

Senate Foreign Affairs, Defence and Trade Legislation Committee

Public Hearing – 13 March 2024

ANSWERS TO QUESTIONS ON NOTICE

Australian Nuclear Science and Technology Organisation

AGENCY/DEPARTMENT: Australian Nuclear Science & Technology Organisation

TOPIC: ISO 19443 Accreditation

REFERENCE: Spoken Question (Hansard Page 10)

QUESTION DATE: 13 March 2024

RESPONSE No.: 1

QUESTION

Senator REYNOLDS: With the last witness we talked about ISO 194493, I think, in terms of the supply chain in the nuclear energy sector. Is that something that applies to you?

Senator REYNOLDS: This might be a question on notice. Firstly, congratulations. That's no mean feat. Have you got any reflections on that process in terms of the lessons that you learnt along the way, which may well be of assistance in terms of the regulation for nuclear submarines reaching the standard to be certified?

ANSWER

As a sophisticated nuclear organisation working within a mature and independent nuclear regulatory framework, ANSTO has long held ISO 9001:2015 certification across all its nuclear activities to demonstrate the suitability of its quality management systems. Even though not part of a nuclear energy supply chain, ANSTO recently sought and achieved ISO 19443:2018 accreditation for “Specific requirements for the application of ISO 9001:2015 by organizations in the supply chain of the nuclear energy sector supplying products and services important to nuclear safety (ITNS)”. As a customer with a strong nuclear safety culture, ANSTO has sophisticated processes in place to ensure and verify the quality of safety relevant components. Acquiring accreditation to ISO 19443:2018 further demonstrates this to the regulator, and in a formal manner. This was the first such accreditation in the southern hemisphere.

This certification required an external validation of our systems and processes for managing nuclear safety. During this assessment ANSTO was able to further enhance our continuous improvement objectives by demonstrating compliance against the additional principles set out in ISO 19443:2018 including: Nuclear Safety Culture; Items Important to Nuclear Safety (ITNS); and the Graded Approach to Quality.

The accreditation process is rigorous. During the accreditation process, ANSTO was required to provide evidence demonstrating that our systems meet the requirements of the standard, drawing on our 70 years of experience. For organisations entering the nuclear sector for the first time this will, necessarily, be more difficult, and gaps would likely be identified. However, for organisations which already have a strong Quality Management System accredited to ISO 9001:2015, those gaps will be evident through the process. This will allow such organisations to focus on those key areas specific to the nuclear industry requirements, which may be new to them.

For organisations looking to enter the nuclear sector, ISO 19443:2018 should be viewed as an evolution of ISO 9001:2015 for the respective organisation rather than a complete revolution in Quality Management.

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Australian Nuclear Science and Technology Organisation

AGENCY/DEPARTMENT: Australian Nuclear Science & Technology Organisation

TOPIC: Supply Chain Regulation

REFERENCE: Spoken Question (Hansard Page 10)

QUESTION DATE: 13 March 2024

RESPONSE No.: 2

QUESTION

Senator REYNOLDS: My last question is also in relation to some discussion from the last witness. As to when components enter the supply chain and how they're regulated—safety for a nuclear submarine is not just safety in relation to the reactor, it's also in relation to the rest of the submarine. There are considerations about when components enter the supply chain and when they become regulated. Do you have any observations? Has any of that been relevant to ANSTO and things you've had to consider?

ANSWER

While there are no specific regulations relating to the nuclear supply chain in Australia, other than defence trade controls, Section 66 of the *Australian Radiation Protection and Nuclear Safety Regulations 2018* ('the ARPANS Regulations') requires regulatory approval for constructing an item important for safety that has been identified in the licence holder's safety analysis report. Additionally, Section 63 of the ARPANS Regulations requires regulatory approval before making a change to the licence application with significant implications for safety. However, these are obligations on the licence holder, rather than third parties that provide the components. This is in line with the operator having ultimate responsibility for safety.

There are very few nuclear-specific suppliers for Australia's only nuclear reactor, the Open Pool Australian Lightwater (OPAL) multipurpose reactor. ANSTO has specific suppliers for reactor fuel and target plates, reactor protection systems, key reactor core components and instrumentation, and other specific components. The international suppliers have their own internal quality assurance and quality control systems that have been subject to review and inspection by their home nuclear regulatory body or appropriate certification body.

ANSTO also has internal processes for verifying the quality of components that are important for safety. These processes were verified as part of our recent accreditation to the ISO 19443: 2018 standard on "Specific requirements for the application of ISO 9001:2015 by organizations in the supply chain of the nuclear energy sector supplying products and services important to nuclear safety (ITNS)". For example, ANSTO has its own Institute of Electrical and Electronics Engineers (IEEE) Class 1E equivalent qualification process by which we can qualify instrumentation and control systems, and components to an appropriate standard for use in our facility, under our conditions.

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ANSWERS TO QUESTIONS ON NOTICE

Australian Nuclear Science and Technology Organisation

AGENCY/DEPARTMENT: Australian Nuclear Science & Technology Organisation

TOPIC: Differences Between ANNPS Bill and ARPANS Act

REFERENCE: Spoken Question (Hansard Page 14)

QUESTION DATE: 13 March 2024

RESPONSE No.: 3

QUESTION

Mr Jenkinson: There are specific differences you've raised and I've acknowledged those and I'm happy to take those away and look at them.

ANSWER

ANSTO's submission to the Senate Foreign Affairs, Defence and Trade Legislation Committee inquiry on the Australian Naval Nuclear Power Safety Bill 2023 ('the ANNPS Bill') draws from our perspective as an operating nuclear organisation, and our engagement with the regulatory framework for nuclear safety set out by the Australian Radiation Protection and Nuclear Safety Act 1998 ('the ARPANS Act') and the associated Australian Radiation Protection and Nuclear Safety Regulations 2018 ('the ARPANS Regulations'). From this experience, and as described in our submission, ANSTO sees that the safety standards of the ARPANS framework and the Bill are commensurate, respecting the different technologies to be regulated (i.e. nuclear naval propulsion vs research reactors and other civilian applications) and operating environments (i.e. military vs civilian). There are similarities including, but not limited to: objectives of the Bill; responsibilities for safety; licensing, inspection, and enforcement powers; activities requiring licensing; information required to demonstrate safety; and punishments for non-compliance.

Some differences between the Bill and the ARPANS Act and Regulations were also raised at the hearing, including:

1. ARPANSA reporting to Parliament of serious accidents (ARPANS Act, Section 61)
2. ARPANSA reporting to Parliament of directions to controlled persons (ARPANS Act, Section 41)
3. Establishment of the Radiation Health Safety Advisory Council (RHSAC), Radiation Health Committee (RHC), and Nuclear Safety Committee (NSC) (ARPANS Act, Part 4)
4. Powers to be exercised in accordance with international agreements (ARPANS Act, Section 84)

ANSTO acknowledges there are some differences between the ANNPS Bill and the ARPANS Act and Regulations, which regulates civilian activities.

Noting machinery of Government reporting requirements under Sections 61 and 41 of the ARPANS Act pertain directly to ARPANSA, they are useful in providing information to the public.

ANSTO is not a member of the advisory bodies to the CEO of ARPANSA. As an operator, we acknowledge they play an important role in providing independent advice to the regulator.

We acknowledge that there are drafting difference between Section 84 of the ARPANS Act and Section 136 of the ANNPS Bill in relation to prescribed international agreements, noting that some of the agreements subsequently prescribed in the ARPANS Regulations pertain only to civil applications.