



Radiation Health and Safety Advisory Council – Meeting Minutes

Date	16 and 17 December 2021
Location	Microsoft Teams Meeting
Members	Dr Roger Allison, Dr Carl-Magnus Larsson, Professor Adele Green, Professor Pam Sykes, Mr Jim Hondros, Dr Mel Taylor, Dr Trevor Wheatley, Ms Melissa Holzberger, Dr Jane Canestra, Dr Peter Karamoskos, Mr Keith Baldry, Mr John Piispanen.
Invitees	Dr Gillian Hirth, Mr Jim Scott, Mr Ryan Hemsley, Ms Yvonne Pavey, Mr Ben Paritsky, Mr James Wheaton, Mr Nathan Wahl, Dr Ivan Williams, Dr Rick Tinker, Ms Kelly Daniell, Adj A/Prof Ken Karipidis, Dr Chris Brzozek, Ms Jenni Stiffe, Representatives from Dept of Health, Dr Katie Volter and Mr Trent Furminger (Day 1 only)
Absent	Dr Hugh Heggie (both days), Professor Adele Green (day 2 only).
Secretariat	Ms Helen Alexander.

1 - Meeting open and housekeeping

The Chair opened the meeting at 9.30am with an Acknowledgement of Country. Ms Katie Volter and Mr Trent Furminger from the Commonwealth Department of Health were welcomed as observers. The 4-5 August 2021 meeting minutes are finalised and all previous working groups are now closed.

The only correspondence noted since the previous meeting were the questions to ARPANSA via the Member representing the interests of the general public (on the agenda at item 5). All actions from the August 2021 meeting have been completed, except two: ARPANSA will provide an update in 12 months' time on activities relating to Naturally Occurring Radioactive Material (NORM); and the International Commission on Radiological Protection's (ICRP) issue paper on the future system of radiological protection circulated out-of-session for comment (which is on the agenda at item 7).

Mr Jim Hondros noted he is now President of the Australasian Radiation Protection Society (ARPS). The Council congratulated him on his election, and he responded by outlining how he will continue to separate his involvement in ARPS and the Council.

It was noted that no potential Conflicts of Interests were reported by members.

2 - CEO update on RHC and NSC, and ARPANSA

ARPANSA's CEO gave a general update on the activities of ARPANSA. This included the following recent international travel:

- ARPANSA's CEO attended the organisational meeting for the joint 8/9th review meeting under the terms of the Convention on Nuclear Safety. It was noted that Dr Larsson will continue his role as Vice-President until the joint review meeting in March-April 2023.
- ARPANSA's CEO and Deputy CEO attended the International Atomic Energy Agency (IAEA) International Conference on Radioactive Waste Management: Solutions for a Sustainable Future, in Vienna, at which it was noted that the Australian Radioactive Waste Agency (ARWA) also gave several presentations and Finland gave an update on its geological disposal facility.
- ARPANSA's CEO, Deputy CEO and one staff member, in his capacity as Chair of the Emergency Preparedness and Response Safety Standards Committee (EPRSC) of the International Atomic Energy Agency (IAEA), attended the Covid-19 delayed 10-year Fukushima anniversary conference. Deputy CEO Dr Gillian Hirth presented, as Chair of the United Nations Scientific Committee on the Effects of Atomic Radiation (UNSCEAR), on UNSCEAR's March 2021 report *A Decade of Progress after Fukushima-Daiichi: Building on the Lessons Learned to Further Strengthen Nuclear Safety in Vienna*. The report found no adverse health effects among Fukushima residents have been documented that could be directly attributed to radiation exposure from the accident, and that no discernible effects were expected in the future. This included thyroid cancer where an observed increased incidence of cases was attributed to large-scale screening following the disaster.
- The Deputy CEO attended the ICRP Main Commission meeting in Frankfurt, which was the first meeting under the new term of appointments (with four new members including the Deputy CEO) as well as the first in-person meeting since the 2019 meeting in Adelaide. It focused on the reports of various ICRP committees along with the ICRP's future program of work following the virtual workshops held in 2021.

The CEO noted that an IAEA International Regulatory Review Service (IRRS) follow-up mission has been scheduled for Australia in October 2023. It will focus on Australia's progress in relation to recommendations made following the 2018 IRRS mission.

The CEO noted a small chemical spill incident in a laboratory at Yallambie, Victoria, which resulted in a Comcare investigation and related actions, which ARPANSA is working through. The work process during which the incident occurred has been permanently discontinued. The management system for training staff was identified as an area of focus for rectification and improvement, with individual training of key staff expected to be completed by January 2022.

The CEO provided an update to the Council on ARPANSA's work related to skin cancer caused by solar ultra-violet radiation (UVR) including its Solar UVR Protection Strategy 2018-2022. This included ARPANSA's role as an active member of the National Skin Cancer Committee chaired by Cancer Council Queensland, and other work in collaboration with Cancer Council Victoria and Griffith University to research the issues associated with aerosol sunscreens. ARPANSA has also prepared a paper in collaboration with Council member Professor Adele Green for a special issue of Public Health Research & Practice, as part of the 40th year celebration of the Slip, Slop, Slap campaign. The paper, titled *Effectiveness, Compliance and Application of Sunscreen for Solar Ultraviolet Radiation Protection in Australia (PHRP-2021-0145)*, targets policy makers and regulators.

The Council noted the credit due to ARPANSA for its involvement in the recently announced new SunSmart campaign – a first in nearly 20 years – funded by the Victorian Government. The campaign forms part of the ambitious Victorian Cancer Plan 2020–24 which sets out a target to halve the proportion of Victorians diagnosed with preventable cancers by 2040. ARPANSA noted that the [Council's 2019 letter](#) to the CEO of ARPANSA had been a useful reference point for this work.

The Council noted that an action point from the August 2021 meeting, for ARPANSA to provide an update on any risk ARPANSA faces as a regulator, would be covered under agenda item 3.

The Council heard an update on public enquiries that ARPANSA has received via the Talk to a Scientist program, noting that the number of enquiries has returned to approximately 2017 levels as the number of 5G-related enquiries has reduced. It was noted that since the government's 'AUKUS' nuclear submarines announcement there had only been one submarine-related public enquiry. This engendered the question as to how the public would know to use the Talk to a Scientist (TTAS) program as a source of information. The Council discussed ways that people are referred to the program via government agencies and other means. Information on media enquiries to ARPANSA was also briefly noted.

3 - Nuclear submarine program

The CEO of ARPANSA introduced ARPANSA's current involvement in the 'AUKUS' program and related impact on resourcing, noting that the Submarine Taskforce to which ARPANSA is contributing is 3 months into a designated 18-month effort to examine all the requirements for a nuclear submarine capability in Australia.

The CEO noted that there are different possible structures to regulate a nuclear submarine program with respect to safety, security, and nuclear safeguards, however ARPANSA's workforce is expected to grow under any scenario.

The Council discussed the importance of a national approach to effective radiation policy, considering state and territory regulatory models. The importance of ARPANSA's independence was discussed, acknowledging that maintaining effective control and regulation does not preclude liaison with relevant stakeholders, and continuing to be a national resource for information and advice.

Task: Nuclear submarine working group 31/01/2022

The Council agreed to establish a nuclear submarine working group, to identify elements where ARPANSA should focus, related to the *Australian Radiation Protection and Nuclear Safety Act 1998* (ARPANS Act) and role of the agency (in relation to the program).

4 - Australian Radioactive Waste Agency (ARWA), National Radioactive Waste Management Facility (NRWMF) introductory presentation

The Chair welcomed Ms Amanda Fortanier from ARWA who introduced the purpose and planned activities of ARWA, including the plans for a National Radioactive Waste Management Facility (NRWMF), proposed to be located at Kimba, South Australia, for the permanent disposal of low-level radioactive waste and the temporary storage of intermediate-level waste. It was noted that no high-level waste is proposed to be at this site. The Council noted that the licence applications related to

the low-level waste disposal facility and intermediate-level storage facility are not considered to be interdependent for the purposes of proceeding with regulatory decisions.

5 - Lasers discussion

ARPANSA provided an update on activities related to laser technology safety, noting a recently advertised PhD position in conjunction with the Victorian Injury Surveillance Unit (at Monash University) remains unfilled and will be readvertised (including internationally) in 2022. ARPANSA also noted its relationship with the Australian Competition and Consumer Commission (ACCC) in approaching online marketplaces about the sale of dangerous consumer laser products.

ARPANSA is also exploring the option of engaging curriculum quality agencies such as the Tertiary Education Standards and Quality Agency (TESQA) to ensure the accuracy of laser-related content in relevant courses, such as TAFE training for beauticians. ARPANSA will also explore ways to mandate existing standards through Commonwealth regulatory mechanisms. ARPANSA also noted efforts in Queensland to change legislation on the use of cosmetic lasers (expected to progress in 2022).

The Council discussed the increasing amount of concerning laser products available to consumers, particularly through online marketplaces, presenting risks of intentional and unintentional misuse, with incorrect labelling also a significant concern. It was noted that the European Union (EU) has published a Consumer Laser Safety Standard (EN50689 2021) which prevents the sale of Class 4 lasers to members of the public and includes a workplace safety standard, which may be a useful model for Australia.

Professor Nigel Spooner, from the Centre for Radiation Research, Education and Innovation (CRREI) at the University of Adelaide, gave a presentation on the extraordinary power and dangers of multi-spectral lasers, and concerns that such products are currently available with no regulations in place and inadequate safety manuals or guidance. There is further concern that the versatility of multi-spectral laser-based systems means they will soon be used in industry as well as being of interest for medical applications, potentially exposing a range of unqualified workers and patients or clients to dangerous lasers in occupational settings. It was noted that the only possible safety controls for such lasers at present are tightly prescribed engineering controls and the refusal of all sales to public consumers, however neither of these controls are currently enforceable. Rapid price decreases continue to make lasers increasingly accessible to unqualified users.

The Council discussed options and complications for intercepting lasers at the border for online purchases, potential national legislation with the responsibility to comply being on the supplier, and avenues for formally accredited training of users of lasers.

The Council were also shown an online educational tool which Dr Wheatley has offered to make available to the public to assist consumers who would like to educate themselves about laser safety prior to making a purchase. This will be circulated in full to Council members.

6 - Member representing the interests of the general public

ARPANSA noted a set of questions from the International Campaign to Abolish Nuclear Weapons (ICAN), received via the member representing the interests of the general public, that it had responded to prior to the meeting to enable discussion during the meeting. The questions concerned access to information on the number of historical nuclear-powered warship (NPW) visits and associated radiation monitoring reports which ARPANSA releases on its website, and the current

arrangements in place for oversight (regulatory and other) of NPW visits through the Department of Defence interdepartmental standing committee called the Visiting Ships Panel (Nuclear), or VSP(N). ARPANSA provided information in response to the questions, noting that NPW visits are not ARPANSA-regulated activities, but detailing the range of planning, modelling, and monitoring activities which ARPANSA contributes to as part of VSP(N) activities.

The member representing the general public thanked ARPANSA for the comprehensive responses and expanded on the concern raised around the monitoring of nuclear ships/submarines, as well as governance and ultimate responsibility in the event of an incident. ICAN would like to see an independent agency such as ARPANSA with clear authority to be responsible for such monitoring. ARPANSA noted that the current VSP(N) arrangements have been in place for a long time and, as visiting vessels are effectively considered foreign territory, ARPANSA can provide advice but has no regulatory authority over visiting ships. It was noted that the AUKUS agreement has highlighted this aspect and there may be an opportunity to reconsider these arrangements in consultation with the states and territories. It was noted that ICAN welcomes transparency and want change in this area.

An update on the recruitment of a new ARPANSA CEO was requested, ahead of the current CEO's retirement in March 2022, and it was noted the process is still underway.

The Council discussed the likely timeline for receiving a license application from ARWA to establish a NRWMF. ARPANSA's current assumption is mid-2024 as ARWA are advanced in the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) process, although ARWA has given no further indication of timing.

Task: Review ARPANSA's role as a regulator 27/12/2021

The Chair requested Members review Council's 2017 advice on ARPANSA's roles as a regulator and radiation health and safety advisor for the NRWMF.

7 - International Commission on Radiological Protection (ICRP) - the future of radiological protection

Council members had reviewed an ICRP issues paper and provided some comments out-of-session. The Council noted that the CEO of ARPANSA was seeking advice on any consensus views of the Council which not only note identified issues with the current ICRP system, but also provide scientifically sound and regulatory implementable workable constructive alternatives. The Council was asked to also identify in its feedback what elements of the current ICRP system work well. ARPANSA can then provide this advice through its own submission as well as through representatives at ICRP.

The Council noted the history of the ICRP and the various ways that its standards flow through to different countries. The Council discussed the long timeframe of the ICRP review process, and the reasons for the resistance to change from various places across the world.

The Council discussed the rationale for having different radiation exposure limits for members of the public as opposed to workers as an area for potential change, given that there is no biological difference between members of the public and workers. The Council also discussed aiming to provide practical solutions to industry and the people trying to implement the standards. The issues of translation and communication in training, education and resources were also raised. The Council

also discussed reviewing the ICRP system from a best-practice-governance approach, thereby reviewing the United Kingdom-based charity structure that currently governs ICRP.

Task: ICRP working group 31/01/2022

The Council agreed to form a working group to identify areas for advice to ARPANSA on the ICRP System.

8 - Proposed Radiation Protection Series (RPS) framework update

A paper was tabled noting that the Radiation Health Committee (RHC) has been considering a proposed new Radiation Protection Series (RPS) framework of documents for radiation protection in Australia. ARPANSA is seeking the Council's view on this work and the proposed approach. It was noted that one of the main issues with the current RPS is that it is unsustainable to maintain, given that the codes and standards have grown substantially over 20 years. The main aim of the revised system will be to consolidate the main principles, with regulatory expectations of requirements outlined in codes to be published separately. This is intended to provide a more effective and efficient approach and provide clarity for licence holders and regulators.

The RHC agreed in October 2021 to request that ARPANSA engage the Commonwealth Standing Committee on Environmental Health (enHealth) as a significant policy stakeholder, to obtain endorsement for the RHC to continue its work. This work would include addressing concerns around implementation in each jurisdiction and agreeing to later bring a full proposal to enHealth with a recommendation to commence a public consultation through an issues paper. The Council noted that the RHC's statutory role is to set standards, and not to solve broader policy uniformity issues. Initial feedback on the framework itself from Council members was positive, with the documents being described as elegant and helpful to states and territories for their own regulatory systems.

It was noted that the revised framework identifies the gaps in non-ionising radiation (NIR), given that the International Commission on Non-Ionising Radiation Protection (ICNIRP) and the World Health Organization (WHO) are already working in this space. Although part of the NIR spectrum is covered under other standards such as those issued by the International Electrotechnical Commission (IEC), the scope of NIR is vast and this is an opportunity to provide better NIR guidance for Australia.

Task: RPS Framework review 1/06/2022

The Council requested an update in 6 months' time on the progress of the RPS Framework review.

9 - The WHO definition of health: Public health considerations for radiation protection

The Council considered the WHO definition of health which includes mental and social well-being, in the context that regulatory approaches typically only expected applicants to demonstrate protection of physical health. The Council noted the lack of integration of the WHO definition of health into Australia's radiation protection frameworks. It also noted ARPANSA's consideration of this issue in the context of the waste disposal code, the RHC's discussion of this issue at its previous October 2021 meeting, and the ongoing ARPANSA's [Advisory Note public consultation](#), closing Wednesday, 15 December 2021.

The CEO sought the Council's view (including out-of-session) on whether this WHO definition should be brought into scope for radiation protection in exposure situations in Australia, where the exposure itself is not the main concern. Initial comments noted that the WHO definition was created for the purposes of individual health and extrapolation to communities is problematic, therefore a protocol for doing so would need to be established along with baseline assessments to determine cause and effect in relation to any one issue. However other members noted that adoption of the WHO definition for understanding community impacts was a well-established practice in some areas. It was also suggested reconsidering the use of the word 'impacted', instead using a more neutral word such as 'involved', when describing communities or groups in health considerations.

The Council also discussed the advisory note in the context of the Fukushima Daiichi Nuclear Power Plant accident as well as public health decisions made during Covid. The Council referred ARPANSA to the United Nations (UN) Sustainable Development Goals related to human and environmental wellbeing and the 'One Health – One Welfare' concept for further consideration.

The Council noted ARPANSA's important role and expertise in providing technical advice while considering the possible consequences of this advice in terms of costs and benefits, noting that the interpretation and implementation of such advice is ultimately for the Australian Health Protection Principal Committee (AHPPC) and the State and Territory radiation regulatory authorities. The Council emphasised that this work may be subject to intense scrutiny by stakeholders and used as a legal reference, underlining the needs to ensure any definition is fit for purpose.

Task: WHO definition of health 31/01/2022.

The Council requested that ARPANSA bring back the advisory note for discussion at the next meeting, following consideration of public comments received, to further discuss the WHO definition of health.

10 - Meeting close

The Chair reminded the Council that the ARPS conference will take place in Canberra in March 2022. This conference was delayed due to the Covid 19 pandemic from October 2021 and Dr Larsson is a keynote speaker.

At the Chair's suggestion the Council considered the advice they gave to ARPANSA in February 2017 on [ARPANSA's roles as regulator and radiation health and safety advisor for a national radioactive waste management facility](#). Following discussion it was agreed that the advice is still current and has no need for updating.

Meeting ended at 11.25am.