

Section 22

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From: Section 22 <Section 22@arpansa.gov.au>
Sent: Thursday, February 15, 2024 11:16 AM
To: Section 22 <Section 22@onr.gov.uk>
Cc: Section 22 <Section 22@arpansa.gov.au>
Subject: ARPANSA and Defence visit to ONR [SEC=OFFICIAL]

Hi Section 22,

Section 22

[Redacted]

ARPANSA would appreciate meeting with ONR again during this visit. We have two themes for the call:

- Further engagement on training, workforce development and ONR academy
- Introducing the head of the NPSRD team, RADM Kath Richards, to ONR
 - o A discussion similar to what ARPANSA had with Section 22 in November would be excellent for this call

Section 22

[Redacted]

[Redacted]

Cheers

Section 22

Section 22

Principal Advisor Nuclear-Powered Submarines

Defence Engagement Project Team

Radiation Health Services

Australian Radiation Protection and Nuclear Safety Agency

t: Section 22
m: Section 22
w: arpansa.gov.au



Australian Government
**Australian Radiation Protection
and Nuclear Safety Agency**



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Section 22

From: Section 22
Sent: Thursday, 4 April 2024 7:09 PM
To: Gillian Hirth; Section 22; Jim Scott; Rick Tinker; Section 22; Section 22
Subject: Topics for discussion with ONR [SEC=OFFICIAL]

Hi all,

A bit of a scattergun email, but I thought I could get all of you together on one email...

Section 22

On the last topic, I requested this meeting to essentially keep the discussion going from last year. I will seek to enquire more about their inspector training and courses, and determine whether there is scope for ARPANSA (and NPSRD) to attend their courses, and whether we can develop a 'train the trainer' approach. This can be built on a separate ARPANSA trip to the UK. However, are there any questions or topics for the ONR Academy you wish to raise @ Section 22 or @ Section 22?

Another potential topic for discussion is public communications around regulatory assessments. It would be good to better understand the UK approach, noting DNSR doesn't really do much. @ Section 22 do you have any thoughts on this?

As you can probably appreciate, our engagement with ONR is heavily focused on their involvement in regulation of nuclear-powered submarines. However, as a last catch all, are there any other topics either related to submarines or separate that you would like Section 22 and I to raise with ONR?

Cheers

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From: Section 22 <Section 22@arpansa.gov.au>
Sent: Friday, April 5, 2024 7:24 AM
To: Section 22 <Section 22@onr.gov.uk>
Cc: Section 22 <Section 22@arpansa.gov.au>
Subject: ARPANSA - ONR meetings [SEC=OFFICIAL]

Hi Section 22,

It was great to speak with you last night/morning. As requested, please see below all of the proposed arrangements and suggestions for meetings and topics from our side.

Who

ARPANSA – Section 22, Principal Advisor to the CEO on Nuclear Powered Submarines and Section 22
Section 22, Technical Advisor and Regulatory Lead

Nuclear Powered Submarine Regulatory Design (NPSRD) – RADM Katherine (Kath) Richards and CDRE Guy Holthouse

Note: The NPSRD is the team that is the precursor organisation to the Australian Naval Nuclear Power Safety Regulator (ANNPSR). ANNPSR will be the Australian equivalent to DNSR. However, they are not yet a regulator.

When

ARPANSA (Section 22 and I) are available to meet with ONR on 29 and 30 April.

The Nuclear Powered Submarine Regulatory Design Team is available to meet with ONR on 30 April only.

Proposed meetings and topics

Meeting with CEO (Section 22) and Executive Director of Regulation (Section 22)

Proposed topics: Introductions of senior ONR representatives to NPSRD. Strategic overview of interaction between ONR and DNSR, and lessons learned for Australia.

Roundtable between ONR and DNSR – could be together with (Section 22) and (Section 22) or separate

Proposed topics: Introduction of DNSR to ARPANSA. More detailed discussion of ONR and DNSR's interfaces. ONR's and DNSR's processes for licensing assessments for new sites. Workforce issues.

ONR Academy with (Section 22)

Proposed topics: Building on meeting last November. Does ONR has appropriate online training/webinars that could be shared with ARPANSA? Proposed secondment of junior inspectors to ONR for learning and development

Other potential topics:

- Public engagement and consultation. When and how is public consultation undertaken in relation to licence assessments, particularly around naval nuclear propulsion. Does ONR and DNSR work together? How does ONR undertake public consultation in regards to radioactive waste issues?
- Continuing discussion with ONR site inspectors for military sites. Last November, we had an excellent conversation with (Section 22). Now that ARPANSA is undertaking the licence assessment for a controlled industrial facility at HMAS *Stirling* in Western Australia, we would like to explore ONR's processes in more detail.

Where

As discussed, the meetings on 30 April will be held in London. (Section 22) and I are available on 29 April for meetings. Our preference would be to remain in London if possible. We can consider travelling to Bootle, but as noted in our discussion, that would mean only having half a day there on Monday, and we would want to ensure there was value in doing so. I am not sure that the proposed topics above necessarily warrant that travel, but I would take your advice on any possible approach.

Hopefully that addresses everything you are after. I am happy to chat with you further about logistics and planning for the meetings. And more than happy to provide more details of the topics proposed and any Australian context that would be useful.

Have a good weekend.

Cheers

(Section 22)

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Principal Advisor Nuclear-Powered Submarines

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Travel diary

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Daily Schedule

Please record the major business activity for each day including official Rest Days, weekends, and public holidays					
Date	Location	Nature of Activity	Time from	Time to	Initials
27/04/2024	London UK	Arrival in UK	2pm	-	Section 22
28/04/2024	London UK	Rest Day -Sunday	12am	12am	Section 22
29/04/2024	London UK	Planning Day	8am	4pm	Section 22
30/04/2024	London UK	Meetings at the Australian High Commission with Office of Nuclear Regulation, Naval Reactors, Australian Submarine Agency and Ministry of Defence re AUKUS and travel to Edinburgh	9am	5pm	Section 22
01/05/2024	Edinburgh, UK	Planning Day	9am	5pm	Section 22
02/05/2024	Rosyth, UK	Visit to BAE Systems Rosyth and travel to Cumbria	9am	5pm	Section 22
03/05/2024	Sellafield, Cumbria, UK	Visit to Sellafield, UK and travel to Manchester	8am	5pm	Section 22
04/05/2024	Manchester Airport	Fly back to Australia – Landed 8.30pm05/04/2024	5am	12am	Section 22

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International engagement report

Engagement with the UK Office of Nuclear Regulation and the UK Defence Nuclear Safety Regulator

Tour of Rosyth Royal Dockyard Ltd (Babcock International Group)

Tour of Sellafield Ltd

United Kingdom

29/04/2024 to 03/05/2024

Participant(s) from ARPANSA: **Section 22**

Background

ARPANSA is developing its relationship with the UK in the context of a shared interest in the regulation of nuclear-powered submarines for nuclear and radiological safety. This relationship is focused on the UK's civilian nuclear safety regulator, the Office for Nuclear Regulation (ONR). In September 2023, ARPANSA and ONR signed an Information Exchange Agreement to share information, experience, and good practice. ARPANSA seeks to engage with ONR on a range of issues, particularly in relation to its involvement in and interfaces with the UK's nuclear-powered submarine program and workforce training, staff development and knowledge management.

The ONR regulates, in part, sites which support the UK Naval Nuclear Propulsion Program including shipbuilding yards. This is achieved via a general agreement with the Ministry of Defence whereby the ONR will interface with the UK Defence Nuclear Safety Regulator (DNSR) to achieve full onsite and offsite coverage of nuclear and radiological safety and security related to nuclear submarines. In the United States the sole regulator of submarines is the Naval Reactors (NR).

The Australian Naval Nuclear Powered Safety Regulator (ANNPSR) is scheduled to be established in July 2024 by the Nuclear-Powered Submarine Regulatory Design team (NPSRD) to regulate Australia's fleet of nuclear-powered submarines. The interfaces between ARPANSA and ANNPSR are still actively being developed but the regulatory model is expected to be similar to the one established in the UK. ARPANSA is conducting licensing work concerning nuclear submarines until ANNPSR are established including early licensing of a facility at the HMS *Stirling* site and licensing of a shipbuilding yard at Osborne.

It is therefore vital that ARPANSA continues to meet with AUKUS regulatory bodies in order to partake in knowledge sharing regarding the licensing of such facilities and to further understand any interfaces between civilian and defence regulators with regards to naval nuclear propulsion programs.

Relevant Details

An ARPANSA delegation consisting of **Section 22** and **Section 22** took part in meetings at the Australian High Commission in London which comprised of representatives from ONR, DNSR, UK Ministry of Defence (MoD), Australian Submarine Agency (ASA), NPSRD, the Australian Nuclear Safeguards Office (ASNO) and the US Naval Reactors. The meetings covered key topics such as strategies for resourcing and training, waste management and decommissioning. A key outcome for ARPANSA was discussion regarding mutual assurance strategies between civilian regulators and defence or AUKUS partner submarines (specifically when detailed design information on submarines cannot be shared)

The delegation travelled to the Rosyth Royal Dockyard Ltd to engage with Babcock International Ltd which is regulated by the ONR. Rosyth Dockyard was used for the refit, repair and maintenance of operational nuclear submarines from the 1960s until 2003. As each submarine reached the end of its operational life, it was defueled and decommissioned onsite. Phase 1 of the decommissioning is the removal of low-level waste from the decommissioned submarines. Its primary role now is the dismantling of decommissioned nuclear submarines. A MoD project for the final dismantling of the laid-up submarines is currently at the planning design stage - Submarine Dismantling Project Phase 2, which will remove the intermediate level waste (ILW) from the decommissioned submarines, and infrastructure to process and package the ILW. A key outcome of the visit for ARPANSA was to further understand the scale of infrastructure required to support a naval nuclear propulsion program and to gain more information regarding the whole life cycle of such a program.

The delegation visited the Sellafield nuclear site which, among other things, manages more radioactive waste in one place than any other nuclear facility in the world. Many of the Sellafield facilities are ageing, and new facilities are required, as the site's mission changes from reprocessing to decommissioning. Key outcomes were a tour of the purpose-built Wet Inlet Facility which currently stores spent fuel from the UK Naval Nuclear Propulsion program.

As ARPANSA is conducting the initial licensing of naval nuclear propulsion program related facilities at HMAS *Stirling* and Osborne it was considered important that staff view a working shipyard and decommissioning facility as well as waste management facilities in order to further understand the full licensing lifecycle of such technology. This is in line with the ARPANS Regulations which require the CEO to take in account the full staged lifecycle of any facility even at the siting licence stage.

The key outcomes from the visit included information sharing on

Regulatory frameworks and the approach to licensing of naval nuclear propulsion programs

- Although the cooperation agreement with the ONR prohibits detailed discussions of defence installation, ARPANSA was able to discuss the interfaces between the ONR and the DNSR. As Australia is likely to adopt a regulator model more akin to the UK model, this information was important to further prepare ARPANSA for any future interface role with Defence regulator. ONR and MoD have agreed to amend the ARPANSA – ONR agreement to include discussions of defence installations.

Mutual Assurance between Regulatory Bodies

- ARPANSA was able to obtain information regarding the mechanisms between regulatory bodies for providing mutual assurance on the safety of naval nuclear propulsion programs where details on the design cannot be shared. This is particularly important for the current licensing work which ARPANSA is conducting at HMAS *Stirling* which involves interface between an Australian facility and visiting AUKUS partner submarines.

Training and recruitment of staff

- An overview of the ONR academy and training modules was given and the possibility of non ONR staff attending the ONR academy virtually was discussed. The MOD 3-month naval nuclear propulsion program was also discussed and raised as a key resource by ONR for training its inspectors who engage with DNSR. This information is seen as key to improving ARPANSA's existing inspector training and the MOD course could be considered if ANNPSR stand up is further delayed.

Summary

ARPANSA is strengthening its relationship with UK in the context of a shared interest in the regulation of nuclear-powered submarines for nuclear and radiological safety. Following this, an ARPANSA team joined a wider Australian delegation attended a visit to the Australian High Commission in London to meet with the UK Office of Nuclear Regulation, the UK Defence Nuclear Safety Regulator (DNSR), the US Naval Reactor Regulator, the Australian Submarine Agency (ASA), the Australian Office of Nuclear Safety Regulatory Design (NSRD), the Australian Nuclear Safeguards Office (ASNO) and the UK Ministry of Defence to discuss the resourcing and regulation throughout all life stages of naval nuclear propulsion programs and their support facilities. Key outcomes included discussion of interfaces between civilian and in relation to oversight of nuclear submarines; the concept of mutual assurance between regulatory bodies particularly when information regarding detailed submarine design cannot be shared and sharing on recruitment and training.

The delegation, together with personnel from NPRD, ASNO and ASA undertook a visit of the ONR licensed Babcock site at the Royal Rosyth Dockyard to gain further insight into an ex working shipyard and manufacturing plant for nuclear submarines which has now moved to decommissioning phases. In addition, a visit to Sellafield Ltd in Cumbria was undertaken (again ONR licensed) which stores spent fuel from the UK naval nuclear propulsion program. These visits were vital in enabling further understanding of the full lifecycle of naval nuclear propulsion programs and their support facilities, of which ARPANSA is currently undertaking initial licensing for in Australia whilst the defence regulator is being established.

The visit was also considered to be crucial in further preparing ARPANSA for an interface regulatory role with ANNPSR given that the Australian regulatory model is likely to be based on the UK's existing model between the ONR and the UK Defence Nuclear Safety Regulator (DNSR) to a degree. Opportunities for ARPANSA staff to attend ONR training and MOD training were also discussed.

What does it mean for ARPANSA?

The visit means that ARPANSA continues to actively engage and collaborate with the Office of Nuclear regulation under the Information Exchange Agreement which was signed at the September 2023 International Atomic Energy Agency General Conference. Key outcomes of this visit included but are not limited to:

- The visit provided valuable information on UK and USA regulatory bodies of naval nuclear propulsion programs. In particular it provided further information on the regulatory interfaces between defence and civilian regulators which is important as Australia is developing a similar regulatory model.
- Opportunities for ARPANSA staff to attend the ONR academy and MOD training were discussed.

- Vital information on mutual assurance between regulatory bodies was obtained which is relevant to the current licensing work which ARPANSA is undertaking with the ASA.
- The visit to the decommissioning shipyard and the waste storage facility was important as ARPANSA is conducting licensing of naval nuclear propulsion facilities until ANNPSR is established and under the ARPANS regulations, the CEO must consider a whole of life approach when making a licence decision.

Opportunities for future international engagement

ARPANSA will continue to collaborate with the UK Office of Nuclear Regulation, the UK Ministry of Defence and the Defence Nuclear Safety Regulator to share information on regulatory frameworks and the licensing of naval nuclear propulsion program support facilities. Future engagement may also involve ARPANSA staff attending ONR and MOD training courses and ongoing discussions re resourcing.

Further information

Further information can be obtained from [Section 22](#) or [Section 22](#)