AUSTRALIAN NAVAL INFRASTRUCTURE

A GUIDE

TO READING THE SITE LICENCE APPLICATION SUMMARY OVERVIEW

ANI is upholding the highest standards of safety, security, and environmental stewardship in the development of the Nuclear-Powered Submarine Construction Yard (NPSCY).

There are a number of regulatory authorisations that will be required to support the development of the NPSCY. This includes licensing processes with the Australian Naval Nuclear Power Safety Regulator (ANNPSR).

The Site Licence Application Summary Overview has been developed by drawing from the suite of documentation that will be used to support ANI's application for a licence to prepare a site for a naval nuclear propulsion (NNP) facility. The Site Licence Application Summary Overview:

- Summarises the very detailed and technical information that the regulator requires to support its licensing decisions.
- Provides stakeholders and the public with information about the suitability of the preferred site, the extensive analysis that has been undertaken, and ANI's capacity as an organisation to meet the regulatory requirements now and throughout the site's lifecycle.
- Is a technical document that addresses scientific and engineering matters, and outlines activities that would be undertaken at the site throughout its lifecycle, including by the future licence applicants. This forward-looking approach is important, because ANI is taking a whole-of-lifecycle approach to the project.

ANI has sourced a number of explanatory resources to provide general information about nuclear science, plans for the nuclear-powered submarine program, radioactive waste management, and radiation safety. These supporting resources can be found on the ANI website here **www.ani.com.au/public-consultation/.**

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Key Terms and Definitions

This section outlines some of the key terms, definitions and terminology that appears in the Site Licence Application Summary Overview. Understanding these terms will help you to better follow our discussions and learn more about our practices.

For all nuclear-related activities, we use guidelines, definitions and standards aligned to the International Atomic Energy Agency (IAEA). By upholding these internationally-recognised standards, we will protect our workforce, the surrounding community, and the environment.

Australian Naval Nuclear Power Safety Regulator (ANNPSR): is the independent statutory naval nuclear safety regulator established on 1 November 2025. ANNPSR will licence, monitor and enforce regulated activities under the Australian Naval Nuclear Power Safety Act 2024 (Cth) (ANNPS Act).

Dose: In the context of radiation, is the amount of radiation energy that is absorbed. For those who work in nuclear-related activities, there is close monitoring of the dose of radiation they receive through their work and clear guidance and conservative limits to protect them.

Emergency Plan: A standard plan in all industrial facilities which outlines likely incident scenarios, and procedures and resources to respond to them. It includes site evacuation, emergency services coordination and communication protocols, and incidents involving or not involving radiation.

Emergency Preparedness and Response: Planning and actions to eliminate, mitigate or manage the effects of emergencies on personnel and the environment, including but not limited to emergencies which have the potential to involve or happen near materials that are radioactive.

Environmental Monitoring: Continuous surveillance and assessment of environmental conditions to prevent or mitigate potential impacts of all activities at the construction yard, including from nuclear-related activities.

Environmental Protection: Measures planned or in place which mitigate or minimise the impact of our activities on the environment. This includes mitigating impacts of nuclear-related activities like managing radioactive waste (in future operational phases of the NPSCY) and general activities including preventing contamination through the use of proven engineering design and construction control measures.

Inspection and Auditing: Regular assessments conducted by regulatory authorities to verify that nuclear operations adhere to safety and security standards.

International Atomic Energy Agency (IAEA): The IAEA is the world's central intergovernmental forum for scientific and technical cooperation in the nuclear field. It works for the safe, secure and peaceful uses of nuclear science and technology, contributing to international peace and security.

Microsievert (μSv): A unit of radiation dose, representing one-millionth of a sievert. It is the unit of measure used to explain low-level radiation exposures such as natural background radiation or other low-level radiation exposure scenarios.

Natural Background Radiation: Ionising radiation comes from a variety of natural and artificial sources such as the sun, space, the earth and building materials. These levels are not harmful and exist all around us. Australians receive about 1,500 to 2,000 microsieverts of natural background radiation each year.

Nuclear Installation: The IAEA term for a facility where nuclear materials are produced, processed, used, handled or stored.

Nuclear Mindset: Reflects a rigorous commitment to safety, quality, environment, and security. It involves an organisation having a comprehensive understanding of the unique challenges and complexities associated with nuclear technology, and fostering a culture where the strict adherence to approved procedures is paramount.

Nuclear Safety: Measures and systems which mitigate risks and prevent accidents at nuclear facilities. It encompasses activities to ensure nuclear safety, including the safe operation of nuclear systems and the protection of people, the environment, and property.

Nuclear Security: Preventing, detecting and responding to theft, sabotage or other malicious acts involving nuclear material and facilities. In a nuclear-powered submarine construction yard, it includes protecting the nuclear power unit and sensitive information.

Naval Nuclear Propulsion Facility or NNP facility: This term is defined in section 12 of the ANNPS Act and includes a facility for constructing an SSN-AUKUS submarine, maintaining NNP plant, storing NNP plant or the management and temporary storage of low-level radioactive waste in the commissioning facility, in relation to an AUKUS submarine. This is expected to include relevant facilities within Area 3 of the NPSCY.

Protective Security: Security measures designed to prevent unauthorised access to facilities and materials. This includes barriers, surveillance systems, and access controls.

Personal Protective Equipment (PPE): Clothing or equipment which protect a person from hazard or injury. When an individual is undertaking regular nuclear-related activities they may need specialist PPE including gloves, masks, lab coats and dosimeters. PPE requirements may change subject to the activity being undertaken, or in incident management.

Radiation: Refers to the emission of energy as electromagnetic waves or particles that travel through space. Radiation can be ionising (such as alpha, beta, gamma or neutron radiation) or non-ionising (such as ultraviolet, visible and infrared light or even radio waves).

Radiation Protection: Practices and standards to protect people and the environment from the harmful effects of ionising radiation. This includes optimising and controlling levels of exposure and implementing protective measures.

Radioactive Waste Management: Procedures for the handling, storage, and disposal of materials that are contaminated with or produce radiation.

Radiological: A catch-all term for dealing with, or managing, materials that emit ionising radiation. It often relates to contexts involving radiation safety, protection, hazards and assessment.

Radiological and Contamination Baseline: A survey undertaken to determine existing natural background radiation and any contamination which already exists at the site.

Regulatory Compliance: Adherence to national and international regulations governing nuclear safety, security and radiation protection. This includes meeting the standards set by organisations such as the IAEA and local regulatory bodies.

Reference Accident: The Reference Accident refers to a hypothetical scenario for a severe accident involving a nuclear-powered vessel, which results in the release of radiation from the submarine's nuclear reactor.

Safety Culture: An organisational culture that prioritises safety through continuous improvement, transparent communication, and a proactive approach to identifying and addressing safety concerns.

UPZ (Urgent Protective action planning Zone): A standard term defined in the IAEA Safety Standards and used in emergency management planning to describe an area that may require urgent actions to reduce the potential for radiation exposure during an incident.