



Radiation Health Committee

Meeting Minutes

Date: 24-25 March 2021

Time: 10:30 am to 2:30 pm (24 March); 10:30 am to 1:00 pm (25 March)

Location: Virtual

Chair: Dr Roslyn Drummond

Members: Dr Roslyn Drummond (Chair); Ms Fay Bellis (Public Representative); Mr Mark Carey (NSW); Mr Glenn Riley (VIC); Mr Simon Critchley (QLD); Mr Bradley Feldtman (NT); Ms Penny Hill (ACT); Dr Massey de los Reyes (SA); Dr Carl-Magnus Larsson (CEO of ARPANSA); Dr Stephen Newbery (TAS); Ms Hazel Upton (WA); Dr Joanna Wriedt (Nuclear Safety Committee Representative)

Secretariat: Dr Samir Sarkar, National Codes & Standards Section, ARPANSA

Scribe: Ms Meaghan Partridge

Apologies: None

Invitees: Dr Rick Tinker (ARPANSA); Nathan Wahl (ARPANSA); Sieu Tran (Senior Project Officer – NSW EPA); Dr Peter Thomas (ARPANSA)

Observers: Dr Gillian Hirth (Chief Radiation Health Scientist – ARPANSA); Dr Ivan Williams (Chief Medical Radiation Scientist – ARPANSA); Mr Jim Scott (Chief Regulatory Officer – ARPANSA), Mr Ryan Hemsley (A/g Chief of Staff –ARPANSA)

1. Introduction and Standing Items

Item 1.1 Welcome by the Chair

Chair

The Chair called the meeting to order and welcomed the members, observers, and invitees, and outlined the etiquette rules for this virtual meeting.

Item 1.2 Minutes

Chair

The Chair noted that the minutes from the previous meeting held on 18-19 November 2020 were confirmed out of session and had been posted on the ARPANSA's website.

The minutes for the Single-Issue meeting held on 10 March 2021 were sent to the members for confirmation. Mr Carey suggested some changes related to Regulatory Guidance and Expectations. The minutes were updated incorporating changes suggested by Mr Carey. The updated minutes were confirmed at this meeting.

Item 1.3 Actions and Business Arising**Chair**

All items were either completed, on hold or on the agenda for the current meeting.

Item 1.3a CEO's letter to enHealth regarding regulation of emissions of/exposure to non-ionising radiation (NIR)**Dr Larsson**

Dr Larsson advised the RHC of the letter sent to the Chair of the Environmental Health Standing Committee (enHealth). The letter provided enHealth with an update on recent developments in the regulation of NIR, and members were provided with a copy of this letter. He informed the Committee that the Radiation Health and Safety Advisory Council (RHSAC) will also be provided with a copy of this letter as some work on NIR were undertaken through the RHSAC.

Members acknowledged that the letter was timely and would be very useful for enHealth as a policy setting committee in establishing a risk-informed strategy for regulation of NIR. Dr Larsson stated that he would be happy to provide enHealth with an update, on behalf of the RHC, on health risks associated with NIR and potential mitigating strategies as required.

Item 1.4 Correspondence**Chair**

Members noted and discussed the following correspondence:

1. Email dated 1 December 2020 from the Secretariat to RHC members requesting comments on IAEA Documents:
 - a. Draft Safety Guide DS514: Compliance Assurance for the Safe Transport of Radioactive Material (Revision of TS-G-1.5);
 - b. Draft Safety Guide DS521: Radiation Protection Programmes for the Transport of Radioactive Material (Revision of TS-G-1.3); and
 - c. Draft Safety Guide DS 421: Radiation Protection Programmes for the Transport of Radioactive Material (Revision of TS-G-1.3)
2. Email dated 12 January 2021 from the Secretariat to RHC members enclosing the IAEA Safety Guide on Radiation Safety in the Use of Nuclear Gauges, SSG-8 for use as a tool for the revision of RPS 5 and RPS 13.
3. Email dated 20 January 2021 from the Secretariat to RHC members requesting comments on the IAEA draft safety guide Radiation Safety in the Use of Sources in Research and Education.
4. Email dated 11 February 2021 from the Secretariat to RHC members requesting completion of an IAEA survey on Occupational Exposures to NORM in the Water Supply and Treatment Industry.

Item 1.5 Public Interest Issues**Ms Bellis**

Nil.

Item 1.6 Conflict of Interest Declarations**All Members**

Nil.

Item 1.7 International Liaison**Mr Wahl**

Mr Wahl provided an update on ARPANSA's engagement in international activities. Considering that currently there is no international travel, ARPANSA staff have attended virtual meetings and workshops. He informed the Committee of the new Australian representatives at the IAEA Nuclear Safety Standards Committee, Radiation Safety Standards Committee, Transport Safety Standards Committee, Waste Safety Standards Committee and Nuclear Security Guidance Committee. He stated that early engagement of the RHC would improve the process of development of the IAEA safety standards and guides.

It was noted that due to Covid-19, the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management and the Convention on Nuclear Safety have been postponed until 2022 and 2023 respectively.

Members noted the update on international activities.

2. National Uniformity

Item 2.1 Radiation Protection Network (RPN) Activity update**Dr Newbery**

Dr Newbery provided an update on the outcomes of a meeting held on 23 February 2021 to discuss the skills and qualifications for a Regulatory Health Physicist. Mr Carey stated that this meeting was useful and informative, and he suggested to consider some flexibility in skills and qualifications as every regulatory authority do not employ a Regulatory Health Physicist and they rely on some form of training courses used for Radiation Safety Officers and/or Advanced Radiation Safety Officers. Dr Newbery stated that this is the first step and no road-mapping was done and that members should continue the discussion to help in identifying the requirements specific to the roles.

Justification and optimisation of protection and safety regarding the use of X-ray transmission imaging of prisoners were discussed. Dr Newbery informed that a meeting was scheduled for 26 March 2021 to discuss this matter and Mr Alex Kalaiziovski of ARPANSA and Mr Bradley Feldtman of NT would host the meeting. Mr Feldman stated that he would send reference documents to the attendees before the meeting.

Members noted the update on RPN activities.

After-note: On 25 March 2021, Mr Feldtman circulated reference documents on X-ray transmission imaging of prisoners to the attendees.

Item 2.2 RHC/enHealth interface**Dr Larsson/Dr Tinker**

Dr Tinker advised that the draft National Strategy for Radiation Safety was discussed at the February 2021 meeting of the Radiation Health Expert Reference Panel (RHERP). Members provided feedback into the draft strategy, which was sent to enHealth for endorsement for sending out for public consultation. The Chair inquired whether this item should be considered as an RHERP or enHealth matter. Dr Larsson stated that enHealth is the communication partner of the RHC. Considering the importance of maintaining communication with enHealth, Members agreed to retain this item as a standard agenda item for future RHC meetings.

Dr Newbery informed the Committee that mutual recognition was discussed at that meeting and that the Mutual Recognition Bill was already closed for consultation. TAS and NSW are working on technical aspects for generating automatic notification following recognition of licences issued in other jurisdictions. Members noted the update on this item.

Decision 2021-01: The RHC Agreed to retain this item as a standard agenda item for the RHC meeting.

Item 2.3 Competency requirements – non-medical

Dr Newbery

Dr Newbery provided an update on the progress and direction being taken to develop common competencies for users in non-medical practices. He referred to the competencies developed for fixed radiation gauge and portable soil density gauge users as part of the workbook for RPS 5 (*Code of Practice and Safety Guide for Portable Density/Moisture Gauges Containing Radioactive Sources*, 2004) and RPS 13 (*Code of Practice and Safety Guide for Safe Use of Fixed Radiation Gauges*, 2007). Noting the discussion at the single-issue meeting of the RHC in February 2021, he suggested to revisit the membership of the current working group for developing nationally agreed competencies for users in non-medical practices. This working group is led by Dr Newbery and comprises members from all jurisdictions, Ms Bellis and Mr Scott. Dr Newbery suggested to include the workbook developer and a relevant expert. He also advised that workbook developers should seek input from Ms Bellis into the competency components. Members noted the progress and direction being taken to develop common competencies and agreed to revise the composition of the working group as suggested by Dr Newbery.

Relevant aspects of this matter were further discussed under Item 3.2 below.

Action 2021-04: Working group composition to be revised to comprise Stephen Newbery, Jim Scott, Fay Bellis and the workbook developer and empower the working group to co-opt an expert relevant to the practice if required.

Item 2.4 Competency requirements - medical

Mr Riley

Mr Riley provided an update on competency requirements for medical practices. He advised that he examined the registration and accreditation requirements of the Australian Health Practitioner Regulation Agency (AHPRA). He also informed the Committee that other jurisdictions provided him with their licensing requirements. Mr Riley is currently mapping the available information related to competency requirements and identifying the issues related to mutual recognition. Firstly, he would focus on two jurisdictional requirements, viz. NSW and VIC to identify the differences, followed by a comparison of requirements between other jurisdictions. NSW expressed their interest in this activity.

Members noted the progress and suggested Mr Riley to progress the work as planned.

Item 2.5 Third-party accreditation – training providers and the development of accreditation standards

Dr de los Reyes

Dr de los Reyes informed the Committee that the *SA Radiation Protection and Control Act 2021* was passed by parliament last month. Under the current legislation there is provision for accreditation of third-party service providers, and the accredited person is authorised to issue certificates of competence. She informed the Committee that the criteria for assessment of competencies were released for stakeholder consultation and only a small number of submissions were received. Dr Newbery stated that currently there is discussion on competencies between SA, TAS and VIC, and if there is an agreement on

competencies between these states then there is an opportunity to develop a nationally agreed approach to an accreditation scheme.

Dr de los Reyes stated that she would keep the RHC updated on this matter.

Members noted this update.

Item 2.6 Exemption of cabinet x-ray apparatus

Mr Riley

Mr Riley referred to the agenda paper presented under item 2.8 at the RHC meeting in November 2020, which applied the GSR Part 3 criteria for the exemption from holding a user licence for operators of cabinet X-ray apparatus. At that meeting Members were requested to provide Mr Riley with historical and/or current personal dosimetry records for operators of cabinet X-ray apparatus as available. The responses from jurisdictions show that historical or current personal dosimetry records for operators are not available. Regarding exemption of CT based units, Mr Riley stated that the exemption is related to non-CT based units. Mr Carey stated that NSW exempt both CT based and non-CT based units.

Since a safety assessment is needed to justify the exemption from user licence for operators it is imperative to obtain dose information. For this purpose, Mr Riley proposed to deploy passive personal or area dose monitors and perform real time dose rate surveys of cabinet X-ray apparatus. Dr Newbery stated that Tasmania had commenced performing routine monitoring of such apparatus.

It was noted that considering the sensitivity of devices, effective doses to operators of less than 10 μ Sv would be challenging to measure. Mr Riley stated that considering the low level of dose, sensitive equipment with fast response time would be used to measure the dose from cabinet X-ray apparatus. He stated that Victoria is prepared to lead the development and coordination of the program and requested other jurisdictions to participate in this program and to provide radiation monitoring data. A plan of the program will be presented at the next RHC meeting for approval.

Members approved the proposed program to obtain radiation monitoring data involving other jurisdictions.

Decision 2021-02: Approved the program to collect radiation monitoring data from all jurisdictions to develop the justification for exemption of cabinet X ray apparatus operators from holding a use licence.

Action 2021-05: Mr Riley to lead and coordinate the program and other jurisdictions to provide radiation monitoring data.

Action 2021-06: Mr Riley to present the plan of the program for obtaining radiation monitoring data at the next RHC meeting in June 2021.

Item 2.7 RHC Statement/Advisory Note on personal dosimeters and CT baggage scanners

Mr Carey/ Mr Tran

Mr Tran presented the proposed draft RHC Statement on personal dosimeters and CT-baggage scanners describing the background information and the outcomes of communication with the Department of Home Affairs (DHA). The aim of this statement is to prevent potential false high dose being recorded when regulatory inspectors are required to scan their wearable personal dosimeters with carry-on baggage at the airport as part of security screening process during interstate travel. He stated that two manufacturers provided accumulated dose received during transit to the DHA. The doses provided by the manufacturers

are lower than the anecdotal evidence from Victoria, which was communicated to the DHA. Noting the discrepancy in the dose data, DHA requested a formal position from the RHC/ARPANSA on this matter.

Members suggested to communicate the results from Victoria with the DHA, and ARPANSA will communicate with the DHA in this regard. Following discussion, members endorsed the draft RHC Statement on 'wearable personal dosimeter and airport CT-security scanners' as a working document to allow jurisdictions to include radiation monitoring data to finalise the statement.

The draft Statement will be updated incorporating feedback from the DHA and sent to the RHC for final endorsement of the Statement. Members noted that this statement will help the DHA to prepare policy and guidance on exemption of wearable personal dosimeters from being subject to CT-baggage scanners.

Decision 2021-03: RHC endorsed the draft RHC Statement on personal dosimeters and CT-baggage scanners as a working document.

Action 2021-07: ARPANSA to communicate with the DHA and discuss the draft statement together with the measured dose information provided by Victoria, to aid progression of the statement to finalisation.

Action 2021-08: The draft Statement to be submitted to the RHC for final endorsement.

Item 2.8 Regulation of chiropractors in South Australia: Impacts and opportunities for licensing

Dr de los Reyes

Dr de los Reyes provided an overview of the unsuccessful EPA prosecution of a chiropractor in South Australia. She summarised the factors that contributed to the failure of the prosecution. This includes the lack of a defined 'scope of practice' (both legal and professional) for chiropractic treatment and associated licence conditions. It was noted that the *Code of Practice for Radiation Protection in the Application of Ionising radiation by Chiropractors*, Radiation Protection Series no. 19 (2009) does not include a scope of practice for chiropractors. In addition, justification of the use of radiation described in section 3.2.2 of RPS 19 was broad and subject to interpretation. Members considered that a Regulatory Expectations document may make such aspects explicit. Further, having an approved Radiation Management Plan would be effective in preventing such failures as it would provide clear justification of the use of radiation and the scope of authorisation. Members noted the lessons learnt from this unsuccessful prosecution.

Dr de los Reyes stated that she would circulate a copy of the judgement.

After-note: Dr de los Reyes circulated a copy of the judgement to the RHC on 24 March 2021.

3. RHC Work Program

Item 3.1 RHC Projects update

Dr Sarkar

Dr Sarkar presented an update on the progress of the current RHC projects, which were discussed under relevant agenda items. Members noted the state of the projects.

Item 3.2 Radiation Protection Series (RPS) document framework approach**Dr Tinker**

Dr Tinker presented the process of adopting and implementation of the RPS Framework and Regulatory Expectations documents. He described how the RPS framework provides a more effective and efficient approach to achieving the desired level of protection of health and safety of people, and protection of the environment, from the harmful effects of radiation. In addition, it establishes how requirements and regulatory expectations are linked, providing clarity for those responsible for safety and a balanced approach to risk-based regulation and compliance-related assistance and advice. The framework introduces a new type of document, Regulatory Expectations, which can be designed and developed to provide nationally consistent regulatory expectations to establish a 'baseline' for compliance against applicable Codes.

Regarding stakeholder consultation on the Regulatory Expectations document, Dr Tinker stated the intent to undertake an online survey, which is similar to that used for RPS documents. Members considered that involvement of a large cross section of stakeholders would provide good outcomes from the consultation. Apart from ARPANSA's stakeholder consultation mechanism, the States/Territories should discuss the framework approach with their licence holders. Members suggested to revise the stakeholder consultation plan considering the matters discussed and circulate the revised plan to the RHC out of session.

It was noted that some jurisdictions had not implemented the Planned Exposure Code (PEC) that could be related to the final sign-off of the National Directory for Radiation Protection (NDRP) by the Ministers. Dr Larsson advised that implementation of the PEC should not delay the adoption of the RPS framework since the framework is a forward-looking approach with a clearly defined objective. He suggested that it would be beneficial to socialise the framework with enHealth.

Discussion took place on the development of Regulatory Expectations for specific practices using the results of the mapping of the entire suite of RPS and RHS documents. Members suggested to involve the workbook developer to develop Regulatory Expectations document. For this purpose, it was agreed to use the Regulatory Expectations document for RHS 28 (*Code of Practice for the Safe Use of Sealed Radioactive Sources in Borehole Logging*) as a guidance, and Dr Newbery would present the Regulatory Expectations Document at the next RHC meeting in June 2021.

Considering the benefits of the RPS framework, Members agreed to adopt this framework incorporating Regulatory Expectation documents.

Regarding the transition options, the deficiencies associated with the current Practice Specific Codes, particularly the disconnect between the PEC and the Practice Specific Codes involving radiation management plan and safety assessment, were noted. Members considered that the transition options should be determined on a case by case basis taking into account the results of the mapping of RPS and RHS documents.

Decision 2021-04: RHC agreed to adopt the RPS framework incorporating Regulatory Expectations documents into the RPS series.

Action 2021-09: Dr Tinker to revise the stakeholder consultation plan and circulate the revised plan to the RHC out of session.

Action 2021-10: Dr Newbery to present the Regulatory Expectations Document for RHS 28 at the next RHC meeting in June 2021.

Item 3.3 Guidance for implementation of the Medical Exposure Code (MEC)

Dr Newbery

Dr Newbery provided an update on the Guidance for Implementation of the MEC in Diagnostic and Image Guided Radiology. He informed the Committee that he met SA and VIC about this guidance and received feedback from Dr Thomas of ARPANSA. Currently Dr Thomas and Dr Tinker are reviewing the document, pending the decision on the RPS Framework approach.

Regarding the Guidance for implementation of the MEC in Nuclear Medicine (NM) and Radiation Therapy (RT), Dr Williams stated that he had discussed the development of the RT document with Dr Newbery using the Diagnostic Radiology document as guidance. He also stated that some expert advice would be needed to develop this document. The Chair offered her assistance in developing the RT document.

Dr Newbery stated that TAS is leading and working on the development of the Guidance document for NM. Dr Thomas stated that ARPANSA would provide input to this document upon return of a key staff member from long-service leave at the end of April 2021.

Mr Carey stated that he would be happy to share the Regulatory Expectations and Guidance document on Diagnostic and Interventional radiology with the NSW Radiation Advisory Council for comment.

Members noted the update on the Guidance for Implementation of the MEC.

Item 3.4 Preliminary assessment on the Regulatory Guidance for implementation of personal dosimetry service providers

Mr Riley

Mr Riley informed the Committee that Victoria is preparing the Regulatory Impact Statement (RIS) for the Regulatory Guidance for implementation of personal dosimetry providers and the wording for amendment to the NDRP2 for inclusion of the provision of personal dosimetry services and authorisation for service providers. He stated that the draft RIS and the wording for amendment to the NDRP2 would be presented at the RHERP, which could also be provided to the RHC as required. It was noted that the Accreditation Standards for dosimetry service providers were presented at the RHC meeting in March 2020.

Members considered that it would be beneficial to revisit the accreditation standards. Mr Riley would circulate the accreditation standards along with the proposed amendment to the NDRP2 to the RHC out of session for comment.

Action 2021-11: Mr Riley to circulate the Accreditation Standards for dosimetry service providers and the proposed amendment to the RHC out of session for comment.

Item 3.5 Regulation of NIR

Ms Upton/Jurisdictional Members

Ms Upton advised that it was believed that once the regulations changed to allow non-medical practitioners, with an exemption from requiring a licence to use lasers for cosmetic procedures, there would be reduction in the number of complaints that appears to be supported by the number of phone calls received in this regard. However, there is no formal evidence to confirm this reduction in the number of complaints.

At the November 2020 meeting, Members were requested to liaise with their enHealth members to ensure that they are fully briefed about NIR regulation to consider this issue in the enHealth agenda. The letter from the CEO to the enHealth covered under Item 1.3a has superseded this matter.

4. General Information Items

Item 4.1 Nuclear Safety Committee (NSC) Update

Dr Wriedt

Dr Wriedt advised that the NSC met on Friday 5 March 2021. She advised that the main topics discussed at that meeting were the Regulatory Guide for the Waste Facilities, ongoing plan to address certain structural integrity matters, an incident involving extremity exposure to lutetium-177 (Lu-177) and update on major facilities. NSC members were requested to provide feedback on the Waste Guide. Members noted the update.

5. Closing

Item 5.1 Any other business

Chair

Item 5.1.1 Sharing information on events with safety implications Dr Larsson/Dr Williams/Members

Mr Scott informed members of current regulatory activities regarding the OPAL reactor and that the reactor is currently shutdown. Due to the shutdown of the reactor production of radioisotopes has been ceased. ANSTO is importing molybdenum-99 (Mo-99) from overseas for manufacturing radiopharmaceuticals.

Ms Upton informed that WA are looking at proposals for disposal of sealed sources at Tellus Holdings Sandy Ridge facility. The facility licence has been amended to store naturally occurring radioactive material and storage of disused sealed sources. WA would seek technical assistance from ARPANSA regarding the Sandy Ridge facility. The Mount Walton facility is expanding the capacity to take more waste from WA.

Dr Newbery informed that a linear accelerator (linac) was installed at Royal Hobart Hospital and some redevelopment work was taking place at the hospital. There was an incident involving unauthorised access of three workers of a contractor to a small area of the bunker of the accelerator whilst the linac was operating. These workers accessed to this area through an external door, by removing the lock, warning sign and deactivating the alarm. Although there was potential for high exposure the estimated exposure to these three workers was negligible. This incident has been reported to the Australian Radiation Incident Register.

Mr Riley stated that Victoria received an application for a Fluoroscopy apparatus. He sought advice for licensing of such apparatus. Mr Feldtman stated that he would provide relevant information in this regard out of session.

Mr Critchley informed the Committee about an issue related to generation of orphan sources and improper management of radioactive sources when mining companies go into receivership. It was noted that the change in ownership of a company falls under the *Corporations Act 2001*, which does not require the Radiation Regulator to be notified of the changes in ownership of radioactive sources. It was also stated

that the same situation exists in SA and TAS. Members considered that it would be useful to explore the protocols for transfer of ownership of a company.

Item 5.1.2 Mining Code

Dr Tinker

Dr Tinker stated that the ICRP dose coefficients for the uranium and thorium decay series have changed, which may have an impact on the *Code of Practice and Safety Guide for Radiation Protection and Radioactive Waste Management in Mining and Mineral Processing* (2005), RPS 9. He stated that he would present a proposal on updating RPS 9 reflecting the new dose coefficients at the next RHC meeting in June 2021.

Action 2021-12: Dr Tinker to provide a proposal on updating RPS 9 at the next RHC meeting in June 2021.

Item 5.2 Next Meeting – June 2021

Chair

The next meeting will be held on 16-17 June 2021 with the location is to be advised.