



# Nuclear Safety Committee

## Minutes

Details	
Date	5 March 2024
Time	
Location	Derwent room, 619 Lower Plenty Rd, Yallambie VIC 3085
Chair	Dr Tamie Weaver
Members	Ms Jasmin Diab, Dr Gillian Hirth, Mr Tony Irwin, Dr Peter Karamoskos, Mr Cameron MacPhail, Dr Peta Miller, Mr Michael Parker, Mr Brent Rodgers, Mr Peter Wilkinson, Dr Joanna Wriedt
Apologies	Mr Stuart Parr
Secretariat	
Scribe	
Invitees	ARPANSA: Mr Jim Scott, Mr Vaz Mottl, Mr Grant Beamish, Mr Ryan Hemsley, Ms Fran Wigney, Mr John Ward, Mr Chris Nickel

#	Agenda item	Presenter	Time allocated	Papers
1.	<b>Introduction</b>			
1.1	<b>Opening</b>	<b>Dr Tamie Weaver</b>		<b>Nil</b>
The Chair opened the meeting, respectfully acknowledging the Traditional Owners and Custodians of the land, paying respects to their Elders, past and present.				
1.2	<b>Attendance and Apologies</b>	<b>Mr Stuart Parr</b>		<b>Nil</b>
Mr Stuart Parr provided apologies for this meeting.				
1.3	<b>Introductions</b>	<b>Multiple</b>		<b>Nil</b>
Members introduced themselves and the CEO gave an overview of roles and responsibilities of the Committee and highlighted some potential upcoming work during this new triennium.				
1.4	<b>Declaration of Conflicts of Interests – real, perceived or otherwise</b>	<b>Multiple</b>		<b>Nil</b>
No additional potential conflicts were declared at this meeting. Previously declared potential conflicts of interest are maintained by the Secretariat. A brief overview was provided of the process for declaring potential conflicts of interest.				
1.5	<b>Minutes of previous meeting</b>	<b>Multiple</b>		<b>Nil</b>
Draft minutes of the previous meeting had been circulated to members. Member comments were addressed, the minutes were agreed at the meeting, and will be published online.				
1.6	<b>Meeting dates</b>	<b>Multiple</b>		<b>Nil</b>
The future meeting date for June/July will be confirmed out of session.				
2.	<b>Business Arising</b>			
2.1	<b>Outstanding Actions</b>	<b>Multiple</b>		<b>Nil</b>
The Committee noted that all outstanding actions were completed.				
3.	<b>Correspondence</b>			
3.1	<b>Incoming Correspondence</b>			<b>Nil</b>
None.				
3.2	<b>Outgoing Correspondence</b>			<b>Nil</b>
None.				
4.	<b>Main Items for Discussion</b>			
4.1	<b>Overview of Major Facilities</b>	<b>Multiple</b>		<b>Nil</b>
<p>ARPANSA provided a high-level overview of the major facilities that it regulates. This overview was provided to give context for future discussions and advice, particularly for new members. These facilities included the OPAL Reactor, ANSTO Nuclear Medicine (ANM) facility, ANSTO Health (B23), ANSTO Waste Operations, SyMo Waste Treatment Facility, HIFAR Reactor, and Little Forest Legacy Site.</p> <p>The Committee noted that an overview of some key terms that have special meanings within the nuclear industry may be beneficial. The Committee briefly discussed concepts of defence-in-depth, independence of controls, human and organisational factors, design basis accidents and cyber security.</p>				
4.2	<b>OPAL Reactor First Reactor Protection System refurbishment</b>	<b>Multiple</b>		<b>Nil</b>

ARPANSA provided an overview of a recent application to replace components within the First Reactor Protection System (FRPS) of the OPAL Reactor. The FRPS is the electronic control system that is approaching its end of design life and therefore needs to be upgraded. It performs a number of safety functions including the actuation of the First Reactor Shutdown System that, if the reactor goes outside its normal operating parameters, inserts control rods into the reactor core shutting it down.

To support ARPANSA’s regulatory review of the submission a specialist third-party agency was contracted to provide an expert review of the submission and to provide a report and advice to ARPANSA on the safety considerations within the application. The contractor will also review the results of the site acceptance testing and commissioning when they become available.

The Committee discussed several factors for ARPANSA to consider in this application, which included:

- the importance of selecting appropriate vendors with technical expertise, assurance that any potential conflicts of interest are identified, and ensuring ARPANSA can operate as an ‘intelligent customer’ to review such analysis. This was considered particularly important within the limited pool of nuclear sector experts and considering the expansion of activities requiring expert advice. The Committee noted that a tender selection process was undertaken and that assurances had been provided that the contractors have not provided any related advice on this matter to the licence holder.
- ensuring the functional safety analysis was re-assessed for the overall, complete, system to ensure that the level of safety required is attained. This includes the use of appropriately qualified and certified individuals for such assessments. The Committee was informed that this had been reviewed by the contractor and considered by ARPANSA in its regulatory review.
- assessment of changes that affect the independence of the FRPS, specifically related to bi-directional communication between Reactor Control and Monitoring System (RCMS) and FRPS. The Committee was informed this assessment has been undertaken and included the cyber security aspects of this change.
- ensuring the adequacy of the ANSTO ‘qualification equivalent program’, which is required as the PLC (programmable logic controller) has not yet been Institute of Electrical and Electronics Engineers (IEEE) qualified by the vendor. The Committee noted this had been reviewed by the contractor.

4.3	<b>OPAL Cold Neutron Source replacement application</b>	<b>Multiple</b>		<b>Nil</b>
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ARPANSA provided an overview of a recent application to replace the Cold Neutron Source (CNS) which is a component within the reactor. This component is being replaced as it is nearing the end of its design life.

The Committee discussed important factors for ARPANSA to consider in this application, which included:

- The importance of managing the timeframes for submission, review, and authorisation to avoid undue pressures. The Committee noted that guidelines on timeframes could assist both the licence holder and regulator in planning and ensuring adequate assessment resources.
- That internal licence holder verification prior to submission should ensure that both individual documents but also the overall submission is to a high standard and readily reviewable. This helps to ensure that pressure is not unduly applied to both ARPANSA and the licence holder.
- The importance of outage management, which is a complex but common aspect of the operation of such facilities. The Committee felt that it should be made clear how all the work planned to be undertaken, that is not part of the submission, could have safety implications during the outage. This can impact considerations such as how the regulator could determine if the work is not being completed to schedule and what actions important for safety need to be completed.

<ul style="list-style-type: none"> <li>Given the length of the multi-year planning cycles for the project management, staff changes, and knowledge management should be considered. The Committee noted that key staff have not changed during this project planning to date.</li> <li>The importance of contamination control, to mitigate risks to public and other workers. The Committee noted that while it is not expected to significantly increase the risk of any offsite release, there are significant controls required to ensure the risk of contamination for personnel is managed appropriately.</li> <li>The management of foreign objects in the pool, including dropped items, is important to ensure safety. The Committee noted that this should extend beyond just the safety critical items.</li> <li>The importance of the availability of the emergency staff, to ensure rapid response, particularly while any high-risk activities are being undertaken.</li> </ul>			
<b>4.4</b>	<b>Update on draft code for the safety of reactor facilities</b>	<b>Multiple</b>	<b>Nil</b>
<p>The NSC provided feedback on the draft code for the safety of reactor facilities. ARPANSA presented a brief overview of stakeholder engagement to date. ARPANSA will now issue for further external consultation with a final draft to be presented at a future NSC meeting.</p>			
<b>4.5</b>	<b>Defence application for a low-level waste management facility siting licence</b>	<b>Multiple</b>	<b>Nil</b>
<p>The Committee was provided with an overview of an expected licence application to prepare a site for a low-level waste management and maintenance facility at HMAS Stirling on Garden Island, WA to be known as the 'Controlled Industrial Facility'. This is expected to be an application for a prescribed radiation facility under the ARPANS Act. Further information will be provided to the Nuclear Safety Committee once an application is received and ARPANSA has conducted reviews.</p>			
<b>5.</b>	<b>Update on major Controlled Facilities and Inspections</b>		
<b>5.1</b>	<b>Periodic Safety and Security Review (PSSR)</b>	<b>Multiple</b>	<b>Nil</b>
<p>The Chair opened the meeting, respectfully acknowledging the Traditional Owners and Custodians of the land, paying respects to their Elders, past and present.</p>			
<b>5.2</b>	<b>Other facility updates</b>	<b>Multiple</b>	<b>Nil</b>
<p>The Committee noted there was nothing significant to report.</p>			
<b>6.</b>	<b>Reports</b>		
<b>6.1</b>	<b>ARPANSA significant Activities</b>	<b>Multiple</b>	<b>Nil</b>
<p>The CEO provided the Committee with an update on significant ARPANSA activities including:</p> <ul style="list-style-type: none"> <li>Work on priority regulatory submissions from ANSTO for upgrades to the OPAL reactor as outlined in agenda items 4.2 and 4.3;</li> <li>Upcoming appearance at Senate Committee's public hearing for the inquiry into the Australian Naval Nuclear Power Safety Bill 2023 [Provisions] and Australian Naval Nuclear Power Safety (Transitional Provisions) Bill 2023 [Provisions] scheduled for 13 March 2024.</li> <li>Ongoing support and advice to the Nuclear-Powered Submarine Regulatory Design office who are leading the drafting of the new regulations for the proposed Australian Naval Nuclear Power Safety Regulator (ANNPSR).</li> <li>Ongoing development for the Regulatory Administration Database (RAD) and its portal;</li> <li>Production of a report of the recent internal Safety Culture Assessment undertaken by ARPANSA.</li> <li>Key international activities that included support to the Department of Foreign Affairs and Trade (DFAT) on matters such as Fukushima and Ukraine; attending International Atomic Energy Agency (IAEA)</li> </ul>			

<p>Safety Standards Committee meetings; and preparing Australia’s national report to the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management.</p> <ul style="list-style-type: none"> <li>• Emergency management activities included ARPANSA’s participation in a counter-terrorism exercise in February 2024, operational support through the Visiting Ships Panel (Nuclear) for nuclear-powered submarine visits to Western Australia, and the upcoming INEX-6 Exercise.</li> <li>• There is also ongoing work to develop an Environmental Monitoring Framework to support regulatory monitoring, establish principles for risk assessments, and provide public transparency.</li> </ul>			
<b>6.2</b>	<b>Radiation Health Committee</b>	<b>Multiple</b>	<b>Nil</b>
<p>The Committee noted that minutes of the Radiation Health Committee meetings can be downloaded from the <a href="#">ARPANSA website</a>.</p>			
<b>6.3</b>	<b>Radiation Health and Safety Advisory Council</b>	<b>Multiple</b>	<b>Nil</b>
<p>The Committee noted the Minutes of the Radiation Health and Safety Advisory Council meetings can be downloaded from the <a href="#">ARPANSA website</a>.</p>			
<b>6.4</b>	<b>Member of Public update</b>		<b>Nil</b>
<p>No new correspondence has been received.</p>			
<b>7.</b>	<b>Other Business</b>		
<b>7.1</b>	<b>Nuclear-powered submarines update</b>	<b>Multiple</b>	<b>Nil</b>
<p>ARPANSA provided a brief update on legislation and arrangements related to the Australian Naval Nuclear Power Safety Regulator (ANNPSR). Legislation was introduced into Parliament on 16 November 2023. ARPANSA continues to work closely with Defence on these matters.</p>			
<b>7.2</b>	<b>Security Update</b>	<b>Multiple</b>	<b>Nil</b>
<p>ARPANSA provided a briefing on the current security climate and its implications for the Committee at home and abroad.</p>			
<b>8.</b>	<b>Information on Nuclear Safety Matters and Regulatory Activities</b>		
<b>8.1</b>	<b>Travel Reports</b>	<b>Multiple</b>	<b>Nil</b>
<p>The Committee noted the item.</p>			
<b>8.2</b>	<b>Public Consultations and publications</b>	<b>Multiple</b>	<b>Nil</b>
<p>The Committee noted the item.</p>			
<b>9.</b>	<b>Closure and Next Meeting</b>		
	The meeting closed at 16:10 and the next meeting will be held in June or July 2024.	<b>Multiple</b>	<b>Nil</b>