



Nuclear Safety Committee

Meeting Minutes

Date: 20 July 2023

Location: Level 3, 38-40 Urunga Parade, Miranda

Chair: Dr Tamie Weaver

Members: Ms Fay Bellis, Mr Ian Drinnan (via video), Ms Jasmin Diab, Dr Gillian Hirth, Mr Tony Irwin, Dr John Loy (via video), Mr Cameron MacPhail, Mr Stuart Parr, Dr Peta Miller, Mr Peter Wilkinson, Dr Joanna Wriedt

Secretariat: John Ward, Chris Nickel

Apologies: none

Invitees: ARPANSA: Mr Jim Scott, Mr Vaz Mottl Mr Grant Beamish, Mr Ryan Hemsley, Mr Andrew McCormick
 ANSTO: Mr David Carr, Ms Rebecca Moore, Mr David Vittorio, Mr Michael Luu, Mr Hefin Griffiths (item 4.2 only)

Observers: RADM Kath Richards, Department of Defence

1. Introduction

Item 1.1 Opening, Attendance and Apologies

The Chair opened the meeting, respectfully acknowledging the Dharawal people as the Traditional Owners and Custodians of the land, paying respects to their Elders, past and present. There were no apologies for this meeting. All members were present. Some members attended online.

Item 1.2 Declaration of Potential Conflicts of Interests

No additional potential conflicts were declared at this meeting. Previously declared potential conflicts of interest are maintained by the Secretariat.

Item 1.3 Minutes of the previous meeting

Draft Minutes of the previous meeting were circulated to members. Member comments were addressed and the minutes have been agreed and published online.

Item 1.4 Meeting dates

The November meeting date was confirmed, and new meeting dates are expected to be determined out of session.

Item 1.5 Safety/Security Moment

A Committee member presented their experience with the implementation of error-precursor and error prevention strategies in nuclear sector internationally.

2. Business Arising

Item 2.1 Outstanding Actions

The Committee noted that all outstanding actions were completed.

3. Correspondence

Item 3.1 Incoming Correspondence

none

Item 3.2 Outgoing Correspondence

none

4. Main Items for Discussion

Item 4.1 International Regulatory Review Service Mission Report

The Committee was provided with an overview of ARPANSA's preparation for the International Atomic Energy Agency (IAEA)'s upcoming 2023 Integrated Regulatory Review Service (IRRS) Follow-up Mission for Australia. The mission follows up on progress regarding findings identified in 2018. This includes a draft of the Advanced Reference Material (ARM) that will be provided ahead of the mission. The Committee noted the challenges of presenting material for IAEA expert review and making this public in the interest of transparency. Suggested enhancements included clear summaries on improvements made, challenges still faced and future opportunities, as well as the outcomes of actions taken. This could include the preparation of a summary using simple traffic light indicators and short summary to communicate more effectively with the public. The Committee noted that generally ARPANSA had made good progress within its jurisdiction, but that multijurisdictional areas, and national uniformity, had been more challenging to address.

Item 4.2 Opal Riser

ANSTO provided an overview of progress on the OPAL riser issues and the associated proposed flap valve modifications. ANSTO answered questions related to the analysis performed and assumptions used in the monitoring, design, and evaluation. The Committee noted that ANSTO had examined the impact of the fault on the safety case of OPAL and that ARPANSA had reviewed their analysis and action plan. The continued operation was approved on the basis that the safety function of the riser was maintained under postulated accident conditions. ANSTO stated that, with no visible evidence of propagation of the weld cracks, they are not considered a life limiting fault for the riser.

The Committee also enquired on how corporate knowledge would be retained over a long period of time. ANSTO explained that a project management approach was being used to capture knowledge including photograph and videos, handovers of job roles and exit reviews for people leaving ANSTO.

ANSTO had decided to pursue two new flap valve designs to reduce or eliminate a pressure pulse that is triggered by the sudden closure of the valves, and which is believed to have caused the structural fault. It is working with the OPAL reactor designers on these designs. At this stage all options for the flap valves and riser repair are being considered.

The Committee considered that a clear 'multi-legged' safety approach, using the provided fracture mechanics alongside other methods, would support greater confidence in ensuring safety is demonstrated, which may be considered by ARPANSA in ANSTO's justifications for continued operation.

Item 4.3 Opal Flap Valve

The NSC was provided with information of a self-identified deviation from the OPAL safety case. As part of the project to replace the flap valves (see item 4.2) an error in the original design calculations was identified indicating that the allowable stress limits for a component weld were being exceeded. This exceedance has been present throughout the 17-year life of the reactor with no apparent consequence. The NSC noted a case for continued safe operation was accepted by ARPANSA and that the timeline for further analysis and rectifications had been specified.

5. Update on major Controlled Facilities and Inspections

Item 5.1 Periodic Safety and Security Review (PSSR)

Committee noted an update on the progress of the ARPANSA review of the OPAL PSSR.

Item 5.2 Other facility updates

The committee was provided with a summary of other regulatory activities. No significant regulatory issues or concerns were raised among Committee members.

6. Reports

Item 6.1 ARPANSA significant Activities

The CEO provided an update on significant ARPANSA activities. This included attendance at the Convention on Nuclear Safety (including decisions on managing impacts of pandemics and armed conflict, supply chain, aging management). In relation to the Australian Radioactive Waste Agency (ARWA), the outcome of relevant litigation on 18 July 2023, which found in favour of the traditional landowners on the grounds of apprehended bias in the decision-making process for site selection. The finding set aside the site declaration for Kimba, South Australia. The NSC discussed potential implications of this decision.

The CEO advised that the 'Defence Legislation Amendment (Naval Nuclear Propulsion) Bill 2023' had passed Parliament and received Royal Assent. It amends the *Australian Radiation Protection and Nuclear Safety Act 1998* and the *Environment Protection and Biodiversity Conservation Act 1999*, to clarify that naval nuclear

propulsion is not proscribed as prohibited under either Act, enabling the CEO of ARPANSA to continue to exercise regulatory powers with regard to naval nuclear propulsion. It was noted that the amendments do not disturb the moratorium on civilian nuclear power, and a second tranche of legislation is under development to establish an Australian Nuclear-Powered Submarine Safety Regulator (ANPSSR). ARPANSA continues to support this work, dependent upon resource-sharing discussions, alongside other work programs and resource commitments.

Item 6.2 Radiation Health Committee

The Committee was provided a summary of the recent activities of the Radiation Health Committee, with the next meeting scheduled for 27-28 July 2023. Minutes of the Radiation Health Committee meetings can be downloaded from [ARPANSA website](#).

Item 6.3 Radiation Health and Safety Advisory Council

The CEO of ARPANSA presented a summary of the recent activities of the Radiation Health and Safety Advisory Council with the next meeting of Council scheduled for 10-11 August 2023. She noted that a new membership of Council had just been appointed for the term 2023-2026. Minutes of the Radiation Health and Safety Advisory Council meetings can be downloaded from the [ARPANSA website](#).

7. Other Business

Item 7.1 AUKUS Update

ARPANSA provide a brief update on legislative changes, and potential licencing activities that ARPANSA might need to oversee prior to the establishment of the new nuclear submarine regulator.

The NSC were updated on early considerations to accommodate nuclear safety into the codes and standards framework for Australia, which ARPANSA currently maintains with jurisdictional input through the RHC. A particular current focus is the need to incorporate nuclear safety into this national framework. Further updates on this matter will be provided to NSC at the last meeting of 2023. The NSC noted that there were significant implications on the resources of ARPANSA during both the interim arrangements and into the long-term future.

8. Information on Nuclear Safety Matters and Regulatory Activities

Item 8.1 Travel Reports

The Committee noted the item.

Item 8.2 Public Consultations and publications

The Committee noted the item.

9. Closure and Next Meeting

The meeting closed at 15:45 and the next meeting will be held on 16 November 2023.