming solar eclipse was an area of interest along with the 2023 WA lost source incident which also drew significant media interest. Media enquiries on the lost source incident in one week equalled the normal annual total for the Agency, including significant national and international media. ARPANSA had worked closely with other agencies to deliver a coordinated media response and built positive relationships with media organisations. Other topics of media interest were UV radiation at the time the new Sun Smart app launch; the upcoming solar eclipse; and three media enquiries related to AUKUS and nuclear-powered submarines (NPS).

ARPANSA presented an update on the Australian Government's 14 March 2023 announcement of the optimal pathway for Australia to acquire nuclear-powered submarines,, noting that some topics relevant for ARPANSA were yet to be decided or publicly announced. ARPANSA had staff embedded in the AUKUS taskforce and has worked closely providing input into regulatory framework considerations, legislative changes needed, and planning for radiological surveys and resourcing. This interdepartmental work by ARPANSA was noted to have been a positive opportunity for ARPANSA to build working relationships across Government. The Council discussed the three main phases of the optimal pathway announced by Government in March 2023. It also discussed the number of NPS visits in the past 12 months, noting that there is the expectation that future visits of foreign NPWs would be more frequent and for longer duration.

ARPANSA noted that workforce depth is a key challenge nationally including for ARPANSA, noting that although future decisions were yet to be made it was highly likely that the workload for ARPANSA would increase. There will be a significant national uplift in training and development nationally including university courses, graduate programs, and ongoing development of training programs. The agency was pleased to be able to resume a graduate program after a 14-year hiatus. The Council noted that prior to AUKUS the lack of workforce depth in radiation protection practitioners was already a key concern for industry and jurisdictional regulators, with international recruitment proving very challenging. One member observed that the quantity and quality of workers had been an issue with anecdotes of some types of roles already being filled with less qualified or experienced staff than would be preferred.

The Council discussed the impact of increased security around ARPANSA's activities, and the management of conflicts of interest for staff moving between a regulator and a regulated entity, as well as the practice internationally of regulatory staff being embedded with operators as part of regulator training.

### 3 - Emergency Preparedness and Response (Including the WA lost-source incident)

ARPANSA presented its experience with the lost source incident which occurred in WA in January 2023. ARPANSA's CEO and the Council acknowledged the work of the ARPANSA technical team, underpinned by strong and skilled staff, who were deployed to assist in the successful recovery of the lost source as part of both the incident control room and search teams.

The Council discussed the incident timeline from when the damaged gauge was packaged for transport to when the source was recovered, including the initial contact to ARPANSA for assistance via Commonwealth emergency arrangements. The search included work in both remote and populated areas.

ARPANSA completed an after-action review of our WA incident response, including its internal work and external interactions. Areas of focus included the appropriateness of current processes, suitability of equipment, training, drills and exercises, and the resourcing required for the ongoing incident response capability. The Council discussed that there will be an expectation in Australia that ARPANSA has an appropriately resourced and ongoing incident response capability.

ARPANSA also noted that the current regulatory arrangements to assess and approve radiation gauges, such as the one which failed in WA resulting in the lost source, should be examined with a view to improve how different jurisdictions share information on gauges that have received regulatory approval. Issues around the incident response role definitions for deployed staff, interoperability with peer regulators or agencies, and the dynamics of a multi-jurisdiction response were also discussed. Similarly, the coordination of media messaging between government agencies was discussed, including benefits versus problems with the method of messaging radiation safety in terms of comparisons to 'x-rays per hour'.

The Council also discussed the applicability of ARPANSA's *Code for the Safe Transport of Radioactive Material (RPS C-2, Revision 1)* including its adoption throughout Australian jurisdictions. Failure of multiple layers of redundant protection were a point of discussion with the outcomes of the Western Australian regulator's investigation identified as a point of future interest to the Council and the Radiation Health Committee (RHC).

The Council discussed the hypothetical scenario of failure of the Cs-137 capsule (which did not occur in this case), including details such as the capsule's external hazard warning and labelling for identification. The Council also discussed other hypothetical issues intended to inform future incident planning, covering the triggers for decision points in the event a lost source was not found, or where one jurisdiction may cease involvement while another continued response or recovery operations.

#### 4 - Member representing the interests of the general public

The member representing the interests of the general public noted some concerns from key interest groups on various points related to the Council's 2022 advisory letter to the CEO on the principles and attributes of an effective independent regulator for nuclear-powered submarines. These points include emergency management contingencies and adequacy with respect to visiting nuclear ships and submarines, how transparency and military secrecy are balanced in the interests of safety and how independent regulatory decision-making will be ensured; the scope and terms of reference for an updated reference accident with respect to marine radiological releases and port-specific consequences of any accident; and that members of the public may currently find it difficult to locate publicly available information.

The Council noted that several of these issues were beyond ARPANSA's direct responsibilities in the current planning framework with respect to visiting ships, however referred specific questions from the key interest groups to ARPANSA for further consideration. Council then discussed the value in ARPANSA having a 'frequently asked questions' webpage to guide members of the public to find information already available on this growing area of interest.

#### 5 - AANMS Letter on Theranostics – discussion

The Chair noted a letter received from the Australasian Association of Nuclear Medicine Specialists (AANMS) on the topic of Theranostics, seeking guidance on improving national uniformity of certifications for practitioners. The Council and ARPANSA discussed Theranostics as a field of growing significance, however that certification was a topic for jurisdictional regulators and Australian Health Practitioner Regulation Agency (AHPRA) to consider. The Council suggested that the ARPANSA CEO refer the letter to the Radiation Health Expert Reference Panel (RHERP) via the Environmental Health Standing Committee (enHealth).

**Task:** Recommend the AANMS letter is referred to enHealth (and RHERP).

#### 6 - Science Communication and misinformation

The Council noted ARPANSA's work in public communication about misinformation, such as the event the agency arranged for Science Week 2022, and congratulated ARPANSA on this work. ARPANSA noted that engagement at the event itself was low but that it generated excellent post-event engagement. The Council suggested that it may be possible to run more events with a smaller number of staff resources to achieve further engagement, as well as developing passive information or infographics that could be placed in appropriate public spaces.

The Council was also interested in ARPANSA's engagement with younger demographics and regional areas. ARPANSA noted its ongoing proactive online and in social media work on topics which might be coming up, putting out factual, science-based information in advance. Engagement in regional areas is a challenge with limited staff resources, however opportunities to combine regional engagement with regional field work are being considered.

## 7 - CEO Response to advice previously provided

The CEO's response letter to previous advice from the Council was tabled and acknowledged by the Council, noting the details had previously been verbally discussed at the meeting in November 2022.

**Task:** ARPANSA to publish via the ARPANSA website the CEO's response letter to previous advice.

## 8 - EPBC Process

ARPANSA updated the Council on its interactions with the Department of Climate Change, Energy, Environment and Water (DCCEEW) regarding the proposed NRWMF. There is established awareness of the need to ensure that ARPANSA remains independent, noting that such a facility would be regulated separately under the *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act) as well as the *Australian Radiation Protection and Nuclear Safety Act 1998*. ARPANSA continues to provide advice to DCCEEW (and the taskforce to establish a Commonwealth Environment Protection Authority) on the alignment of definitions in radiation protection and nuclear safety, based on international best practice and the published Australian standards (under the Radiation Protection Series).

The Council discussed issues under current EPBC Act, such as the categorisation of copper mining as a nuclear action being unnecessarily burdensome, which ARPANSA acknowledged as a known issue.

## 9 - ARPANSA and First Nations Engagement

ARPANSA gave an overview of the agency's ongoing consideration of First Nations engagement, noting that the Canadian Nuclear Safety Commission (CNSC) as a peer international nuclear regulator had released guidance on its approach to such engagement. While this advice is specific to Canada, ARPANSA noted that it was useful to compare international practices and the Canadian guide included recognition of the unique value of indigenous knowledge, specific funding to support engagement, school outreach programs, a specific consultation website and contact email. In the Australian context, some CNSC work would overlap with heritage impact assessments for a NRWMF (undertaken by DCCEEW).

ARPANSA also gave an update on its work towards a Reconciliation Action Plan (RAP), including work with Reconciliation Australia at early planning stages, noting that future actions based on a finalised plan will be an important measure of success. The Council suggested drawing on the expertise of university programs and the Australian Institute of Company Directors for example RAPs for further comparison. The Council supported ARPANSA's work given the potential future need for First Nations engagement in Australia, noting that engagement with every community will be different.

## 10 - 6th Asia-Oceania Congress on Radiation Protection (AOCR6) update

A Council member who had attended AOCRP6 in February 2023 gave an overview of the event, noting that the host organisation, the Asia-Oceania Association of Radiation Protection (AOARP), is part of the International Radiation Protection Association (IRPA) which is made up of radiation protection practitioners. AOARP's region covers 50 per cent of the global population and the organisation includes an active early career group (IRPA-YGN) which may be a development opportunity for Australia. Radiation protection in India, the host nation for AOCRP6, occurs in the context of a significant nuclear power build-program, as well as the management of very high naturally occurring background radiation levels in some local areas. The Council thanked the member for their presentation and highlighted the early career network as an opportunity for Australia given current and future workforce challenges.

## 11 - Issues to highlight for the next term of Council

The Council discussed the areas of radiation protection and nuclear safety that it expected to remain important to Australia and ARPANSA into the next term of the Council, and identified the following:

- Workforce – identifying ways to boost capacity, reduce redundancy, and maintain capacity building. Including being mindful of the practitioner field of radiation protection that needs to deliver safety.
- Indigenous engagement – noting the relevance of Reconciliation Action Plan work ongoing.
- Emergency preparedness – with continued high expectations of ARPANSA's capability in this area.
- Laser safety – highlighting that ARPANSA should maintain its current work in this area.
- Communications and openness – ARPANSA should collaborate broadly as many issues are nation-wide and may benefit from international experience. Growing interest in AUKUS and maintaining the Australian community's trust would underpin any future work in clearly communicating radiation risk.
- National uniformity – both on technical issues but also noting the opportunities for efficient use of resources, including the sharing of resources between jurisdictions.
- UV radiation – ARPANSA should continue its work, especially on sunscreen testing.
- Regulatory independence – noting the importance of this value to ARPANSA and the implementation of the optimal pathway for nuclear-powered submarines in Australia.
- Legislation – noting the changing landscape of radiation protection in Australia, there may be an opportunity to review the functions of the ARPANS Act including the advisory committees.

**Task:** Issues highlighted to be distributed to Council members for the next term once appointed.

## 12 - Housekeeping and Meeting Close

The CEO thanked the current term of Council (ending 31 March 2023) for their work and advised that the appointment process for the next term remains ongoing. The Council thanked ARPANSA staff for the agency's work over the term, noting the increased workload due to the national programs such as AUKUS and the disruption from Covid-19. The next Council meeting is scheduled for the week of 7 August 2023.

**Task:** Council members to provide feedback on their experience and recommendations from their term.

**Task Summary**

Action item	Agenda topic	Responsible
Secretariat to forward incoming correspondence to ARPANSA for consideration of a response.	01 - Correspondence Received	ARPANSA
Secretariat to forward the AANMS letter to ARPANSA for further referral to enHealth (and RHERP).	05 – AANMS letter on Theranostics	ARPANSA
ARPANSA to publish the CEO’s response letter to previous advice from the Council	07 – CEO response to previous advice	ARPANSA
Issues highlighted to be distributed to Council members for the next term once appointed.	11 – Issues to highlight for the next term of the Council	ARPANSA
Council members to provide feedback on their experience and recommendations from their term.	12 – Housekeeping	ARPANSA