

Australian Radiation Protection and Nuclear Safety Agency
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To the CEO of ARPANSA,

Thursday 17 July 2025

Re: Submission to Application number: A01075

Thank you for the opportunity to submit to the Australian Radiation Protection and Nuclear Safety Agency on the licence application from the Australian Submarine Agency (ASA) for the construction of a Controlled Industrial Facility (CIF) at HMAS Stirling, Garden Island, Rockingham, WA.

This submission is made on behalf of Nuclear Free WA, a registered charity formed in 2023 with over 80 members and thousands of supporters. The organisation is the latest form of the strong and long standing anti-nuclear movement in WA.

Many of our members live in the local government areas of Rockingham (situated on the border of Whadjuk and Binjareb Noongar peoples territories), Kwinana, Cockburn and Fremantle which all face Cockburn Sound - the location of HMAS Stirling at Garden Island. Consequently, they are directly and personally impacted by the AUKUS nuclear powered submarine program and including the ASA's proposed CIF to manage and store nuclear waste.

Nuclear Free WA stands for a nuclear free Indo-Pacific, peace and for Australia to have an independent foreign policy. We are fundamentally opposed to AUKUS and the Force Posture Agreement and the visitations, rotations, procurement and building of naval nuclear-propelled submarines in Australia. We are opposed to this application from the ASA which would facilitate the storage of Low Level nuclear waste from visiting US and UK nuclear powered submarines.

We oppose the presence of these submarines, the military build up in the region to secure foreign defence forces and we absolutely reject the establishment of a facility to store radioactive waste from foreign defence forces. This is not in the public interest but instead makes our beautiful Cockburn sound a military target and inevitably subject to the risk of radioactivity escape. It poses a health risk to workers, to the environment and in the case of an accident the broader community who use the region intensively through recreation, boating, fishing, walking and more.

Despite our strong opposition, we have engaged, and continue to do so, in policy discussions regarding the implementation of AUKUS, in the interest of constructively advocating for stronger, clearer and more transparent laws and conditions for the operation of nuclear submarines in Australian waters. In the interest of public safety, governance and transparency we offer this

submission to the ARPANSA on some more substantive details beyond our broader informed opposition.

Lack of detail on the proposal

The entire application documentation is simply a declaration that the guidelines in the handling of radioisotopes as specified by ARPANSA, IAEA, etc. would be followed in construction of the Controlled Industrial Facility (CIF) at the HMAS Stirling Naval Base.

No details of that construction are given that would permit assessment of whether those guidelines would actually be followed. Indeed, it is admitted in Effective Control Arrangements Section 9.1-4, that the design of the CIF is yet to happen (e.g. 9.2.c. "The Design Services Consultant 1, with their suitably qualified and experienced team, are developing the CIF design on behalf of the SEG"). Further, this design process will take place entirely within the Department of Defence through their Security and Estate Group (SEG) and thus be unaccountable to ARPANSA or public scrutiny.

There are also numerous references throughout the documents that the design is yet to be done, such as "as the design progresses". However, in a public information session held on 3 July 2025 the CEO of ARPANSA stated that ARPANSA has received the design for the CIF. Whether or not a design exists, it is not available for this public consultation.

Some examples of plans and proposals that are yet to be developed or made public include:

Safety Analysis Report: Section 3.5 details of the transfer and handling of the waste from the submarine to the CIF. It is apparent that there is still no clear plan or agreement with the partners on the vehicle, transport, route, or specification of any roads or surfaces to transfer the materials from the port to the CIF.

Safety Analysis Report: In section 5.8 we are concerned that the form, volume and amount of the radionuclides to be stored are not yet known before building design. Only Co-60 is mentioned ($t_{1/2}$ 5.27 y). 5.19. But the design is not given. Section 5.5 of the SAR indicates issues of sea level rise, ground water, storm surges and tidal events will be addressed later; surely these items need to be known before the CIF design phase, rather than being worked out during or after construction.

Safety Management: Section 2.5 "The Nuclear-Powered Submarine Safety Management System is currently under development." We are of the view that this would need to be established before any building could be designed or construction begin.

Emergency Management: Section 2.3 "The existing HMAS Stirling Emergency Management Plan is comprehensive, well established, and includes emergency preparedness and response arrangements across the full spectrum of planned operations in a hazardous environment." We

are concerned that the Emergency Management plan is outdated and has no social license for some of the emergency response actions proposed.

Radiation Management: Section 6.2 “Workflow planning has been conducted during the facility design to ensure doses are as low as reasonably achievable.” This statement conflicts with Effective Control Arrangements Section 9.1-4 which states that the design is yet to be done. If workflow planning has indeed been done it needs to be presented for scrutiny in a public consultation. As throughout this proposal insufficient information is given for effective third party assessment.

Classification of Waste Type

For ARPANSA, or any entity outside of the Department of Defence, to be able to comment on this application, further details must be provided. Firstly, details of the half-lives and radiation characteristics of the isotopes to be handled must be known, in order to understand such parameters as the degree of shielding required and required longevity of storage facilities for longer lived isotopes. Perhaps such information was supplied to ARPANSA but not made publicly available for security reasons. If this is the case then putting it out for public consultation is meaningless as the criteria for assessment are not publicly available. Secondly, no details are given of the proposed design, as this is claimed as yet to be done.

It is claimed that: “The waste being managed at the CIF will be low-level waste and similar in levels to waste that is currently managed at more than 100 locations around Australia” (Safety Analysis Report, Section 3.3). This claim bears scrutiny as the processes producing radioactive waste in nuclear submarines differ from those producing such waste in hospitals and research organizations. Knowledge of the radioisotopes involved is necessary to assess this claim, and thus understand the CIF containment requirements.

We are concerned about liquid wastes produced in the maintenance process where there is some risk of intermediate level waste being generated and stored. There is reference to liquid waste in the Safety Analysis Report Section 2.6(b) & Section 3.9 - 3.15. There is minimal description of the process and no clear indication of the treated waste criteria or quantities expected at the site or to be released into the environment and in what form.

The lack of transparency is increasingly problematic from a public perspective as it generates distrust and unease about the potential for undisclosed types of radioactive waste to be stored at HMAS Stirling in close proximity to the community and in a vulnerable location to both climate impacts and as a military target.

Long term waste Management and Decommissioning

In view of “The disposal location for the radioactive waste from nuclear-powered submarines has not yet been decided” (Overview, P6), contingency plans are required for longer lived

isotopes. In Australia there has been a search for permanent storage sites for long-lived radioisotopes for at least half a century, with no resolution so far. Proposed sites have been opposed by community groups, mainly First Nations people. Uncertainty continues into the indefinite future as to whether a permanent site can be found. This affects consideration of longevity of functional operation of the CIF. There needs to be contingency plans of how to manage long-lived radioactive waste into the future in the event of no long term storage facility becoming available – e.g. plans to extend the life of the CIF or find an alternative “temporary” storage site.

We are deeply concerned about the Decommissioning Report section 2.3a where there is no commitment to decommissioning. One future option listed (section 2.3 a) is for the “Continued operations as a radiologically controlled building.” This option is inconsistent with the promotion of the facility as a temporary facility with a time-bound licence..

Security of Radioactive Material at a vulnerable site

HMAS Stirling faces two major threats, one as a military target, and one due to its location and impacts of increasingly intense weather events and sea level rise as a consequence of climate change.

Although this CIF is planned to be within military establishment, there are no contingency plans for enemy attack. Recent events in Ukraine (e.g. Zaporizhzhia nuclear power plant) and Iran illustrate that international constraints in attacking nuclear facilities have been lifted. In the threat of war likely to involve Australia there needs to be contingency plans of what to do with the radioactive material in the CIF, such as removing it or making the CIF bomb proof. An attack on Stirling Naval Base, even if no nuclear submarines were hit, would result in the radioactive contents of the CIF being distributed over Cockburn Sound and its hinterland.

In the Safety Analysis Report (SAR) 4.8 it is clear that, as the site is only 1-3 m above sea level, measures to counter possible ground water effects, sea level rise and increased severity of tidal and storm surges exacerbated by climate change need to be specified.

We are concerned that section 5.5 of the SAR indicates these issues will be addressed later, surely these items need to be known before the CIF design phase, rather than being worked out later.

Throughout the proposal it is claimed that the likelihood of accidents involving escape of radioactivity at the CIF is negligible. The experience at a base for UK submarines that has been in operation for over half a century is different. Since 2006, 789 nuclear safety events were recorded at HM Naval Base Clyde at Faslane, a UK nuclear submarine base, and nearby Royal Naval Armaments Depot Coulport, as confirmed by the UK Ministry of Defense.¹ [].

¹ <https://www.bbc.com/news/uk-scotland-glasgow-west-46863064>

Although most accidents were “low level” some were not. However, it is generally acknowledged that governments are reluctant to publicly disclose nuclear, or any other, accidents occurring within their military.

Transparency and Accountability

Oversight of any grant of licence by ARPANSA would be transferred to the Australian Naval Nuclear Power Safety Regulator (ANNPSR) when it is stood up in November 2025. As the ANNPSR reports to the Ministry of Defence, there will no doubt be a diminished chance of public accountability, including reporting on accidents. This in itself presents a safety risk to both people and the environment - lack of awareness goes against good governance.

It is important to reflect on the statutory role and mandate of the Naval Nuclear Power Safety Regulator (ANNPSR) and Department of Defence and that of ARPANSA. In our view it is critical that ARPANSA should retain regulatory control over all Commonwealth Facilities - their mandate under the ARPANS Act is to protect public health from the threats of radiation; it is not yet clear if this will be the function and mandate of the ANNPSR, it certainly is not that of the Department of Defence.

There are further licenses required to operate the CIF and decommission the CIF. It remains unclear that under the proposed new regulatory regime whether these processes would involve any advisory role for ARPANSA or any public consultation, or what licensing would be required and whether the criteria ARPANSA are currently assessing the CIF under would be applied under the new regulator for the operating license and decommissioning license.

Environmental Protection

It is accepted that there will be no radiological hazard to the environment during construction of the CIF. However, when the CIF is operational it will present an ongoing threat to the surrounding environment, particularly to endangered species endemic to the location, such as little penguins. Again, this component is purely aspirational with no clear commitment to follow up on actually implementing those aspirations.

While it is outside the remit of ARPANSA we would like to highlight the significance of disturbance of the construction works to fauna of particular concern is the Little Penguin colony on Meeandip (Garden Island) which is vulnerable to any changes, disturbance such as light and noise, or future pollution at the site. We understand there are around 114 individuals left alive between the two colonies on Garden Island and Penguin Island and that there are around 3 dozen little Penguin nesting sites along the harbour and wharf at HMAS Stirling.

We welcome the approach of baseline radiation surveying and encourage ARPANSA to recommend conditions that baseline radiation surveys be made public. We welcome the monitoring data being published annually in annual reports. Real time reporting would also be

welcome to show transparency and accountability, particularly given the proximity of the facility to one of WAs most used recreation areas.

We remain deeply concerned about the prospect of release of treated liquid wastes into the environment and request that more details be provided under what criteria and under what conditions a release would be acceptable.

We note that Cockburn Sound is a unique environment; it has many users and threats and there have been significant efforts to monitor and reduce pollutants and impacts across agencies and civil society. Being a Sound the flow and movement of water in and out of the sound is complex and dependent on a number of conditions. At different times there is the potential for pollutants to build up or be slow to flow out of Cockburn Sound. ARPANSA should also be aware of this feature of Cockburn Sound in considering any construction and design features that would enable the release of treated wastes into the environment.

Concluding Comments and Further Questions to ARPANSA and ASA

In summary, this application is replete with platitudes and claims that would remain unaccountable, which question its rigour of preparation and sincerity. Neither ARPANSA, nor any other external entity, could assess the viability of this proposed CIF construction without further details of the radioisotopes to be processed and stored and being shown the actual building design itself.

We have outstanding questions on a number of aspects of the project and process including:

1. Will ARPANSA retain any role or responsibility in the operation and decommissioning licensing process or management, monitoring or compliance of the CIF, and will there be any public consultation for those licensing applications under the Naval Nuclear Power Safety Regulator (ANNPSR)?
2. Can you confirm and identify draft regulations and legislation that clearly describe the role of the ANNPSR as being responsible for the protection of public health and safety from the threats of radiation?
3. Will "The Site Evaluation Report, due for completion in 2025" (section 3.4 of the Technical Overview) be made publicly available for comment, given that the public interest in the Site itself and local knowledge about the site and its suitability is unique and a matter of public interest?
4. Will there be any condition setting for the CIF that would prohibit the storage of any class of waste other than Low Level Waste (LLW)? If not, what would be the process for ASA to apply or seek to store other types of waste at the CIF for example Intermediate Level Waste?
5. How will liquid wastes be treated? Under what conditions or water or air quality criteria would treated liquid wastes be released into the environment and at what location?

6. In 4.7 of the Safety Analysis report “the objective will be to reduce doses as low as reasonably achievable and industrial risks so far as is reasonably practicable.” Who will determine what ALARA or ALARP is? How will that be communicated to the public? What accountability mechanisms are in place to ensure that the dose limits are implemented and reported?

7. What is the contingency plan for decommissioning if a permanent storage site for the waste is not identified? A permanent storage site for Australia’s national inventory of civilian low level waste is yet to be identified or developed after at least 50 years of promising to do so?

8. Will the baseline radiation survey be made publicly available, through what document, and who is the consultant undertaking the survey?

For any clarification or questions please contact and we hope very much you can provide written responses to our questions above.

Mia Pepper
Nuclear Free WA, Committee Member

[REDACTED]

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