



Australian Radiation Protection and Nuclear Safety Agency consideration of public submissions on the Australian Submarine Agency licence application to prepare a site for a Controlled Industrial Facility

Background

The Australian Submarine Agency (ASA) submitted a licence application to the CEO of ARPANSA on 27 March 2024. The application sought permission from the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) to prepare a site for a facility known as the 'Controlled Industrial Facility' (CIF) that meets the criteria for a prescribed radiation facility. The proposed facility is intended to provide low level waste management and maintenance support to the Submarine Rotational Force - West (SRF-West) program at the existing HMAS *Stirling* Navy Base on Garden Island in Western Australia.

ARPANSA's role in regulation activities of the ASA is restricted to activities that involve radiation or nuclear safety. For example, the scope of ARPANSA's review of any effects on people or the environment is limited to any radiological effects or impacts directly related to radiation. It does not extend to socio-economic, health or environmental impacts unrelated to radiation.

The CEO of ARPANSA invited public submissions and comments on this proposed facility between 8 May and 7 June 2024.

ARPANSA received 165 public submissions relating to this licence application from interest groups, businesses and individuals, the majority of whom reported their location as within the local community in Western Australia.

ARPANSA wishes to thank the individuals and organisations for the time and effort taken in expressing their views on the application by the ASA. Consultation supports informed decision-making and ARPANSA recognises the value of public input and stakeholder engagement.

The licence application

The *Australian Radiation Protection and Nuclear Safety Act 1998* (ARPANS Act) and Regulations require a staged licensing approach, which is in line with international best practice. The licence application for each stage needs to be forward looking and contain sufficient information on the safety and security aspects of subsequent stages to allow the CEO or her delegate to make an informed decision. A new licence application is required for each stage of a facility. The key stages are siting, construction, operation and decommissioning. This licence application is the **first** of the staged licence applications to be submitted for this facility.

ARPANSA confirms that ASA submitted the full suite of licence application documents for a siting licence for a prescribed radiation facility required under the ARPANS Regulations. Details of the required content of these documents and the level of assessment ARPANSA requires from licence applicants to demonstrate radiological safety can be found on [our website](#). The ASA licence application included:

- a safety analysis report (which considered both normal and accident conditions)
- plans and arrangements to cover:
 - radiation protection
 - safety management (including demonstration of how ASA will maintain suitably qualified and experienced personnel to manage the facility)
 - environmental protection (including baseline radiological monitoring programs)
 - emergency planning and response
 - waste management
 - effective control
 - security
- the required site evaluation to consider site characteristics
- the potential effect of external hazards (both natural and human-caused) on the safety/security of the proposed facility.

Under ARPANSA's Act and Regulations, the ARPANSA CEO or her delegate will only grant a licence if there is confidence that stringent requirements have been met and there is evidence that these requirements can continue to be met throughout the lifecycle of the facility.

Decision to invite public comment

Under the Australian Radiation Protection and Nuclear Safety (ARPANS) Regulations, only licence applications for *nuclear installations* have a requirement for public consultation. The proposed levels of radioactivity to be managed in the CIF are significantly less than those prescribed in the ARPANS Regulations for a nuclear installation and as such the type of licence required is classified as a *prescribed radiation facility*. There is no requirement for ARPANSA to conduct public consultation for a prescribed radiation facility, however the CEO has elected to seek public comment for this licence application.

Despite there being no legislative requirement for public consultation in this instance, the CEO of ARPANSA elected to seek public comment due to the level of public interest, and also due to the fact that this is the first licence application to be submitted to ARPANSA from the newly formed ASA. The CEO of ARPANSA will continue to seek public comment on future ASA facility licence applications (including any future staged licence applications for the CIF), regardless of whether they are characterised as a nuclear installation whilst ARPANSA remains the responsible regulatory authority. Note that the legislation to establish the dedicated naval nuclear power safety regulator, the Australian Naval Nuclear Power Safety Regulator (ANNPSR) is currently before Parliament. ARPANSA will remain the regulatory authority for nuclear and radiological safety for ASA until the legislation passes Parliament and a commencement date is set.

Consideration of public submissions

ARPANSA seeks to engage with our stakeholders in a balanced and fair way, welcoming all perspectives, while being clear about our role, purpose and independence. We will use insight from our consultations to improve how we work with our stakeholders and to encourage our licence applicants and holders to do the same.

ARPANSA has taken the public submissions into account in our regulatory assessment of this licence application.

This process involves documenting and analysing issues and concerns raised during the consultation and providing a response to demonstrate, where applicable, how the submission was considered in the decision-making process.

Topics raised in the submissions have been grouped into themes and annotated with ARPANSA responses in the two tables below. Table 1 relates to themes that are directly relevant to the scope of the licence application. These are:

1. The information released for public comment
2. Radiological safety of people and the environment
3. Final disposal of radioactive waste in Australia
4. Waste inventory of the proposed facility (including concerns that additional radioactive waste from AUKUS partner countries could be accepted at the facility)
5. Request for non-radiological safety related information about the proposed facility
6. Transport of radioactive waste from HMAS *Stirling*.

ARPANSA notes that some comments submitted relate to areas that fall outside of ARPANSA's jurisdiction and/or are outside of the scope of the licence application. These have been addressed in Table 2. One submission requested an extension of up to 2 months in order to provide additional information which was not granted due to the impact on ARPANSA's work program. The ARPANSA CEO has committed to providing further opportunities for public comment on any future ASA facility licence applications that fall under ARPANSA's regulatory jurisdiction.

Table 1 – Public submissions related to the scope of the licence application

	Public submission theme	ARPANSA response
1	The information released for public comment	<p>When seeking public comment, ARPANSA typically releases public components or details of a licence application with the permission of the licence applicant. Some licence documents must be heavily redacted or cannot be published at all for security or commercial-in-confidence reasons.</p> <p>As the proposed site is an operational military navy base, and the proposed operations will interface with vessels owned and operated by AUKUS partner nations, there are constraints on ASA regarding what information they are permitted to release.</p> <p>ARPANSA has aimed to balance the restrictions placed on ASA with the decision to consult the public regarding this licence application.</p> <p>The ASA submitted for public comment, a document that contains an overview of the facility, its purpose and operations and how it has satisfied ARPANSA’s licensing requirements.</p> <p>While the summary document is not as comprehensive as information released in other ARPANSA licence consultations, ARPANSA is satisfied that the overview document provides an appropriate and accurate summary of the proposed facility and licence requirements to allow for external stakeholders to make comment.</p> <p>ARPANSA will continue to engage with ASA, to encourage the provision of as much information as possible in any future public consultations related to this facility and any future licence applications.</p>
2	Radiological safety of people and the environment	<p>Under the ARPANS Act and Regulations, the ARPANSA CEO will only grant a licence if there is confidence that stringent requirements have been met and there is evidence that these requirements can continue to be met throughout the lifecycle of the facility.</p> <p>The ARPANSA assessment of the licence application took into account the elements of radiological safety and security which were raised by the public submissions. There were no elements of radiological safety or security raised in the public submissions that are not suitably addressed in the detailed licence application submission provided by ASA to ARPANSA.</p> <p>It was concluded that the proposed facility is compliant with the requirements of the ARPANS Act and Regulations, and also with applicable international best practice for the safe storage and management of radioactive waste. In addition, ARPANSA also performed independent verification of information provided in the application which included performing an assessment of the radiological consequences of a credible worst-case incident at the proposed facility¹.</p> <p>ARPANSA found that, in this worst-case scenario, any radiological doses off-site were negligible and predicted doses on site at HMAS <i>Stirling</i> were significantly less than statutory dose limits. This worst-case scenario was derived from considering a wide number of events (and combination of events) including</p>

¹ See ARPANSA Guide for Radiation Protection in Emergency Exposure Situations [Radiation Protection Series G-3](#) | ARPANSA for more information

		<p>human-caused (for example security events) and natural incidents (for example seismic, bushfire, flooding, etc).</p> <p>ARPANSA is satisfied that nothing in the public submissions relating to radiological safety of people or the environment indicates the proposed facility could not be constructed, operated and decommissioned in a way that provides assurance of the radiological safety of the workers, the public and the environment.</p>
3	Final disposal of radioactive waste in Australia	<p>ARPANSA acknowledges that there is no identified Commonwealth disposal pathway for radioactive waste in Australia and that radioactive waste storage is only an interim measure.</p> <p>The Australian Government has made a commitment to identify final disposal pathways for Australia’s radioactive waste and the Australian Radioactive Waste Agency (ARWA) was established in July 2020.</p> <p>In addition, the Australian Government has made a commitment in relation to the naval nuclear propulsion program to identify locations that are suitable for disposal of radioactive waste generated by submarines.</p> <p>Given the above government commitments, and ARPANSA's assessment that the proposed facility can be constructed, operated and decommissioned in a way that protects the radiological safety of workers, the public and the environment, it is not considered justified to refuse a licence on this basis alone.</p> <p>ARPANSA has not identified any reason to conclude that the waste at the CIF cannot be managed safely over the proposed lifecycle of the facility and acknowledge that ASA have contingency plans in place if required.</p>
4	Waste inventory (including concerns that high-level radioactive waste from AUKUS partner countries could be accepted at the facility)	<p>The proposed facility would only be licensed to manage radioactive waste from the SRF-West program within the strict activity limits laid out for a prescribed radiation facility under the ARPANS Regulations. These limits prevent the CIF from being able to handle spent nuclear fuel or high-level radioactive waste.</p> <p>A different type of licence would need to be sought and approved by the relevant regulatory authorities for management of waste beyond the activity limits for a prescribed radiation facility.</p>
5	Request for non-radiological safety related information about the proposed facility. In addition, there was a request to access the proposed site location at HMAS <i>Stirling</i>	<p>Requests for specific documents, processes or information not related to radiological safety should be directed to the ASA.</p> <p>Requests to access HMAS <i>Stirling</i> must be directed to the Department of Defence.</p>
6	Transport of radioactive waste off HMAS <i>Stirling</i>	<p>A licence would only permit on-site storage of radioactive waste at HMAS <i>Stirling</i>.</p> <p>If there was a requirement in the future to transport waste off-site, the ASA would need to obtain separate regulatory approvals from the appropriate regulatory bodies.</p>

Table 2 – Public submissions related to issues outside the scope of the licence application

	Public submission theme	ARPANSA response
1	Submission of proposed alternate sites to store/ dispose of radioactive waste from the CIF and any future nuclear-powered submarine program. One submission also suggested ARPANSA seek external support in the review of this licence application	As the independent regulator of Commonwealth entities that use or produce radiation, ARPANSA has no official role in the identification or selection of potential sites for storage or disposal of radioactive waste. ARPANSA has appropriate suitably qualified and experienced personnel to undertake this licence assessment.
2	Acceptance of AUKUS spent fuel from nuclear-powered submarine programs	Questions regarding management of spent fuel from nuclear-powered submarine programs should be directed to the ASA. The proposed CIF is a prescribed radiation facility with strict limits for radioactivity that are prescribed under the ARPANS Regulations. It cannot be permitted to handle spent nuclear fuel or high-level waste.
3	The safety and operations of visiting nuclear-powered submarines	The Australian government's Visiting Ships Panel (Nuclear) is a Defence-led, cross-government panel that oversees visits to Australian ports by nuclear-powered vessels. This group has established procedures to ensure the public and the environment's safety during visits from nuclear-powered vessels, including submarines. These procedures include conditions of entry to the port, radiation monitoring, and contingency arrangements in the unlikely event of an incident resulting in the release of radioactivity to the environment. The Western Australia State Emergency Plan for visits by nuclear-powered submarines to Western Australian ports can be viewed here: State Hazard Plan Hazmat Annex A Nuclear Powered Warship (www.wa.gov.au)
4	Concern that establishment of the SRF-West program could result in targeting by adverse military forces	ARPANSA is not able to comment on decisions regarding the establishment of SRF-West nor military threats. The establishment of SRF-West is a government policy decision, and enquiries are best directed to the ASA.
5	Establishment of the AUKUS nuclear-powered submarine program	The establishment of the AUKUS nuclear-powered submarine program is a government policy decision. Any sovereign submarine delivered under the program will require full approvals from appropriate regulatory authorities.
6	Concerns regarding any future government decisions to establish nuclear power in Australia	ARPANSA is not able to comment on government policy regarding establishment of nuclear power in Australia. This topic is not relevant to the regulation of nuclear-powered submarines.

7	Questions regarding nuclear liability	Questions regarding nuclear liability should be directed to the Department of Defence.
8	Potential impacts of the proposed facility that fall outside of ARPANSA jurisdiction	ARPANSA is the independent regulator of Commonwealth entities that use radiation. Queries regarding details of the applications made to other authorities concerning issues that are outside of our jurisdiction (for example non-radiological environmental impact or cultural heritage) should be directed to the appropriate regulatory body, for example, the Department of Climate Change, Energy, the Environment and Water. We remain committed to working with other regulators, as appropriate to ensure effective interfaces that allow us to continue to ensure independent regulation of radiological and nuclear safety. ARPANSA will encourage ASA to note the topics of feedback in this consultation and to take appropriate action to address public concern and interest as part of their ongoing stakeholder engagement.
9	The independence of the Australian Naval Nuclear Power Safety Regulator (ANNPSR)	ARPANSA has provided feedback to parliament on the proposed ANNPSR Bill, including the importance of demonstrating operational independence of the regulator. At the time of the closure of the consultation, the Bill remains before Parliament.

ARPANSA’s assessment of the licence application

ARPANSA conducted a thorough and comprehensive review of all application materials provided by the ASA. The ARPANSA assessment of the licence application concluded that the proposed facility is compliant with the requirements of the ARPANS Act and Regulations and also applicable international best practice for the safe storage and management of radioactive waste.

In addition, ARPANSA performed verification of information provided in the application which included performing an independent assessment of the radiological consequences of a credible worst-case incident at the proposed facility². The ARPANSA results of this assessment were in line with the licence applicant’s own findings which were that: in this worst-case scenario, the radiological doses off-site to people and the environment (that is off the HMAS *Stirling* Navy Base) were negligible and that the predicted doses on site at HMAS *Stirling* Navy Base remained significantly below statutory limits. The worst-case scenario was derived from considering a wide number of events (and combination of events) including human-error or malicious acts (including security events) and natural incidents (for example seismic, bushfire, flooding, etc).

The overall conclusion was that the facility can be sited as proposed and that there is evidence to demonstrate that the facility can be constructed, operated and decommissioned in a way that provides assurance of the radiological safety of the workers, the public and the environment.

The public submissions have been responded to in the tables above and have been taken into account in making final findings in relation to the licence application. Overall, there were no submissions that justified ARPANSA finding that the application did not provide sufficient satisfaction of the radiological

² See ARPANSA Guide for Radiation Protection in Emergency Exposure Situations [Radiation Protection Series G-3](#) | ARPANSA for more information

safety of the proposed facility. Therefore, there was no information obtained or considerations raised that would justify ARPANSA refusing to issue a siting licence. ARPANSA notes that there were a range of concerns raised and will encourage ASA to note the topics of feedback in this consultation and take appropriate action to address public concern as part of their ongoing stakeholder engagement.

While ARPANSA remains the regulatory authority for radiological and nuclear safety for ASA, we will continue to consult with the public on ASA facility licences, including for future staged licence applications for this facility, regardless of whether there is a mandatory legal requirement to do so.