Australian Government

ASNO
Australian Safeguards & Non-Proliferation Office



Annual Report 2025–26

Produced by

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Accessing this report online

Further information about ASNO and an online version of this report are available on the ASNO website at asno.gov.au.

This report complies with the formal reporting obligations of the Director General, ASNO.

ASNO is a specialist office within the Department of Foreign Affairs and Trade (DFAT). Some mandatory annual report information for ASNO is incorporated in the DFAT Annual Report. This includes:

- financial statements
- corporate governance and accountability framework
- external scrutiny
- human resource management, including work health and safety
- asset management
- purchasing
- agency-specific social inclusion strategies
- advertising and market research
- ecologically sustainable development and environmental performance
- climate action in Government Operations and Commonwealth Climate Disclosure actions
- gender equality reporting
- future made in Australia reporting

Acknowledgement of Country

The Australian Safeguards and Non-Proliferation Office acknowledges the Traditional Owners and Custodians of Country throughout Australia. ASNO recognises their continuing connections to land, waters and community. We pay our respects to all First Nations peoples, their cultures and to their Elders, past, present and emerging.

Letter of Transmittal

OFFICIAL

Australian Government

ASNO
Australian Safeguards & Non-Proliferation Office

1 October 2026

The Hon Penny Wong
Minister for Foreign Affairs
Parliament House
CANBERRA ACT 2600

Dear Minister

I submit the Annual Report on the operations of the Australian Safeguards and Non-Proliferation Office (ASNO) for the financial year ended 30 June 2026. This report is made in accordance with section 51 of the *Nuclear Non-Proliferation (Safeguards) Act 1987*, section 96 of the *Chemical Weapons (Prohibition) Act 1994*, section 71 of the *Comprehensive Nuclear-Test-Ban Treaty Act 1998*, your Ministerial Statement of Expectations and my responding Statement of Intent.

During the reporting period, all relevant statutory requirements were met, and no unauthorised access to, or use of, nuclear materials or nuclear items of safeguards or security significance was found. All requirements were met under Australia's safeguards agreements with the International Atomic Energy Agency (IAEA), under the Chemical Weapons Convention, and Comprehensive Nuclear-Test-Ban Treaty. All Australian Obligated Nuclear Material was satisfactorily accounted for.

As outlined in this report, ASNO advanced Australia's security interests through work with partners on safeguards arrangements for the naval nuclear propulsion program. We also continued to strengthen non-proliferation verification mechanisms under the Verify research and development program and enhanced regional non-proliferation treaty implementation through collaboration with partners in the Asia-Pacific.

Yours sincerely

Geoffrey Shaw (Dr)
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Our vision

is to enhance Australia's domestic and international security.

We do this through our three core pillars:

1. Uphold Australia's international non-proliferation obligations through robust and proportionate domestic regulation
2. Shape and strengthen the global non-proliferation and disarmament verification mechanisms
3. Support regional non-proliferation implementation

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What ASNO does

ASNO works to enhance Australian and international security through activities which strengthen the effectiveness of regimes against the proliferation of weapons of mass destruction.

The Australian Safeguards and Non-Proliferation Office (ASNO) serves as Australia's National Authority responsible for the implementation of Australia's non-proliferation treaty obligations. This includes accounting for material, preparing national declarations and managing international inspections within Australia. ASNO also serves as a domestic non-proliferation regulator, operating a system of permits and domestic compliance inspections. ASNO provides expert advice to government, manages a nuclear safeguards research and development program and supports non-proliferation treaty implementation across the Asia-Pacific region.

The position of Director General ASNO is an independent statutory office holder with legislated powers and functions. I exercise these functions in accordance with Australia's treaty obligations, domestic legislation and the Australian Minister for Foreign Affairs Statement of Expectations (SOE).

ASNO has a reputation of non-proliferation excellence. This excellence has supported Australia's ability to shape the global non-proliferation governance architecture and to respond to emerging non-proliferation challenges. ASNO's work and expertise has never been more important. With the global non-proliferation regime under strain, our efforts to strengthen treaty verification and implementation are fundamental to non-proliferation and Australia's national security.

ASNO by numbers

As at 30 June 2026

37 

Number of ASNO staff

35 

International treaties administered by ASNO

249,667

Tonnes of Australian uranium tracked

155 

Nuclear permits issued by ASNO

15 

IAEA inspections facilitated by ASNO

22 

Domestic safeguards inspections and outreach visits

16 

Domestic nuclear security inspections

1 

World ranking on nuclear security

(by the NTI Nuclear Security Index)

21 

IMS facilities that ASNO manages to monitor for nuclear weapons testing

(third largest number in the world)

97 

Chemical facilities and importers regulated by ASNO

2 

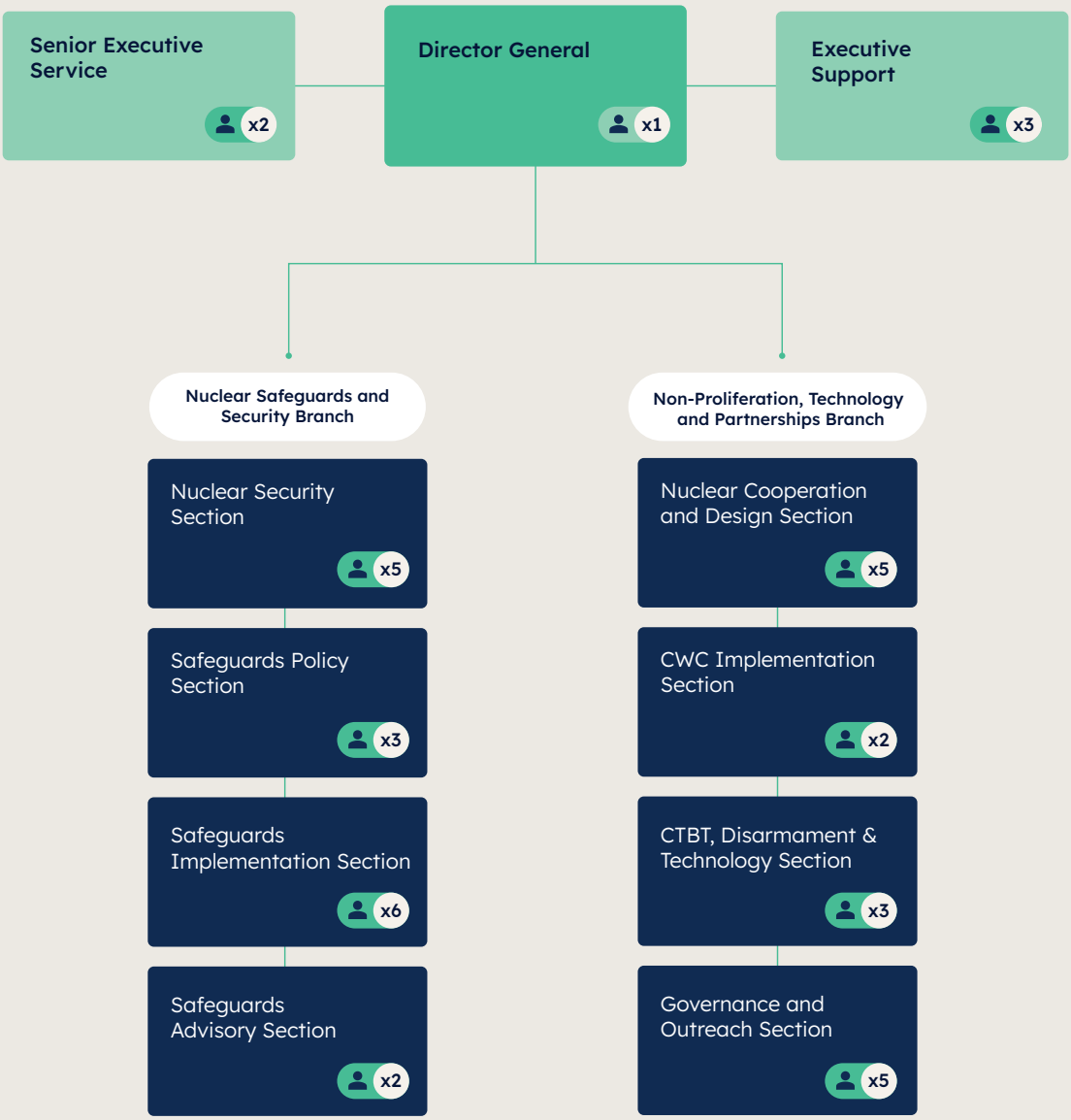
OPCW inspections facilitated by ASNO

7 

Domestic chemical outreach visits

37 ASNO staff

15 Male **22** Female



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Year in review

ASNO delivered its work under three strategic pillars:

Pillar One:
Uphold Australia's international non-proliferation obligations through robust and proportionate domestic regulation

ASNO provided accurate and complete reporting to the International Atomic Energy Agency (IAEA) and the Organization for the Prohibition of Chemical Weapons (OPCW), facilitated international inspections, performed domestic inspections and carried out permit holder outreach during the year. This continued to ensure that Australia's non-proliferation treaty obligations were fully met.

Nuclear Safeguards: ASNO submitted all declarations on time and facilitated 15 IAEA inspections in Australia. The IAEA was able to verify Australia's compliance with its treaty obligations. The IAEA inspected Maralinga, the site of British nuclear weapons testing for the first time.

Naval Nuclear Propulsion (NNP): ASNO continued our work on developing the first permit for the NNP program, trained stakeholders on safeguards and nuclear security responsibilities and regulatory requirements, and coordinated closely with other nuclear regulators. We led technical and practical engagements with the IAEA and our partners on safeguards approaches and associated verification technologies for the NNP program.

Nuclear safeguards and security capabilities: The first class from the ASNO-funded Graduate Certificate in Nuclear Security and Safeguards graduated.

Nuclear security: As the inaugural chair, we consolidated the work of the domestic Nuclear Security Community of Practice, working closely with ANSTO and ARPANSA to deliver Australia's first national training program focused on nuclear and radiological security.

Compliance with Nuclear Cooperation Agreements (NCA): ASNO continued to manage Australia's bilateral NCAs, accounting for 250,000 tonnes of Australian Obligated Nuclear Material across the globe. ASNO negotiated with the Indian Department of Atomic Energy and the Ministry of External Affairs to finalise arrangements necessary to implement the NCA.

Chemical Weapons Convention: ASNO submitted all declarations on time and facilitated 2 OPCW inspections in Australia. The OPCW was able to verify Australia's compliance in meeting its obligations. A modified facility arrangement between the OPCW and ASNO was completed.

Comprehensive Nuclear-Test-Ban Treaty (CTBT): ASNO continued to maintain oversight of Australia's International Monitoring System (IMS) network. ASNO experts actively contributed preparations for the onsite inspection field exercise to prepare for CTBT entry into force.

Regulatory reform agenda: ASNO increased its contribution to the Government's regulatory reform agenda. Regulatory reform initiatives and achievements this year have included:

- engagement in the Department of Finance's Regulatory Leadership Cohort where heads of agencies provide advice and support on the implementation of the Government's regulatory reform agenda.
- migration of ASNO's nuclear and chemical regulatory management systems to the cloud, improving security, stability and usability for permit holders.
- working with other nuclear regulators to improve coordination on regulatory activities, training and outreach to identify opportunities to streamline regulatory engagements.

Pillar Two:
Shape and strengthen the global non-proliferation and disarmament verification mechanisms

ASNO continued senior level engagement with the IAEA, OPCW, CTBTO, and contributed to advancing the disarmament agenda, including as chair of a disarmament verification side event at the Nuclear Non-Proliferation Treaty Review Conference.

I met with senior leaders the OPCW, IAEA and CTBTO on non-proliferation opportunities and challenges and how ASNO can continue to support their mandates.

Providing expert advice to IAEA: ASNO contributed technical advice to the Director General IAEA Standing Advisory Group on Safeguards Implementation (SAGSI) on topics relating to waste management, AI and data management. ASNO also contributed technical expert advice to the IAEA's Nuclear Security Guidance Committee.

Improve IAEA's safeguards and verification tools: ASNO's Verify program continued to fund multiple lines of effort to support the IAEA.



Director General ASNO with the Executive Secretary, CTBTO Rob Floyd.

These include:

- continuing the development of advanced ground robotics capabilities to verify the presence of nuclear materials in hard to reach or highly radiated locations
- research advancing techniques in environmental sampling
- providing IAEA access to Australian mining industry expertise to improve verification tools
- funding approaches using AI and machine learning to improve verification and analysis of international nuclear programs.

Sharing ASNO and Australia's regulatory expertise: During the year, ASNO shared insights and best practices at a range of global and domestic forums. This included providing insights on our naval nuclear propulsion regulatory roles, sharing nuclear security best practices and our work with regional partners to implement their CWC obligations as part of their customs implementation.

Pillar Three:
Support regional non-proliferation implementation

ASNO continued to provide practical support to regional partners in implementing their non-proliferation obligations, and played a significant role in bringing together regional partners to support the exchange of knowledge, best practice and training opportunities.

Chairing the Asia-Pacific Safeguards Network (APSN): As the current chair of APSN, I hosted the Annual Meeting in Australia for the first time. I introduced a panel on gender experiences in nuclear safeguards to advance gender equality, with active participation from senior IAEA leadership. Senior IAEA leadership attendance also provided opportunities for direct dialogue with Pacific partners who were attending in an observer capacity.

Our flagship Safeguards Masterclass: This year, we concluded the three-year cycle of our Masterclass on Advanced Safeguards curriculum. This concept has been designed to respond to the gap of opportunities for mid-career safeguards practitioners to improve their safeguards knowledge and expertise. Satisfaction from the participants across the three years has been high, with ASNO being acknowledged by the IAEA and our partners for providing this opportunity to our regional counterparts.

Pacific-focused training: ASNO co-hosted two Pacific focused training events with international partners. Both events were developed in response to Pacific countries seeking support on how to implement their non-proliferation treaty obligations. One CWC event was focused on the prevention of illicit trafficking of chemicals, which we worked with the OPCW and Australian Border Force to deliver. The second event, co-hosted with our US partners and the IAEA, focused on providing support to the Pacific countries on how to implement their modified safeguards Small Quantities Protocol.

Looking to the year ahead

Consistent with our Statement of Expectations, we will advance our three core strategic pillars:

1. Uphold Australia's international non-proliferation obligations through robust and proportionate domestic regulation
2. Shape and strengthen the global non-proliferation and disarmament verification mechanisms
3. Support regional non-proliferation implementation

We will meet Australia's non-proliferation obligations and deliver robust and proportionate domestic regulation

- The permit systems established under the *Nuclear Non-Proliferation (Safeguards) Act 1987* and the *Chemical Weapons (Prohibition) Act 1994* will operate efficiently and effectively and meet regulatory best practice. This will ensure all nuclear materials, facilities and associated items, and all CWC relevant chemicals, are accounted for and controlled in accordance with legislative requirements.
- ASNO will ensure that Australia meets its non-proliferation treaty obligations to the highest standards.
- National declarations and reports to the IAEA and OPCW will be timely, correct and complete.
- IAEA and OPCW inspections in Australia will be managed effectively to ensure inspection objectives are achieved.
- International Monitoring Systems facilities in Australia will meet CTBTO performance requirements.
- ASNO will work with partners on the safeguards and verification approaches that will enable the IAEA to meet its safeguards objectives throughout the lifecycle of the naval nuclear propulsion (NNP) program, while ensuring the protection of classified and controlled information and assets.
- ASNO will continue to develop new bespoke permits for recommendation to the Minister for Foreign Affairs to establish facilities relevant to the NNP program.
- ASNO will continue to provide its technical and implementation expertise to the development of an Article 14 Arrangement and the various associated subsidiary arrangements for the NNP program.
- ASNO will continue its organisational uplift to build technical and regulatory capacity and expertise to meet the demands of the growing and technically complex regulatory requirements for the NNP program.
- ASNO will conclude arrangements with India and will work with partners to ensure all nuclear material extracted from Australian origin ores and concentrates is captured under the network of NCAs.

- ASNO will continue to provide expertise to the Nuclear Security Community of Practice and the national training exercises.
- ASNO will continue to improve regulatory maturity and provide advice in line with the Government's reform agenda. ASNO will maintain an active leadership role in the Australian regulatory community through participation in the Regulatory Leadership Cohort and associated working groups, supporting innovation and regulatory best-practice.

Our work to strengthen non-proliferation verification mechanisms

- ASNO will expand activities under the Verify program to drive safeguards innovation and the development of the next generation of IAEA safeguards technology.
- ASNO will continue to invest in developing Australia's next generation of safeguards experts through the Graduate Certificate in Nuclear Security and Safeguards and our academic outreach activities, supported by the Verify program.
- ASNO will actively participate as subject matter experts in technical fora including the IAEA Director General's Safeguards Advisory Group on Safeguards Implementation (SAGSI) and the IAEA's Nuclear Security Guidance Committee (NSGC).
- ASNO will present on Verify and participate in panels at the IAEA Safeguards Symposium.
- ASNO will contribute actively to the 2nd Review Conference of the Amended Convention on the Physical Protection of Nuclear Material in April 2027 to strengthen the international nuclear security architecture.
- ASNO will participate in the CTBTO In-Field Exercise (IFE) in October 2026 designed to test the CTBT's ability to respond to a suspected nuclear test, develop an inspection plan, deploy inspection teams and operate in a challenging environment.
- ASNO will take part in the CWC National Authority and the Conference of State Party events to support treaty implementation.

We will support regional partners to implement their non-proliferation obligations

- As Chair of the Asia-Pacific Safeguards Network (APSN), ASNO will host the second APSN annual meeting, in Australia in December 2026.
- ASNO will start the next cycle of Masterclass on Advanced Safeguards in early 2027.
- ASNO will support the IAEA, Pacific regional workshop to Promote the Universalisation of the Convention on the Physical Protection of Nuclear Material and its Amendment (A/CPPNM) in Fiji during August 2026.
- ASNO, in partnership with the US NNSA will host an Indo Pacific Nuclear Security Workshop on the implementation of the A/CPPNM in September 2026.

Current topics

Strengthening Australia's nuclear security capability and preparedness

ASNO regulates the physical protection of nuclear material and facilities across Australia. Often referred to as nuclear security, this has the aim of protecting against theft, sabotage or misuse during use, including transport and storage.

As the nuclear landscape in Australia continues to evolve, ASNO is working to strengthen understanding and implementation of nuclear security across the Government. The following are key examples of this work.

The NSCP is strengthening national nuclear security readiness

ASNO, together with Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) and Australian Nuclear Science and Technology Organisation (ANSTO), launched the Australia Nuclear Security Community of Practice (NSCP) in April 2025. With ASNO serving as the inaugural chair, the NSCP is comprised of 10 member organisations, including the Australian Federal Police, Australian Radiation Waste Agency, Australia Security Intelligence Organisation, Australian Submarine Agency and the Australian Naval Nuclear Power Safety Regulator.

The purpose of the NSCP is to:

- foster a community of like-minded nuclear security professionals
- promote collaboration between organisations that interact with nuclear security; such as in research, regulation, operations, investigations and policy
- build capacity through sharing information, resources and development opportunities
- exchange information on threats and advances in technology
- advance nuclear security as a profession in Australia

National nuclear security training is building a responsive national capability

ASNO, together with ARPANSA and ANSTO, launched the first national course for nuclear and radiological security in October 2025. The course content was designed for the Australian context and was supported by the United States National Nuclear Security Administration (NNSA). Seven Australian Government agencies participated in this two-week course.

The course focused on building a sustainable nuclear security practice and culture. It provided participants with a unifying nuclear security methodology and terminology through the provision of practical, foundational knowledge in nuclear security. The course combined Australian legislation and national security guidance, such as the Protective Security Policy Framework, along with the IAEA Nuclear Security Series and international best practice guidance. The course was facilitated at ANSTO, allowing participants to reinforce their theoretical learning through practical and operational nuclear security examples.

The course served to strengthen operational and regulatory readiness.

Strengthen the implementation of regional safeguards through chairing the Asia-Pacific Safeguards Network

ASNO is serving as the chair of the Asia-Pacific Safeguards Network (APSN) through the 2025 and 2026 period. It has been my honour to represent Australia in this role.

The APSN was established in 2009 as a unique network made up of safeguards practitioners working together as a peer-to-peer community. Its purpose is to provide its members with an opportunity to support each other and to build capability in meeting IAEA safeguards obligations. The APSN currently has 17 member countries and several observers from the region.

As chair, and supported by the steering committee, my vision has been to continue to foster strong collaboration between member states, and to further enhance the governance structure of APSN to ensure that it is relevant for today's challenges. This included advancing gender inclusivity and equality and supporting greater participation from Pacific Island countries.

The first APSN annual meeting hosted by Australia was held in Perth from 3 to 7 November 2025. It was attended by 44 participants from across our region, representing 15 nations and the IAEA, including its Deputy Director General of Safeguards, Massimo Aparo.

Two key initiatives that were introduced in this meeting included the inaugural Women in Safeguards panel and the endorsement of the *APSN Good Practices Guide for Domestic Safeguards Inspection*.

The inaugural Women in Safeguards panel included senior women leaders from counterpart organisation in Lao-PDR, Republic of South Korea and Thailand as well as a panellist from the IAEA. Panellists shared their experiences in becoming leaders and practical ways to support women to achieve their ambitions and improve the visibility of women in leadership for future female leaders. It was clear from the experiences shared that advancing gender equality is not simply about increasing numbers, it is about the experiences of women working in nuclear safeguards. Panellists also reflected that equality in policy alone is insufficient. Inclusiveness requires leadership and commitment by all, at all levels.

The *APSN Good Practices Guide for Domestic Safeguards Inspections* was developed by hosting safeguards experts from seven APSN countries to share examples of best practices. The Good Practices Guide consolidates experiences from APSN partners in planning, conducting and following up domestic inspections across a wide range of national contexts. It supports resilience in safeguards implementation by strengthening domestic inspections, improving inspector competence, and enhancing the quality and consistency of inspection outcomes. The guide has now been shared internationally as an official IAEA Information Circular (INFCIRC/1407) to support global verification consistency.

> “Opening more opportunities for women in nuclear requires practical action… helping women around the world gain the skills, experience and leadership opportunities to build careers in nuclear science and technology… #NuclearNeedsWomen and the momentum must carry forward.
>
> **Rafael Mariano Grossi**
>
> IAEA Director General,
> 8 March 2026



Panel present the Good Practices Guide to other member state countries at the APSN Annual Meeting.

Pillar One

Uphold Australia's international non-proliferation obligations through robust and proportionate domestic regulation

1.1 Implement Australia's obligations under IAEA safeguards agreements 19

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1.1

Implement Australia's obligations under IAEA safeguards agreements

Performance Measures

Australia's safeguards obligations are met under Australia's CSA and Additional Protocol with the IAEA.

Australia continues to receive the IAEA's 'broader conclusion' that all nuclear material remains within their declared uses and activities.

Overview

This section summarises how ASNO ensures that Australia is meeting its international obligations under the Comprehensive Safeguards Agreement (CSA) and the Additional Protocol.

Australia received the IAEA's highest level of safeguards assurance—a determination that all nuclear material remained in peaceful activities.

IAEA verification activities have confirmed that Australia's declarations are correct and complete.

ASNO's regulatory activities enable Australia to demonstrate that IAEA safeguards obligations are being met

ASNO's regulatory activities provided assurance that Australia met its IAEA safeguards obligations. ASNO did this by providing the required timely and accurate information and access for the IAEA. Through ASNO supplying this the IAEA were able to determine that all nuclear materials and activities were accounted for, and controlled, and that there were no indications of undeclared nuclear material or activities. The IAEA verified that Australia fulfilled its obligations and confirmed that the IAEA had achieved its safeguards objectives for the reporting period.



Explaining the 'broader conclusion'

The IAEA issues an annual safeguards statement that summarises its conclusions about the peaceful use of nuclear material in each State worldwide in the annual IAEA Safeguards Implementation Report. The strongest safeguards conclusion that a State can receive is the 'broader conclusion', which determines that all nuclear material in a country remained in peaceful activities. It reaches such conclusions by verifying not only that there was no indication of diversion of declared nuclear material, but also that there was no indication of any undeclared nuclear material or facilities.
In the most recent Safeguards Implementation Report for 2025, the IAEA drew the broader conclusion for 75 of the 190 States with safeguards agreements in force, including Australia. Australia has received the Broader Conclusion every year since 1999.

ASNO maintains correct and complete reporting amid increasing IAEA scrutiny

The IAEA's Director General noted in his 2023 *Naval Nuclear Propulsion: Australia* report to the Board that: "the Agency must ensure that no proliferation risks will emanate from [Australia's naval nuclear propulsion] project".

The IAEA is using a range of powers available under the CSA and Additional Protocol, to apply greater scrutiny of Australia's declarations and activities. Examples include:

- the amount of, and the types of facilities and activities, it monitors and verifies
- the complexity of its information requirements and verification activities
- utilisation of a wider array of standard IAEA verification tools.

ASNO has responded to these enquiries by providing the required information and facility IAEA access. Through these responses, the IAEA continues to assess Australia's reporting as correct and complete, as evidenced by the IAEA Statement of Results (Appendix E) and Australia continuing to receive the broader conclusion.

ASNO supports successful IAEA safeguards inspections in Australia

The IAEA conducted 15 inspection activities during the reporting period. ASNO coordinated the logistics and facilitated access to the inspected locations to ensure that Australia's obligations under the CSA and Additional Protocol were met. ASNO nuclear inspectors took part in each inspection, ensuring that the IAEA could meet its objectives, that agreed procedures for such inspections were adhered to and that the rights and needs of the permit holders were protected.

Details of all IAEA inspections are given in Table 1. The IAEA's findings from these inspections (where available at the time of publishing this Annual Report) are included in Appendix E.

Table 1: IAEA inspection activities 1 July 2025 to 30 June 2026

Date	Facility	Material balance area	Type
11 August 2025	ANSTO	AS-F	Interim Inventory Verification
12 August 2025	Ubaryon	ASE1	Physical Inventory Verification (LOF)
14 August 2025	Flinders University	AS-E	Physical Inventory Verification (LOF)
5 November 2025	Defence Precinct at Henderson shipyard	N/A	Complementary Access (8)
7 November 2025	Australian National University	AS-E	Complementary Access (4.a.ii)
24-25 November 2025	A rare earth mine	N/A	Complementary Access (4.a.ii)
27-28 November 2025	BHP Olympic Dam	AS-E	Complementary Access (4.a.i)
23 April 2026	Former British nuclear weapons test site at Maralinga (South Australia)	N/A	Complementary Access (4.a.ii)
1 June 2026	ANSTO	AS-F	Physical Inventory Verification and Design Information Verification
2 June 2026	Silex	N/A	Complementary Access (4.a.i)
2 June 2026	Ubaryon	AS-J	Physical Inventory Verification and Design Information Verification
3-5 June 2026	ANSTO	AS-C	Physical Inventory Verification and Design Information Verification

See explanation of each material balance area in Table 2.
Details on different types of inspections are outlined in Appendix E.

ASNO facilitates IAEA inspections at unique locations

In April 2026, ASNO facilitated the first IAEA complementary access visit to the former British nuclear test site at Maralinga.

ASNO led the coordination and planning of the visit, supported by ARPANSA and the Department of Industry, Science and Resources (DISR), with the Traditional Owners represented by the Maralinga Tjarutja Inc. Over several months, ASNO led the consultation processes to seek their permission for the visit to occur at the former test site.

The complementary access was successfully completed. In addition to ASNO, the IAEA were supported on the day by the Maralinga Tjarutja Inc and the relevant Commonwealth and state government agencies. With prior agreement with the Traditional Owners, the IAEA took environmental samples from the locations of nuclear detonations, as well as the location of minor trials conducted by the British Government. In correspondence following the visit, IAEA Deputy Director General and Head of the Department of Safeguards Massimo Aparo expressed the IAEA's gratitude to Maralinga Tjarutja Inc for their "trust and understanding". He also recognised ASNO's effective organisation of the activity and noted that its "seamless coordination" with DISR and ARPANSA "further underscored the strength of Australia's institutional commitment to the implementation of IAEA safeguards".

From 1952 to 1963 the British Government, with the agreement of the Australian Government, tested atomic weapons on three Australian sites. Most of the testing took place at Maralinga, with the extent of the contamination not known until 1984. Remediation of the site took place under an agreement between the Australian and British governments between 1995 and 2000. Access to the test site was returned to traditional owners in 2009.



Representatives from Maralinga Tjarutja, the International Atomic Energy Agency (IAEA), the Australian Safeguards and Non-Proliferation Office (ASNO), the Department of Industry, Science and Resources (DISR), and the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) at the One Tree test site during an IAEA complementary access visit to Maralinga, South Australia, in April 2026.

Demonstrating transparency to the IAEA

As part of Australia's ongoing commitment to transparency, and to facilitate a deeper understanding of the nuclear-powered submarine program, on behalf of Australia I invited the IAEA under Article 8 of the Additional Protocol to conduct a complementary access visit at the planned Defence Precinct at Henderson shipyard. This visit was facilitated by ASNO in coordination with the Australian Submarine Agency and the Royal Australian Navy.

ASNO tracks nuclear material through reports from material balance areas

As is required by the CSA, nuclear material is accounted for in 'material balance areas' (MBAs, see glossary). Australia has 10 MBAs as described in Table 2. ASNO uses nuclear material inventory and transaction reporting generated from each MBA to gain a comprehensive picture of nuclear material movements from, to and within Australia to meet IAEA reporting requirements.

Table 2: Material balance areas in Australia for IAEA safeguards purposes

Location	Material balance area	Name of facility or location outside facilities
Lucas Heights	AS-A	HIFAR (Note: defuelled in 2007)
Lucas Heights	AS-C	Research and development laboratories
Lucas Heights	AS-D	Vault storage
Elsewhere	AS-E, ASE1 & ASE2	Other locations in Australia (e.g. Universities, industrial radiograph companies, hospitals).
Lucas Heights	AS-F	OPAL reactor
Lucas Heights	AS-H	Synroc waste immobilisation (SyMo) plant
CSIRO (various sites)	AS-I	CSIRO
Lucas Heights	AS-J	Research and development

ASNO monitors all nuclear material in Australia

Nuclear material is used in many aspects of Australia's science, technology, medical and industrial activities. Table 3 presents the total quantities of nuclear material by category in Australia as at 30 June 2026.

Uranium ore concentrate (UOC) produced by Australia's mining sector is the largest contributor to the total, followed by thorium ore residue and depleted uranium in metallic form. The inventory of thorium ore residue is dominated by some legacy material and has remained unchanged for many years. Depleted uranium has many uses, including radiation shielding for industrial and medical applications and electron microscopy.

The quantities of special fissionable material are much smaller (measured in grams rather than kilograms or tonnes) but have a high safeguards significance due to their higher proliferation risk. Low enriched uranium (LEU) is used as fuel for the OPAL reactor, as well as production of nuclear medicine.

Australia has a small quantity of high-enriched uranium (2.75 kg ^{235}U, isotope weight). The properties of HEU make it useful in research and development, nuclear forensics and chemistry work.

Table 3: Nuclear material in Australia as at 30 June 2026

Category	Quantity	Intended end-use
Source material		
Uranium ore concentrates (UOC)	1,120 tonnes	Export for energy use pursuant to bilateral agreements
	3.5 tonnes	Storage
Natural uranium (other than UOC)	4,490 kg	Research, storage
Depleted uranium	30,742 kg	Research, shielding
Thorium ore residues	59 tonnes	Storage/disposal
Thorium (other than thorium ore residues)	1,937 kg	Research, industry
Special fissionable material		
^{235}U – low enriched (isotope weight[a])	203,892 grams[b]	Research, radioisotope production, storage
^{235}U – high enriched (isotope weight)	2,754 grams	Research, storage
^{233}U (isotope weight)	3.8 grams	Research
Plutonium (other than ^{238}Pu)	1,201 grams	Research, neutron source

[a] Quantities of ^{235}U and ^{233}U special fissionable material are reported using isotope weight. All other material (including plutonium) is reported using element weight. Further information on these terms is provided in the glossary.

[b] The quantity of ^{235}U in low enriched uranium in Australia decreased by approximately 50kg between 30 June 2025 and 30 June 2026, primarily due to the export of spent fuel assemblies from the OPAL reactor to France, see Section 1.3.

Inventory differences recorded during 2025-26

ASNO conducted thorough checks for differences between accounting records for the physical inventory listing for each MBA. Explanations of differences, detailed in Table 4, were reported to the IAEA in material balance reports. Differences from what was reported in the previous ASNO Annual Report were due to:

- historical accounting errors
- gross weight being inadvertently reported instead of element weight
- previous measurement error/uncertainty.

The differences relate to accounting only, no physical changes to material occurred.

Table 4: Inventory differences recorded during 2025-26

Material balance area (MBA)	Material category	Difference between book and physical inventory[a]	Comment
ANSTO	Depleted uranium	+0.01 kg	Remeasurement to correct previous measurement error/uncertainty.
	Enriched uranium (for fissile isotope of ^{235}U only)	+68.67 g U (+4.76 g ^{235}U)	In 2025-26, a legacy item of nuclear material was neutralised for safer storage. The process also put the nuclear material in a form that was easier to measure the quantity of nuclear material. It was found there was less nuclear material than recorded in historical records. The element weight and isotope weight were adjusted based on the 2026 measurement.
	Enriched uranium (for fissile isotope of ^{233}U only)	+0.01 g U (0.00 g ^{233}U)	Remeasurement to correct previous measurement error/uncertainty.
	Natural uranium	-3.190 kg	Remeasurement to correct previous measurement error/uncertainty.
Other locations (MBAs AS-E and ASE1)	Depleted uranium	-29.396 kg	27.8 kg of this difference is attributable to the total weight of industrial radiography devices being reported instead of the element weight of the depleted uranium shielding. The remaining difference related to remeasurements to correct previous measurement error/uncertainty.
	Natural uranium	-0.007 kg	Remeasurement to correct previous measurement error/uncertainty.
	Thorium	+0.140 kg	Remeasurement to correct previous measurement error/uncertainty.

[a] A positive difference indicates that the book inventory value was greater than the physical inventory listing.

ASNO regulated associated items

To fulfill Australia's obligations under the safeguards agreements, ASNO also administers permits under the Safeguards Act for the possession of associated material, associated equipment and associated technology (collectively referred to as associated items). These permits allow Australia to maintain regulatory control over technology, equipment and material with potential proliferation risks, support reporting on Design Information Questionnaires to the IAEA and meet other reporting obligations under Nuclear Cooperation Agreements (NCAs). Table 5 lists the inventory of associated items in Australia.

Table 5: Associated items[a] in Australia at 30 June 2026

Category	Quantity	Intended end-use
Associated material		
Deuterium and heavy water	21.0 tonnes	Research, reactors
Nuclear grade graphite	83.4 tonnes	Research and storage
Associated equipment		
HIFAR[b]	1	Reactor
HIFAR coarse control arms (unused)	5	Reactor components
HIFAR coarse control arms (used)	14	Reactor components
HIFAR safety rods	3	Reactor components
HIFAR fuel charging and discharging machines	2	Reactor components
OPAL reactor[c]	1	Reactor
OPAL control rods	31[d]	Reactor components
OPAL control rod drives	6	Reactor components
Nuclear-grade zirconium tubes	<50 kgs	Research, development and storage
Self-powered neutron detectors	46	Reactor components

[a] Not including items categorised as associated technology.

[b] The ANSTO Board decided to cease operation of HIFAR in January 2007. It is currently being dismantled and is awaiting decommissioning.

[c] Includes, among other things, the reactor reflector vessel and core grid.

[d] *The inventory of control rods has increased since the last Annual Report as ANSTO took delivery of 17 new un-irradiated (spare) control rods for the OPAL reactor during the reporting period.*

How Australia meets its IAEA safeguards obligations?

"Australia has a longstanding position on nuclear weapons. We have a longstanding position on nuclear non-proliferation, and we will continue to advocate for that."

Senator the Hon Penny Wong, Minister for Foreign Affairs, 5 February 2026.

What are International Atomic Energy Agency (IAEA) safeguards?

The goal of safeguards is to deter the spread of nuclear weapons by the early detection of the misuse of nuclear material or technology.

Safeguards assure the international community that states are abiding by their nuclear non-proliferation commitments.

For Australia, safeguards obligations are specified in:

- The **Comprehensive Safeguards Agreement (CSA)**, an agreement between Australia and the IAEA providing an important set of rules to make sure that countries who use nuclear materials don't use them to make nuclear weapons.
- The **Additional Protocol** provides the IAEA with access to a wider range of information, tools and locations related to nuclear activities. This is to make sure that countries, including Australia, are being completely honest and have no undeclared nuclear activities or facilities. Most countries with a CSA also have an Additional Protocol.

Here's what Australia's CSA does:

Makes sure Australia's nuclear materials are used as declared.

The CSA's main job is to ensure that nuclear materials, like those used in Australia's nuclear research reactor, are only used in ways intended. The CSA ensures that the IAEA can verify that these materials are used exclusively for important medical or scientific research or product development, and not for building nuclear weapons.

Ensures that Australia keeps track of its nuclear materials.

When Australia agreed to have a CSA with the IAEA, we also agreed to keep careful records of all our nuclear materials. Australia has a nuclear accounting database called NUMBAT which is used by ASNO, industry and other partners to input, track and report on the movement of nuclear materials in Australia.

The IAEA needs to know the location of all Australia's nuclear materials and how they are being used as they go through the different stages in the nuclear fuel cycle or are used for non-nuclear uses such as radiation shielding or microscopy.

Ensures that Australia reports what it is doing.

Australia must tell the IAEA what we are doing with our nuclear materials.

We do this by sending a monthly report outlining any nuclear material movements as recorded in our database. We also conduct an annual stocktake of all nuclear material in Australia, which is reported in detail to the IAEA and in summary form in the Annual Report.

IAEA inspections.

The IAEA can inspect Australia's nuclear facilities and places where nuclear materials might be to make sure everything is as declared. They use special devices to check the amount of nuclear material is present as reported. They also check if nuclear activities at facilities and sites match what has been reported.

Here's what Australia's Additional Protocol does:

Checks for hidden nuclear activities.

The main goal of the Additional Protocol is to provide the IAEA tools to verify that Australia isn't hiding any secret nuclear materials or activities anywhere in Australia.

Requires more reporting.

Countries that agree to the Additional Protocol must tell the IAEA additional details about their nuclear-related activities. These details include research on nuclear topics, mining uranium, importing and exporting nuclear equipment (e.g. components of nuclear reactors) and providing information about all the buildings on all the sites where nuclear materials might be stored.



Australia became the first country to bring an Additional Protocol into force with the International Atomic Energy Agency on 12 December 1997. The first complementary access inspection under Australia's Additional Protocol occurred on 21 April 1998 at ANSTO. The first ever complementary access visit at a mine was also in Australia on 28 June 1999.

IAEA safeguards conclusions

The IAEA provides an annual safeguards conclusion that is published in its Annual Report. The safeguards conclusion is like a yearly report card.

Generally, there are two types of safeguards conclusion. The more basic conclusion is that the IAEA assesses that: "declared nuclear material remained in peaceful activities".

Using the additional information and access provided in the AP, the IAEA can reach what is called a 'broader conclusion' (see Appendix F) that: "all nuclear material remained in peaceful activities".

As Australia has successfully implemented the AP since 1997, Australia has this 'broader conclusion'. Australia was the first state to receive this assessment in 1999 and has continued to receive it every year since. In 2024, of the 190 states with IAEA agreements in force, the IAEA drew the broader conclusion for only 75 states.

1.2

Maintain robust and proportionate domestic nuclear regulation

Performance Measures

The quantities, categories, locations and intended end-uses of nuclear material and associated items within Australia are accounted for.

Australia's system of safeguards permits and authorities is administered in an effective and timely manner.

Overview

This section summarises how ASNO completes its domestic nuclear safeguards regulation activities. This includes the maintenance of a nuclear material accountancy database.

We describe the nuclear permits ASNO issues, which are broken into class based on industry type, quantities and types of nuclear material. The specifics for each permit class are reviewed every 5 years to ensure they remain fit for purpose.

ASNO's permit system safeguards nuclear material in Australia

Australia maintains a comprehensive safeguards system to account for and control all nuclear material and associated items within its jurisdiction. Administered under the Safeguards Act, ASNO uses a risk-based framework of permits and authorities that applies to entities establishing, producing, using, storing, transporting, or decommissioning nuclear material or associated items. ASNO also administers permits for the establishment of nuclear facilities, facilities for carrying out nuclear activities and facilities for using associated equipment. Permit holders across the suite of permit types must report on their holdings and activities, implement security measures scaled to risk and facilitate inspections.

Regular review of permits ensures a fit for purpose framework

ASNO conducts reviews of permits over different cycles according to industry type or permit class, with major reviews done on a five-year cycle. The cycle allows ASNO to ensure permit conditions are risk based and fit for purpose. ASNO can respond to changes in the regulatory environment for that class of permit holder, so that all the permits remain effective and efficient.

ASNO completed a review of the class U6 permit template. U6 class permits are designed for holders of uranium ore concentrates for analysis purposes. Permit holders are authorised to store uranium, or thorium ore concentrates, and conduct laboratory scale analysis on the production/extraction chemistry of uranium and/or thorium.

Before renewing three existing permits ASNO reviewed and revised to ensure they remain fit for purpose and incorporate regulatory best practices. A summary of all permits and authorities granted, varied, revoked and expired in the reporting period is in Table 6.

NUMBAT modernisation strengthens nuclear accountancy

The Nuclear Material Balance And Tracking system (NUMBAT) is a custom-built system that manages permits, conducts nuclear material accountancy and prepares reports required under Australia's safeguards agreements and bilateral nuclear cooperation agreements. The system is a critical tool that enables ASNO to maintain an accurate account of nuclear material in Australia to meet IAEA obligations.

This year, NUMBAT underwent a significant migration to a cloud-based architecture. The move helped ensure NUMBAT remains secure, supported and resilient in an evolving cyber security environment. The external-facing portal was refreshed with user-interface improvements that improved usability and accessibility for permit holders.

ASNO worked closely with permit holders throughout the transition, providing communications and support to assist onboarding to the new platform. Permit holders provided positive feedback on the refreshed system. ASNO will continue to deliver incremental enhancements to NUMBAT to improve functionality, usability and reporting capability for both staff and permit holders.

Table 6: Status of permits and authorities under the Safeguards Act at 30 June 2026 and changes in the reporting period

Permit or authority	Current total	Granted	Varied	Revoked	Expired
Possess nuclear material	119	5	6	5	0
Possess associated items	9	0	0	0	0
Transport nuclear material	18	0	0	0	1
Transport associated items	0	0	0	0	0
Establish a facility	1	0	0	0	0
Decommission a facility	2	0	0	0	0
Communicate information contained in associated technology	6	0	0	0	0
Total	**155**	**5**	**6**	**5**	**1**

Domestic compliance inspections and inventory checks

Physical inventory takings were completed successfully, on time and with a high degree of compliance from permit holders.

ASNO conducted 15 domestic inspections separate from those done by the IAEA to:

- ensure existing permit holders are complying with the Safeguards Act and their permits or notification requirements
- determine whether potentially regulated entities (such as new permit applicants) have the necessary arrangements in place to meet their obligations under the Safeguards Act
- investigate any indications of nuclear material or associated items outside of regulatory control
- identify and resolve compliance issues, such as inconsistencies in reporting by regulated entities to ASNO
- work with regulated entities to ensure that they know and are meeting their compliance requirements
- ensure nuclear material, associated items and facilities have adequate physical security to prevent, detect and respond to nuclear security threats.

ASNO's nuclear regulatory permit system

Under the Safeguards Act, ASNO administers a system of permits for anyone who:

- produces, uses, stores or transports nuclear materials
- produces, uses, processes, stores or transports/transfers associated items, such as specific types of nuclear equipment and technology
- establishes a nuclear facility, a facility for carrying out nuclear activities, or a facility for using associated equipment
- decommissions a facility.

The permit system, along with other authorities and notifications under the Safeguards Act provide a clear regulatory framework for meeting Australia's obligations under international agreements for nuclear non-proliferation, safeguards and security. Permit holders must:

- report regularly to ASNO on each item of nuclear material, equipment or technology they have and on their related activities
- report to ASNO on the design, construction and operation of their facilities
- implement risk-based permit conditions scaled for the quantity and type of nuclear materials, equipment or technology
- facilitate compliance checks by IAEA and/or ASNO inspectors, including inspections.

ASNO conducts onsite visits to build relationships with prospective permit holders

ASNO conducted 7 onsite regulatory visits with prospective permit holders to provide regulatory advice to assist potential permit holders to understand obligations under the Safeguards Act.

For some prospective permit holders this included confirming that administrative and security arrangements were in place before granting an ASNO permit.

How ASNO accounts for nuclear material in Australia

Information ASNO collects through its permit system, and other sources, is used to prepare Australia's declarations to the IAEA on all nuclear material, associated items, facilities and activities in Australia. ASNO's domestic regulations support Australia to make declarations to the IAEA that are correct, complete and timely.

For nuclear material, the data generated by ASNO's regulatory activities is recorded in NUMBAT and is used to generate reports to the IAEA (as required by our CSA). ASNO generates three types of detailed accountancy reports that are submitted to the IAEA:

- Inventory Change Reports (ICRs) - each change in the inventory of nuclear material in a Material Balance Area (MBA)
- Physical Inventory Listings (PILs) - listing of all batches of nuclear material, including names and identification of each batch
- Material Balance Reports (MBRs) - summarising the total nuclear material holdings in a MBA, based on material type.

Under the CSA with the IAEA, Australia is obligated to establish and maintain a system for accounting and control of its nuclear material - referred to as a "State system of accounting for and control of nuclear material" (SSAC).

Australia's SSAC has legislation and regulations relating to nuclear safeguards (Australia's Safeguards Act) and a responsible authority that implements and ensures compliance with the regulations (i.e. ASNO).

The SSAC includes the system under the Safeguards Act that enables ASNO to ensure:

- effective control of Australia's nuclear material, associated items and facilities
- accounting for all nuclear material and associated items
- meeting international legal obligations.

The Safeguards Act establishes the required system for control through permits for possession and transport of nuclear material and associated items, as well as permits for establishing and decommissioning facilities. Communication of information contained in sensitive nuclear technology is also controlled through the grant of authorities. Notices of a grant, variation or revocation of each permit and authority is published in the Australian Government Gazette as required by subsection 20(1) of the Safeguards Act.

1.3

Protect Australia's nuclear materials, associated items and facilities

Performance Measures

Security of nuclear material, technology and facilities meets Australia's obligations under the A/CPPNM, the ICSANT and bilateral NCAs and accords with relevant IAEA guidelines.

Internationally agreed standards for the security of nuclear material are applied to all AONM.

Overview

This section summarises how ASNO regulates the protection of Australia's nuclear facilities, nuclear material and associated items against unauthorised access, removal and sabotage.

ASNO maintains regulatory oversight of Australian permit holders to verify that nuclear security arrangements at Australian facilities and other locations with nuclear material are in accordance with obligations under the Safeguards Act. It also covers ASNO's regulatory activities to ensure the security of Australian Obligated Nuclear Material (AONM) and technology in international transit or in facilities overseas.

Australia's nuclear material categories used in the permit and authorities' framework

Permit holders for which physical protection or information security is required is summarised in Table 7. It is categorised according to the materials or items held.

Table 7: Distribution of permit holders according to security category

Nuclear material category	Type of facility	Number of permit holders
Category II[a]	Research reactor, storage	1
Category III[a]	Storage, scientific research	1
Category IV[b]	Scientific research	1
Uncategorised[c]	Locations outside of facilities (LOFs), radiographers	115
Natural uranium (UOC)	Uranium mines and concentration plants	4
Transport of nuclear material	Transport companies, ports, shipping lines	21
Associated items	**Type of facility**	
Associated Equipment and Technology	Enrichment research, storage and archives	5
Associated Technology	Patent attorneys	4

[a] Nuclear material category is based on IAEA Nuclear Security Series No. 13

[b] Category IV limits are: 15g≥Pu>10g;15g ≥(^{235}U≥20%)>10g; 1000g ≥(^{235}U<20%-10%)>10g; 10 000g ≥(^{235}U<10%)>10g; 15g ≥^{233}U>10g; unirradiated source material ≤5000kg (%-enrichment)

[c] Quantities of less than Category IV quantities

Development of a sovereign nuclear security capability

In October 2025, I was honoured to open the inaugural Australian Training Course on the Physical Protection of Nuclear and Radiological Material and Facilities. Targeting Australia's growing nuclear security community, the course is the first nuclear security course specifically tailored to Australia's legislative framework and marks the beginning of a significant uplift in Australia's nuclear security maturity. The course was developed in close collaboration with ANSTO, ARPANSA and in partnership with the U.S. Department of Energy's National Nuclear Security Administration (NNSA).

ASNO increases nuclear security cyber capability

In December 2025, ASNO introduced a cyber capability to support expert assessment of the nuclear security related cyber architecture for permit holders. This allows ASNO to engage with regulated entities to ensure effective operational technology is applied for cyber security threats. With this capability, ASNO is responding to IAEA reports on the need to address cyber threats for nuclear security.

ASNO contributes to regulatory oversight during spent fuel shipment

In September 2025, ASNO worked with ANSTO and 10 State and Federal Government agencies on the nuclear security and safeguards arrangements for a shipment of spent nuclear fuel assemblies to France for reprocessing. This was the 9th export of spent fuel from Australia, with the last being in 2018. The shipment was conducted in line with international best practice.

ASNO's role included reviewing and approving Transport Security Plans, obtaining approval from the United States, Canada, France and Euratom for the export of the spent fuel and facilitating IAEA safeguards for the installation and removal of IAEA containment and surveillance equipment. ASNO also accounted for the transfer of each fuel assembly and provided requisite notifications and reports to the IAEA. ASNO and ARPANSA continue to provide a coordinated approach to nuclear regulation, security and safety.



ASNO official joins other government agencies in monitoring the shipment of spent fuel.
Photo: ANSTO

Collaboration with ARPANSA streamlines regulatory practices

ASNO and ARPANSA have a long-standing, working relationship that has helped to streamline regulatory practices and to identify practical ways that we can continue to work together to reduce the regulatory burden on co-regulated entities.

ASNO's work with ARPANSA focused on areas at the security and safety interface, including:

- periodic safety and security review (PSSR) for the ANSTO OPAL research reactor
- spent fuel management
- material out of regulatory control
- Nuclear Security Community of Practice.

ASNO oversight strengthens security of mining and transport activities

Review of Uranium Ore Concentrate (UOC) shipment routes proximity to conflict zones

ASNO's permit system provides approval of routes and vessels for the shipment of UOC. ASNO continued to monitor conflict zones around the Gulf of Aden and the Red Sea and work with permit holders on alternative routes.

Inspections are key

ASNO conducted 16 inspections throughout the year, including at uranium mines, Silex Systems Limited, Ubaryon laboratory, as well as an inspection of a new domestics UOC transport route.

These inspections assessed compliance with permit conditions and provided an opportunity to guide permit holders on ways to improve nuclear security.

To minimise regulatory burden, nuclear security and safeguards inspections were conducted concurrently where possible.

Australia contributes to international nuclear security reporting

ASNO submitted an incident to the IAEA Incident and Trafficking Database (ITDB) in July 2025. The submission was made following the first prosecution under the Safeguards Act as reported in ASNO's 2024-25 Annual Report. The prosecution related to an unauthorised import of nuclear material.

The ITDB is a voluntary IAEA database that records illicit trafficking and other unauthorised activities involving nuclear and radioactive material outside regulatory control. Australia supports the ITDB and submits relevant information when required.

The IAEA uses this information to identify patterns and trends, helping to detect possible security threats and vulnerabilities. This analysis informs planning, including the IAEA Nuclear Security Plan for 2026–2029.

1.4

Implement nuclear safeguards and nuclear security for naval nuclear propulsion

Performance Measures

- Ensure that Australia's NNP program is compliant with Australia's obligations with the IAEA under our CSA and Additional Protocol, including the future Article 14 Arrangement.
- Provide accurate and timely advice about Australia's domestic regulation and permits to ensure nuclear safeguards and security measures meet Australia's international obligations.
- Support Australia's engagement with the IAEA and trilateral partners to develop an arrangement under Article 14 of Australia's CSA, in a manner that sets the highest nuclear non-proliferation standard.
- Undertake, coordinate and facilitate research and development programs, under Verify, that invest in technologies and techniques to uplift sovereign and IAEA capabilities to apply safeguards for NNP.

Overview

This section summarises ASNO's role in how Australia ensures the Naval Nuclear Propulsion (NNP) program complies with Australia's international safeguards obligations in setting the highest nuclear non-proliferation standard. As the regulator for nuclear safeguards and nuclear security under the *Nuclear Non-Proliferation (Safeguards) Act 1987 (Safeguards Act)*, ASNO is working to develop effective permits for the NNP program. ASNO also provides training to AUKUS stakeholders on Australia's non-proliferation obligations and coordinates closely with Australia's other nuclear regulators. ASNO led Australia's participation in a range of technical and practical engagements on safeguards approaches and associated verification technologies for Australia's NNP program.

ASNO ensures Australia remains compliant with non-proliferation obligations

ASNO ensured that Australia's reporting obligations under the Comprehensive Safeguards Agreement (CSA) and the Additional Protocol were met, including for Australia's NNP activities. Australia continued to receive the 'broader conclusion' from the International Atomic Energy Agency (IAEA) (see Appendix F) which provides evidence of Australia meeting the highest nuclear non-proliferation standard. This is in line with the commitment of AUKUS leaders.

To continue our practice of transparency, we invited the IAEA under Article 8 of the Additional Protocol to conduct a complementary access visit to the Defence Precinct at Henderson shipyard. This visit, facilitated by ASNO, the Australian Submarine Agency (ASA) and the Royal Australian Navy (RAN), provided the IAEA with valuable context to this part of the NNP program.

In the Director General, IAEA's statement to the Board of Governors in November 2025, he recognised Australia's continuing to meet its treaty obligations. He also noted Australia's facilitation of the visits and verification activities, noting the provision of the required information, access to conduct verification activities and ongoing transparency measures.[1]



ASNO's nuclear safeguards and nuclear security regulatory responsibilities for Australia's NNP program

ASNO regulates nuclear safeguards and nuclear security for the NNP program in accordance with ASNO's legislative mandate under the *Nuclear Non-Proliferation (Safeguards) Act 1987*. For the NNP program, ASNO's regulatory work sits alongside the work of the Australian Naval Nuclear Power Safety Regulator (ANNPSR), which was established 1 November 2025.

ASNO's role is essential in ensuring that Australia can continue to meet its international safeguards obligations and that appropriate levels of nuclear security apply to facilities and nuclear material across Australia, including for NNP. Delivery of the Optimal Pathway requires various permits to be granted under the Safeguards Act, the facilitation of both IAEA and ASNO inspections and through ASNO the declaration of required information to the IAEA; all while protecting classified and sensitive information.

[1] IAEA, "Naval Nuclear Propulsion: Australia," GOV/INF/2025/12, 12 November 2025. It reports on the IAEA's safeguards and verification engagement with Australia concerning its naval nuclear propulsion programme.

ASNO's work to develop bespoke permits

ASNO continued to work with ASA to develop a bespoke permit for the establishment of a facility as part of the NPP program. Further permits will be required under the *Safeguards Act* before Australia takes possession of nuclear material and associated equipment.

All permits will need to capture the unique aspects of the NNP program while meeting all requirements under the Safeguards Act. Permits ensure that ASNO can assess which activities may give rise to CSA and Additional Protocol obligations, such as to make new reports, declarations or notifications to the IAEA or to facilitate IAEA inspections. Permits also ensure that Australia completes necessary preparatory works to be able to meet applicable obligations under the CSA and Additional Protocol as they arise. Other obligations such as the protection of classified information against disclosure to IAEA inspectors under the Agreement among the Government of Australia, the Government of the United Kingdom of Great Britain and Northern Ireland and the Government of the United States of America for Cooperation Related to Naval Nuclear Propulsion (AUKUS Naval Nuclear Propulsion Agreement (ANNPA), signed 5 August 2024) also need to be met.

ASNO's contributes technical expertise to support Australia's non-proliferation commitments

ASNO contributed technical advice, including 'safeguards-by-design' and 'security-by-design' principles and other expertise to a range of domestic and international AUKUS stakeholders to progress implementation of Australia's NNP program. Providing such technical advice assists engineering and operational processes to ensure domestic regulatory and treaty obligations can be met in an effective and efficient manner while protecting sensitive information.

To strengthen understanding of safeguards and nuclear security obligations, ASNO provided training, onsite practice inspection exercises and workshops for the Department of Defence, RAN, ASA and Defence industry.

This training was based on ASNO's on-the-ground experience of what these stakeholders can expect during an IAEA safeguards inspection activity, using the same techniques and tools that the IAEA routinely uses. ASNO-appointed nuclear inspectors also participated in a mock inspection and post-inspection debrief at HMAS Stirling.

Regulators align responsibilities for naval nuclear propulsion

ASNO's engagement with Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) and the newly established ANNPSR continued to establish a common understanding of regulatory practices and responsibilities regarding naval nuclear propulsion. Activities included:

- ASNO provided advisory support on the drafting of the Australian Naval Nuclear Power Safety Regulations, which were passed in November 2025. Our advice focused on the interfaces between nuclear safety, security and safeguards.
- In May 2026, senior leadership from ASNO and ANNPSR came together for a workshop to enhance strategic collaboration and regulatory alignment. Outcomes of the workshop included practical ideas to reduce regulatory burden including information sharing mechanisms, regular engagement with co-regulated entities and opportunities for joint training.

ASNO drives international collaboration on future safeguards implementation

During the reporting period, ASNO supported Australian Government efforts to develop an arrangement under Article 14 of Australia's CSA. The aim of this arrangement is to enable the IAEA to continue to meet its safeguards objectives for Australia throughout the lifecycle of the NNP program while protecting classified and sensitive military information and assets. ASNO worked with trilateral partners and the IAEA on a range of technical, practical and legal matters on safeguards approaches for Australia's NNP program. This included significant work on adapting CSA and Additional Protocol safeguards structures suitable for use at Australia's NNP locations, developing arrangements to protect information during IAEA inspections and a workshop held with the IAEA in early 2026.

ASNO gains insights from UK nuclear submarine facilities

In July 2025, I joined heads of Australian nuclear agencies on a visit to the UK naval bases (shipyards) at Barrow and Devonport and to meet regulatory counterparts in UK Office for Nuclear Regulation (ONR) and the Defence Nuclear Safety Regulator (DNSR). Seeing first-hand the operational and engineering features of a facility for the construction and maintenance of nuclear-powered submarines provided valuable insights to assist ASNO in its responsibilities to ensure Australia's planned facilities can accommodate nuclear security and safeguards requirements.

Guiding safeguards innovation to support future implementation needs

Through Verify— Australia's safeguards research and development program— ASNO continued to build the next generation of IAEA safeguards technology and techniques and expertise in Australia, needed to support the implementation of the NNP program. A core objective of Verify is to solve complex safeguards challenges. New technological applications that can meet the IAEA's technical objectives while protecting sensitive information are also being developed under the program.

An example is ASNO's work with ANSTO to further develop and refine the safeguards applications of ANSTO's patented radiation imaging technology. This work included refining the design, operational scope and the user interface to track and monitor nuclear sites without using standard digital cameras.



In-core Nuclear Fuel Absence Verification System (INFAVS)

1.5

Manage Australia's Nuclear Cooperation Agreements

Performance Measures

AONM is accounted for in accordance with the procedures and standards prescribed under relevant bilateral agreements and obligations under NCAs are effectively implemented.

FONM in Australia is accounted for in accordance with the procedures and standards prescribed under relevant bilateral agreements.

Overview

This section summarises ASNO's management of Australia's global network of treaty-level Nuclear Cooperation Agreements (NCA) that govern how Australian uranium exports are used and controlled in accordance with Australia's standing uranium export policy.

ASNO tracked over 249,667 tonnes of AONM. ASNO worked with India to finalise arrangements necessary to implement the Australia-India nuclear cooperation agreement.

ASNO accounts for Australia's exported uranium across the nuclear fuel cycle

ASNO gives effect to Australia's uranium export policy through our management of Australia's global network of NCAs. This network of 25 treaties spans 43 states, as well as Taiwan, and ensures that all nuclear material exported from Australia (and any nuclear material derived from its use) is accounted for, secured and controlled at each stage of the nuclear fuel cycle.

ASNO tracked over 249,667 tonnes of AONM across all stages of the global nuclear fuel cycle, including depleted and enriched uranium created during enrichment processes as well as the plutonium produced in civil reactors during the 'burn up' of uranium in fuel assemblies.

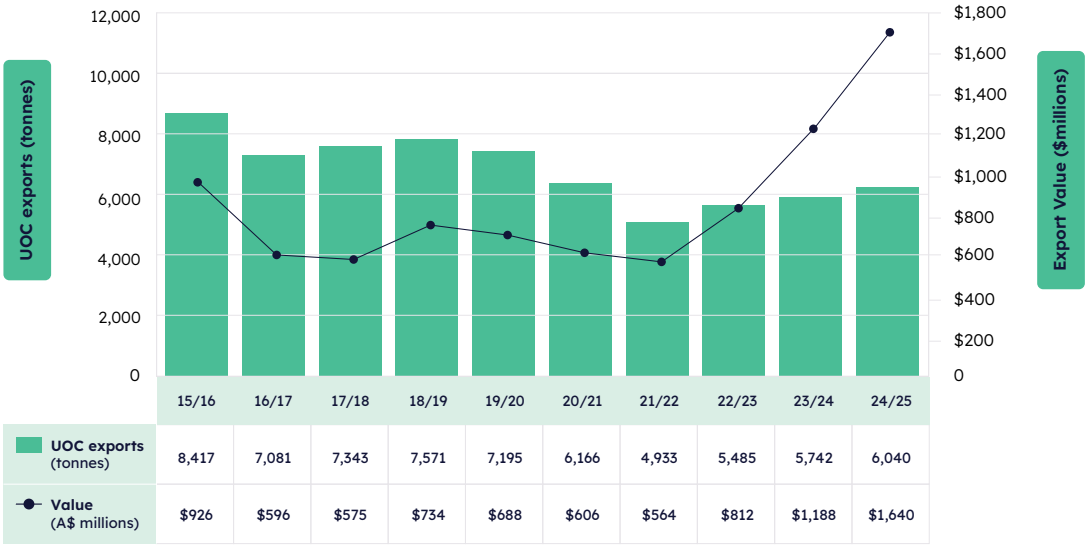
ASNO continued to uphold Australia's reciprocal obligations to our NCA partners by reporting on the presence of all foreign-sourced nuclear material within Australia. ASNO confirmed that all obligations continue to be met by all NCA partners.

ASNO continued to work closely with NCA partners to ensure the approval and security requirements for exports of fuel assemblies that contain Australian-origin uranium to Ukrainian controlled reactors remain fit-for-purpose. This effort directly supports Ukraine's energy security.



ASNO nuclear inspector departing an inspection at Honeymoon mine in South Australia

Figure 1: Australian UOC exports



	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25
UOC exports (tonnes)	8,417	7,081	7,343	7,571	7,195	6,166	4,933	5,485	5,742	6,040
Value (A$ millions)	$926	$596	$575	$734	$688	$606	$564	$812	$1,188	$1,640

Table 8: UOC (U_3O_8) export statistics

Location	Material balance area
Total Australian UOC exports FY2025–26	**6,040 tonnes**
Value Australian UOC exports[a]	$1.64 billion
Australian exports as percentage of world uranium requirements[b]	7.4%

[a] As provided by Australian Department of Industry, Science and Resources

[b] The World Nuclear Association assessed global uranium requirements in 2025 were 68,920 tU

Ensuring effective accounting for AONM

ASNO engaged with a range of uranium supply partners on the effective operation of NCAs. This included meetings at the IAEA's 69th General Conference in September 2025 with different NCA-partners, including the US, UK, EU, Japan, Canada, Sweden, UAE and RoK. Meetings focused on maturing work on common reporting schema for nuclear material transfers to streamline the implementation of NCAs and for agreeing solutions to emerging accountancy challenges, including for unconventional uranium resources.

ASNO works to finalise Administrative Arrangements for uranium exports to India

Over the reporting period ASNO worked with India's Department of Atomic Energy and the Ministry of External Affairs to negotiate the Administrative Arrangements necessary to implement the Australia-India bilateral nuclear cooperation agreement. These arrangements detail the accountancy and reporting processes that ASNO requires to fulfil its legislative responsibilities under the Safeguards Act.

Accounting for uranium extracted from controlled ores

The growing global demand for rare earth elements has led to an increase in Australian exports of uranium-bearing mineral sands, heavy mineral concentrates and rare earth element concentrates. These minerals are export controlled when the concentration of trace quantities of uranium and/or thorium exceed 500 parts per million and are therefore referred to as 'controlled ores'. ASNO provides safeguards risk assessments to the Department of Industry, Science and Resources to support its consideration of applications for mineral export permission of these commodities.

Increasingly, global industry is exploring opportunities to extract uranium for use in the nuclear fuel cycle from waste streams created during mineral processing operations. ASNO continued to engage with Australian industry and our international partners to ensure that any Australian-origin nuclear material that is extracted for use in the global nuclear fuel cycle will be regulated appropriately and subject to the relevant NCAs.

To this end, building on work started in 2024-25, ASNO has finalised a

conceptual framework to ensure that uranium intended to be extracted from Australian-origin controlled ores for use in the global nuclear fuel cycle is accounted for in the same way as Australian uranium ore concentrate (UOC) exports under NCAs. ASNO's efforts are shaping international consideration of this emerging issue.

Table 9: Summary of net accumulated AONM by category, quantity and location as of 31 December 2025[a]

Category	Location	tonnes[b]
Depleted uranium	Canada, China, European Union[c], Japan, Republic of Korea, Russia, United Kingdom, United States	162,058
Natural uranium	Canada, China, European Union, India, Japan, Republic of Korea, United Kingdom, United States	39,155
Uranium in enrichment plants	European Union, Japan, United Kingdom, United States	26,269
Low enriched uranium	Canada, China, European Union, Japan, Mexico, Republic of Korea, Switzerland, Taiwan, Ukraine, United Arab Emirates, United Kingdom, United States	21,928
Irradiated plutonium	Canada, China, European Union, Taiwan, Japan, Republic of Korea, Mexico, Switzerland, United Kingdom, United States	246
Separated plutonium	Japan, United Kingdom	11
Total		**249,667**

[a] Figures are based on yearly reports to ASNO in accordance with Australia's bilateral agreements and other information held by ASNO.

[b] All quantities are given as tonnes weight of the element uranium or plutonium.

[c] Euratom is the European Atomic Energy Community. The Australia–Euratom NCA covers all 27 Member States of the European Union.

Table 10: Supply of Australian uranium by region during 2025[a]

Region	tonnes UOC (U_3O_8)	Percentage of Total
Canada	1,025	17%
Europe	1,108	18%
United States	3,907	65%
Total	**6,040**	**100%**

[a] Export destinations for Australian uranium are decided by commercial factors including the availability of conversion capacity and customer preferences.

Table 11: Summary of AONM Transfers during 2025[a]

Fuel Cycle Stage	Destination	U (tonnes)
Conversion	Canada	2,586
	European Union	1,264
	United States of America	3,620
Enrichment plant	European Union	225
	United Kingdom of Great Britain and Northern Ireland	243
	United States of America	22
Fuel fabrication	European Union	58
	Japan	28
	Republic of Korea	67
	United Kingdom of Great Britain and Northern Ireland	22
	United States of America	140
Reactor	European Union	2
	Ukraine	46

[a] Figures reflect the total volume of imports and exports completed within each jurisdiction between 1 January 2025 and 31 December 2025.

Table 12: The total quantity of Foreign Obligated Nuclear Material (FONM) in Australia (by category) from all partner countries as of 31 December 2025

Category	Quantity
Source material	**kilograms**
Natural uranium (other than UOC)	42
Depleted uranium	3,448
Thorium (other than Thorium Ore Residues)	735
Associated or non-nuclear material	**kilograms**
Heavy water and deuterium	10,655
Special fissionable material	**grams**
^{235}U - low enriched	2,205,946
^{235}U - high enriched	820
^{233}U	0
Plutonium (other than ^{238}Pu)	1,195

1.6

Implement Australia's obligations under the Chemical Weapons Convention

Performance Measures

- Australia’s obligations under the CWC are met.
- Effective regulation of CWC-related activities in Australia.
- Contribute to strengthening CWC implementation, including through cooperation with the OPCW and with CWC States Parties.

Overview

This section summarises how ASNO provides assurances that Australia is meeting its international obligations under the Chemical Weapons Convention (CWC) in submitting annual declarations, facilitating Organization for the Prohibition of Chemical Weapons (OPCW).

ASNO ensures Australia's obligations under the CWC are met

ASNO ensured that CWC annual declarations, amendments and notifications were submitted on time and to a high standard. This included:

- Article VI declarations of imports and exports of CWC-Scheduled chemicals and CWC-relevant past activities at 23 facilities during 2025
- Article VI declaration of anticipated activities at two CWC-Scheduled chemical facilities for 2026
- Article X, paragraph 4, declaration of Australia's national programs for protection against chemical weapons during 2025
- responded to an OPCW Third Person Note regarding mismatch of respective declarations of chemical trade between Australia and other CWC States Parties
- responded to an OPCW Third Person Note regarding clarification of the operational status of declared chemical facilities.

ASNO facilitates OPCW inspections in Australia

ASNO facilitated 2 routine sequential OPCW Article VI inspections in Melbourne. The first inspection occurred at an Other Chemical Production Facility (OCPF) producing discrete organic chemicals for mining, agriculture and industrial processes and the second at Australia's Schedule 1 Facility for Protective Purposes operated by Defence Science and Technology Group. The OPCW verified Australia's declarations to the OPCW in accordance with the respective inspection mandates, including the absence of any undeclared Schedule 1 chemicals.

For both inspections, the OPCW inspection report advised that there were no outstanding issues or issues that required further clarification. The regulated entities valued ASNO's pre-inspection support, which helped them prepare.

This brings the total number of ASNO-hosted Article VI inspections at declared chemical facilities in Australia to 74 since entry into force of the CWC in 1997.



ASNO staff facilitate an OPCW Inspection of an industrial chemical site in May 2026.

ASNO regulates chemical activities

ASNO regulated 97 distinct entities under the *Chemical Weapons (Prohibition) Act 1994* and Regulation 5J of the Customs (Prohibited Imports) Regulations 1956. These regulated entities include permit holders, as well as chemical facilities that do not require a permit, but are required to notify ASNO of their annual activities.

Table 13 lists 25 chemical facility permits (by type and quantity) issued by ASNO under the *Chemical Weapons (Prohibition) Act 1994* that were active at 30 June 2026.

Table 13: Permits for CWC-Scheduled Chemical Facilities

CWC-Scheduled Chemicals	CWP Act	Permit type	Permits[a] at 30 June
Schedule 1	s19(4)	Production (protective)	1
	s19(5)	Production (Research)	8
	s19(6)	Consumption	13
Schedule 2	s18(1)	Processing	2
Schedule 3	s18(1)	Production	1

[a] Permit number includes new, existing and renewed permits.

In addition, ASNO issued 61 Schedule 2 and Schedule 3 chemical import permits. For OPCW Designated Laboratory proficiency testing purposes, ASNO issued 6 import permits for the import of unknown samples containing small quantities of Schedule 1 chemicals or their precursors or degradation products.

Supporting the OPCW's verification mandate at declared Schedule 1 Facilities

In November 2025, I met with Fernando Arias, Director-General of the OPCW, to co-sign a modified Facility Arrangement relating to OPCW inspections at Australia's only designated Schedule 1 Facility for Protective Purposes, operated by the Defence Science and Technology Group (DSTG). As an OPCW Designated Laboratory, DSTG is positioned to analyse environmental and biomedical samples on behalf of the OPCW to support their verification work for identification of Schedule 1 and other toxic chemicals around the world.

Reducing regulatory burden through global outreach

ASNO continued to engage with other CWC national authorities to share regulatory best practice approaches and views on outstanding verification issues to reduce regulatory burden on industry.

ASNO worked with the CWC National Authority of the Peoples Republic of China to streamline administrative arrangements for the trade in scheduled chemicals. In November 2025, ASNO facilitated meetings in Melbourne with Australian importers of CWC-Scheduled chemicals, the Chinese National Authority and its major chemical broker, Sinochem International Corporation. Discussions focused on issues regarding end-user certificates and identified possible solutions.

ASNO attended the 40th Anniversary Meeting of the Australia Group held in Sydney from 14-18 July 2025.

ASNO chaired a round table meeting with the Director General of the Indian Chemical Council (ICC), representatives from Defence Export Controls and Australian Border Force to share respective experiences and challenges regarding trade in CWC-Scheduled chemicals and how our agencies cooperate to implement the CWC and related export controls.

ASNO also facilitated meetings between Director General ICC and senior representatives from ACCORD – Australia's national industry association representing manufacturers and suppliers of hygiene, personal care and specialty products. These discussions help ASNO create stronger ties for cooperation with India's ICC and with ACCORD who support CWC implementation in our respective countries.



Director General ASNO with former Director-General of the OPCW, Fernando Arias, following signature of a modified Facility Arrangement for OPCW inspections at Australia's only designated Schedule 1 Facility.

Industry engagement strengthens CWC compliance

ASNO made 7 on-site visits to regulated entities during the reporting period, including to industrial, research and government sites and importers of CWC-Scheduled chemicals. The engagement program provided opportunities to discuss regulatory requirements, address compliance questions and reinforce the importance of accurate and timely reporting. This included preparing sites selected for OPCW inspections over 21-28 May described above. These activities all assist to maintain the quality of Australia's declarations to the OPCW.

ASNO launches new chemical portal for regulated entities

The ASNO chemical database (ASNOC) is critical to support our work to meet Australia's CWC obligations and to facilitate ASNO's regulatory requirements under the CWP Act and Customs (Prohibited Imports) Regulations. ASNOC is custom-built to manage facility and import permits, to receive and approve stakeholder reports, compile declarations of past and anticipated chemical activities for OPCW and to generate reports which help manage OPCW inspections and resolve discrepancies in declarations of trade between States Parties.

In May 2026, ASNO completed a major upgrade to ASNOC moving it to a secure cloud-based environment to make it more reliable and easier to maintain. This marked a significant milestone in the modernisation of ASNO's IT systems for CWC implementation. The combination of authentication and identity controls, stronger audit logging and monitoring and other security improvements represent a culmination of several years of development.

Feedback from regulated entities has been positive demonstrating closer alignment of CWC-related chemical regulation with the Australian Government's regulatory reform agenda.

1.7

Implement Australia's obligations under the Comprehensive Nuclear-Test-Ban Treaty

Performance Measures

- Australia's obligations under the CTBT are met.
- Contribute to the development of CTBT verification, including through the work of the CTBTO Preparatory Commission.
- Australia's IMS network meets the operational mandate of the CTBTO.

Overview

This section summarises ASNO's work to ensure Australia complies with its obligations under the Comprehensive Nuclear-Test-Ban Treaty (CTBT). ASNO continued its engagement with stakeholders to support the objectives of the CTBT and the sustainment of Australia's network of 21 International Monitoring System (IMS) facilities.

ASNO ensures that Australia is meeting its CTBT obligations

ASNO is the national authority responsible for implementing the CTBT in Australia and is responsible for ensuring that Australia meets its international obligations under the Treaty. *The Comprehensive Nuclear-Test-Ban Treaty Act 1998* (CTBT Act) gives effect to ASNO's responsibilities in these areas.

Australia hosts the world's third-largest IMS network: 21 facilities – run by Australia's Station Operators, Australian Radiation Protection and Nuclear Safety Agency (ARPANSA), Geoscience Australia (GA) and the Australian National University (ANU). These facilities comprise stations across all four CTBT monitoring technologies: hydroacoustic, seismic, infrasound and radionuclide. The number and spread of Australian facilities contribute critical

data to the CTBT's global verification regime, supporting the detection of nuclear explosions worldwide.

Under the CTBT Act, ASNO ensured that Australia's IMS facilities operated in accordance with the technical requirements of the Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO).

ASNO continued to fulfil its reporting, coordination and advisory responsibilities in support of Australia's IMS network and engagement with the CTBTO. This included participation in the CTBTO Preparatory Commission's biannual technical working group (Working Group B) meetings and the provision of technical advice to Whole-of-Australian-Government decision-making bodies with responsibilities for Australia's remote territories (where many of Australia's IMS stations reside). Through these activities, Australia contributed to the ongoing development of CTBT verification capabilities and supported international efforts to strengthen the Treaty's monitoring and verification framework.

Maintenance and upgrades keep Australia's IMS network operational and resilient

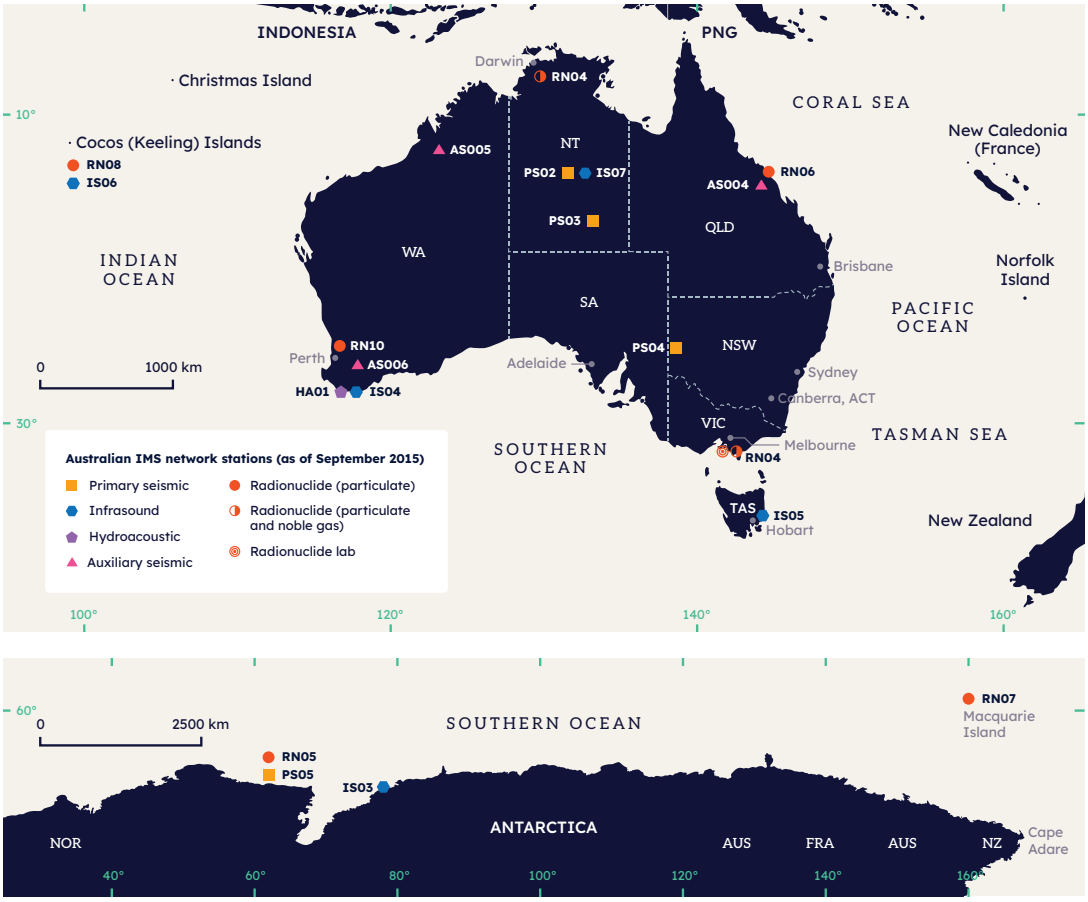
Under ASNO's coordination, Australia undertook a range of technical and operational maintenance activities at various IMS facilities to ensure they continued to operate in accordance with the technical requirements of the CTBTO.

The ANU completed significant upgrades at the infrasound and seismic at Waramunga, NT (station codes PS02 and IS07), including finalising a major vault upgrade and infrastructure repairs, maintenance of station access tracks and roads, site electrical earthing upgrades and installation of solar regulator electromagnetic compatibility systems. Additional work is ongoing under contract with the CTBTO to improve power supply infrastructure and equipment enclosures supporting infrasound sensor operations. This work is vital to ensuring the station can continue to operate effectively in a harsh operating environment.

GA undertook routine maintenance across all IMS stations under its management with all non-Antarctic stations visited three times, and Antarctic stations supported on-site by the Australian Antarctic Division. Significant upgrades included the replacement of seismic monitoring equipment at two auxiliary seismic stations and the completion of a major upgrade to the infrasound station in Western Australia (IS04), including installation of a new wind noise reduction system. GA's program of routine maintenance ensures the production of higher quality data for the CTBTO as the contributions from environmental noise are reduced.

In maintaining operational readiness of Australia's radionuclide network, training was delivered to station operators on new-generation noble gas technology.

Extensive maintenance and upgrade activities were completed to stations in Australia and the Pacific, including the installation of new noble gas systems in Melbourne (RN04) and Darwin (RN09) and preparatory infrastructure works in Fiji (RN26) to support future enhancements. These activities helped ensure the continued reliability and effectiveness of Australia's contribution to the CTBT verification regime.



ASNO manages Australia's network of International Monitoring Systems across Australia and Antarctica

1.8

Strengthen ASNO's governance, regulatory management and engagement

Performance Measures

ASNO's regulatory frameworks and practices are robust, proportionate, evidence-based, responsive to change and aligned with the Government's regulatory reform agenda.

ASNO builds and sustains a workforce with the skills and capacity required to deliver its functions, and the organisational environment needed to attract, retain and grow that workforce.

ASNO maintains trusted relationships with domestic and international partners.

Overview

This section summarises how ASNO is engaging with a range of stakeholders, including Australia's regulatory and non-proliferation communities. Through this work ASNO supports the Government's regulatory reform agenda, improving understanding of ASNO's regulatory and compliance practices and building trust with stakeholders.

ASNO's RSN leadership strengthens integrity in decision making

ASNO was the 2025 Chair of the Regulatory Science Network (RSN), a network of 13 Commonwealth science-based regulators. ASNO accepted the role of Chair to advance the regulatory reform agenda by sharing best practices and promoting consistent regulatory approaches across federal science regulators with the aim of reducing burden on regulated entities.

As Chair, ASNO coordinated RSN activities around the theme: integrity in decision-making. ASNO drew on the Government's best practice principles in Resource Management Guide (RMG) 128 for continuous improvement, collaboration and principles of regulatory stewardship, whilst creating events to explore how technological convergences, risk management, communication strategies, cyber security and artificial intelligence can impact the robustness of regulatory decision-making processes.

A highlight was a 'Stewardship in the APS' webinar that was coordinated by ASNO and presented by the Australian Public Service (APS) Commission to more than 200 RSN members. The session provided practical guidance on how RSN agencies could demonstrate stewardship in their work. A post-webinar discussion allowed for the sharing of ideas, knowledge and experience to further strengthen understanding of what strong stewardship looks like in a regulatory context and empower agencies to embed these principles in their work.

In November 2025, ASNO hosted the annual RSN symposium, with over 120 RSN members attending either in-person or virtually. RSN presenters shared examples of how they had minimised regulatory duplication and harmonised regulatory approaches in their work to reduce regulatory burden. Highlights included a keynote presentation by CSIRO on "Integrity in decision-making in the agentic AI world (and beyond)", and a second keynote presentation on regulatory perspectives by RECAP Consultants. An aim of the symposium was to encourage participants to explore how successful practices from across the RSN community could be adapted to complement and strengthen their existing work, challenge assumptions and identify opportunities to further mature regulatory decision-making and governance processes. These discussions were highly valuable in informing ASNO's response to increased regulatory responsibilities as a regulator of the NPS Program.

At RSN steering committee meetings, ASNO facilitated topical discussions to build a library of common regulatory science practice for the network. During the reporting period, topical discussions focused on the role of regulatory intelligence in supporting regulatory science, identifying good practices from regulatory inspections and understanding how that supports regulatory science, as well as on RSN experience in developing bespoke regulatory databases and portals.

Harnessing public interest to improve permit understanding

ASNO used media coverage and targeted outreach to reinforce permit requirements and encourage compliance. This outreach led to an increase in enquiries to ASNO about permits and compliance obligations. Many enquiries came from industries that use nuclear material for shielding purposes rather than using it as part of the nuclear fuel cycle.

ASNO addressed the Australasian Radiation Protection Society conference in Melbourne in October 2025 as an opportunity to address industry questions and provide updates on our regulatory role and activities. Two ASNO staff presented papers, *ASNO and the law: nuclear regulation and compliance* and *ASNO reporting: information and outcomes*.

Together, the presentations explained ASNO's regulatory approach, including its compliance and enforcement policy, and highlighted the importance of constructive relationships with regulated entities in supporting compliance. They also reinforced that ASNO can apply escalating enforcement action in response to serious breaches, deliberate non-compliance, or conduct that risks Australia's national interests.

The presentations converted outreach into practical engagement. Discussions at the conference identified potential regulatory touchpoints in the rare earths and monazite sectors and strengthened ASNO's links with other nuclear agencies. This included an invitation for ASNO staff to observe an ARPANSA inspection, providing an opportunity to learn from another nuclear regulator's approach.



ASNO presentation at the 48th Annual Australasian Radiation Protection Society (ARPS) Conference 2025

How Statement of Expectations and Statement of Intent guide a regulator's operations

Regulation is an important function of the Australian Government due to its importance for society, the environment and the economy. The Government requires responsible ministers to issue Statements of Expectations (SOE) to statutory agencies. The SOE provides guidance and clarity as to how the minister expects the regulator to perform during its operations.

In turn the regulator responds with a Statement of Intent (SOI) outlining how the regulator intends to meet those expectations and how it will demonstrate progress.

ASNO's Statement of Expectations and Statement of Intent were both updated and published on ASNO's website in February 2026.

Targeted outreach strengthens ASNO's recruitment pipeline

ASNO continued to build a sustainable non-proliferation and regulatory governance capacity to meet our expanded responsibilities. In the May 2026 Federal Government budget, ASNO received additional funding and positions; to support our AUKUS related regulatory work.

ASNO's workforce recruitment and retention strategy expanded to include:

- participation in STEM career fairs at the Australian National University and University of Canberra.
- conducting a wide-ranging recruitment campaign for several specialised positions, attracting more than 650 applicants. This was more than double the average number of applications received per position compared to a similar campaign in 2023.
- the launch of a new careers page including an expression of interest form, where people interested in working at ASNO could register for future opportunities.

ASNO contributes to the Government's regulatory reform agenda

I was invited to join the Regulator Leadership Cohort (RLC) in February 2026. Convened by the Department of Finance, the RLC brings together a select group of Commonwealth regulatory leaders to help shape and inform the Australian Government's regulatory reform agenda and strengthen regulatory capability across the Commonwealth. This membership provides a unique opportunity to engage directly with heads of Commonwealth regulators and senior regulatory leaders, while also participating in specialist working groups that advance cross-government collaboration on emerging regulatory priorities. This opportunity provides ASNO access to emerging regulatory thinking, better practice approaches and discussions on regulatory stewardship, capability and reform. Through the cohort and its supporting working groups, ASNO contributed its perspectives as a specialist regulator operating in a sensitive national security and international obligations environment.

Participation in the cohort informed ASNO's ongoing work to strengthen regulatory maturity, governance and stewardship. Insights and lessons from the cohort were used to support ASNO's regulatory uplift program, helping ensure its regulatory frameworks and practices remain effective, proportionate and fit for purpose as Australia's nuclear landscape evolves.

Pillar Two

Shape and strengthen the global non-proliferation and disarmament verification mechanisms

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2.1

Strengthen global non-proliferation decisions through expert advice

DG ASNO discusses CWC with D-G OPCW

In November 2025, I met with Fernando Arias, Director-General of the Organization of the Prohibition of Chemical Weapons (OPCW). During the meeting we discussed the use of emerging technologies, both for opportunities to support Chemical Weapons Convention (CWC) verification and the heightened risks of novel chemical agents and production pathways.

As this was my last meeting with Director-General Arias before his departure, I thanked him for his leadership of the OPCW and for his commitment and dedication to ridding the world of chemical weapons. He acknowledged ASNO's strong and ongoing practical support to OPCW, especially our efforts to support the Asia-Pacific in implementing their CWC obligations.



DG ASNO meets with the outgoing Director-General OPCW

DG ASNO discusses CTBT with Executive Secretary

In November 2025 I met with Dr Robert Floyd, Executive Secretary of the Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO). A key focus of our discussion was on preparations for the upcoming Integrated Field Exercise in Namibia. This large-scale on-site inspection simulation will test the CTBT's verification regime and strengthen international readiness to detect and investigate potential nuclear tests, before the Treaty's entry into force.

During the meeting we also discussed practical steps to encourage states that have not yet signed or ratified the CTBT to join, especially in Australia's region. We noted that only one additional signature was needed to achieve full commitment in the Pacific. Later, in July 2026, I was pleased to congratulate our colleagues in Tonga on ratifying the CTBT.

DG ASNO discusses safeguards challenges with IAEA Deputy Director General

I met with DDG Safeguards Massimo Aparo on several occasions to discuss a range of safeguards related challenges, collaboration in supporting safeguards implementation and how ASNO's verify program is making a positive contribution to the work of the IAEA.

IAEA Standing Advisory Group on Safeguards Implementation

Australia, represented through ASNO, is a long-standing member of the International Atomic Energy Agency Director General's Standing Advisory Group on Safeguards Implementation (SAGSI). This important group provides recommendations to DG IAEA on safeguards implementation topics that require technical subject matter experts.

In 2025, SAGSI celebrated its 50th anniversary. Australia has provided experts continuously since 1979. ASNO's Dr Stephan Bayer has been a member since 2021, joining 18 other experts.

SAGSI members focused on the application of the IAEA's State Level Approach for states not having the Broader Conclusion, consideration of safeguards in the maritime environment, geospatial data integration and three topics on artificial intelligence and data management.

ASNO shaping and responding to AI developments for safeguards and verification

The IAEA Safeguards Department has identified leveraging artificial intelligence (AI) as a priority to be supported by Member State Support Programmes.



50th Anniversary of the Director General Safeguards Advisory Group (SAGSI) in Vienna. Australia has provided a safeguards expert for 46 of the 50-year history. Members attend in their personal capacity. All participants worked at ASNO during their tenure.

ASNO has been active in supporting the IAEA in this regard. Under Verify, ASNO has also facilitated collaboration between CSIRO and the IAEA to examine how, with appropriate guardrails in place, responsible AI tools can support data analysis, information management and inspector decision-making.

Nuclear Security Guidance Committee

ASNO continued to actively participate in the IAEA's Nuclear Security Guidance Committee (NSGC). The NSGC meets twice a year to develop and review IAEA nuclear security series documents, which are foundational to building effective nuclear security regulatory systems at the national level.

ASNO provided expert technical advice in the review of Nuclear Security Series publications covering: the physical protection of nuclear material, nuclear material out of regulatory control and state level implementation.

ASNO provides advice on CTBT verification, monitoring and implementation

ASNO has continued to focus on promoting effective operation of the CTBT verification system, including at the 65th CTBTO Technical Working Group B (WGB-65) held in September 2025.

The CTBTO On-Site-Inspection (OSI) capability is the mechanism for the international community to verify whether nuclear explosions have occurred ASNO actively participated in preparation for the CTBTO OSI Integrated Field Exercise (IFE). ASNO identified opportunities for Australian technology to be included. Since the meeting, ASNO has been working with the CTBTO to progress this.

In June 2026, an ASNO technical expert was amongst 40 State Signatory specialists invited to attend specialised training to facilitate a successful IFE. The IFE will be a large-scale, 7-week exercise that will be held in October and November 2026.

Championing practical nuclear disarmament verification

ASNO chaired an Australian-hosted expert side panel on International Partnership for Nuclear Disarmament Verification (IPNDV) at the Eleventh Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons (NPT RevCon) in May 2026 in New York. The panel focused on the recently completed Phase III work of the Partnership: Addressing Complexities and Building Confidence in disarmament. The event also launched the publishing of a series of eleven papers on practical measures and approaches to verifying multilateral nuclear arms control and reduction commitments.

2.2

Meet emerging safeguards challenges through innovation

Verify: Solving IAEA verification challenges using Australian expertise

ASNO continued to support the International Atomic Energy Agency's (IAEA) development of innovative safeguards verification solutions through ASNO's research and development program - Verify. This included:

Robotics development to support safeguards inspections

Through Verify, ASNO continued to fund CSIRO to develop advanced ground robotics capabilities for application in a wide variety of routine safeguards activities (such as Design Inventory Verification and Complementary Access). The system also has the advantage of being able to access highly radiated environments, difficult-to-access locations or damaged nuclear facilities.

IAEA visits Australia uranium mine for imagery analysis training

Funding through the Verify program enabled satellite imagery analysts from the IAEA to undertake specialised training in Australia. The training included a visit to Honeymoon uranium mine and technical briefings at Australian Nuclear Science and Technology Organisation (ANSTO).

The analysts were able to receive practical insights into underground and in-situ leach uranium mining operations, including wellfield configurations, processing infrastructure, pipelines, ponds, supporting facilities and associated operational workflows. Direct observation of these activities strengthened analysts' ability to interpret satellite imagery, improving contextual understanding of industrial processes and enhanced the quality of safeguards analysis.

Verify provides funding for expert positions in the IAEA Department of Safeguards

Three ASSP grant funded cost-free experts commenced work in the IAEA Safeguards Department. The expert's roles focus on identifying and integrating emerging technologies to strengthen nuclear safeguards, the development of artificial intelligence tools to support swipe sample analysis and safeguards-relevant imagery analysis tool development. These placements will contribute to the development of international safeguards capabilities while also helping to build Australia's domestic expertise and understanding of emerging technologies in the nuclear sector.

Celebrating 45 Years of Australia-IAEA Safeguards Cooperation and Innovation through the Australian Safeguards Support Program

1980–1986

Centrifuge Safeguards

Supporting the development and testing of safeguards measures for uranium gas-centrifuge cascades.

1993–1995

Facilitating Uranium Mine Inspections

Supporting the development and testing of procedures for inspections at uranium mines under Programme 93+2. This led to Australia hosting, in 1998, the world's first Complementary Access at a uranium mine.

2013–2016

3D Laser Mapping

Supporting the adoption of CSIRO's hand-held 3D laser mapping equipment for rapid data capture during IAEA inspections.

2017–present

Safeguards Robotics

Supporting IAEA safeguards robotics by hosting the 2017 IAEA Robotics Challenge and advancing the Robotised Cerenkov Viewing Device and Ground Robotics Demonstrator.

2022–present

Environmental Sample Analysis

Undertaking cutting-edge environmental (swipe) sample analysis at Australian NWAL facilities to support IAEA inspections worldwide. Additional support for advanced particle-analysis capability has been provided since 2024 to strengthen NWAL's detection and characterisation of uranium particles for the IAEA.

2024–present

Next-Generation Seals

Supporting the IAEA's transition to Field Verifiable Passive Seals, including funding the procurement and deployment of 8,000 seals that can be authenticated at nuclear facilities.

2024–present

Specialist Expertise

Supporting three specialist positions in the IAEA Department of Safeguards in data science, satellite-imagery analysis and emerging-technologies research.

2024–present

AI and Machine Learning

Supporting the IAEA's application of artificial intelligence and machine learning to safeguards information analysis, including open-source information, satellite imagery and environmental-sample particle analysis.

A partnership supporting global non-proliferation:

- For 45 years, Australia has worked with the IAEA Department of Safeguards through the ASSP, contributing Australian expertise, technology and research to strengthen the international safeguards system.
- The partnership has brought together Australian officials, technical experts, researchers and institutions to help the IAEA develop and apply new approaches to nuclear verification.
- Today, through the Verify program, Australia continues to invest in emerging safeguards technologies and specialist expertise that support a robust, credible and effective international safeguards system capable of detecting and deterring nuclear proliferation.

ASNO and IAEA visit Curtin University

I joined IAEA Deputy Director General and Head of the Department of Safeguards Massimo Aparo in December 2025 on a visit to Curtin University's John de Laeter Centre, hearing from researchers about their research focus and the utility of these techniques to nuclear safeguards. Curtin's Large-Geometry Secondary Ion Mass Spectrometry (LG-SIMS) and other instruments are well suited to particle analysis of environmental samples collected by IAEA inspectors across the globe.

Following the visit, I nominated Curtin University for formal qualification by the IAEA as a member of its Network of Analytical Laboratories (NWAL). Once approved, Curtin's addition will make it the third member from Australia (in addition to the University of Western Australia and ANSTO) in the NWAL, furthering Australia's strong contribution to IAEA's safeguards analytics capability for environmental sample analysis.

The inaugural cohort graduates

The Australian National University (ANU) and Charles Sturt University (CSU) jointly delivered the first year of the Graduate Certificate of Nuclear Security and Safeguards in 2025. The program, funded through Verify, contributes to Australia's professional capacity to safeguard the use of nuclear materials and technologies.

The Graduate Certificate, which was co-designed with ASNO, exceeded expectations in its first year, with 37 enrolments and national reach. Eighteen full-time students completed the certificate in December 2025, with an additional 17 students projected to graduate in 2026. A further 6 students enrolled in one of the two specific safeguards course as part of separate postgraduate qualifications.

Students came from a well-distributed range of government agencies and industry. Additionally, the online and in-person delivery modes meant students were able to study from regional Australia as well as from capital cities. Course graduates overwhelmingly found their studies gave them practical skills and knowledge for delivering on Australia's international nuclear safeguards obligations through a wide range of regulatory technologies and practices.

Published outcomes of the Verify program

Key outcomes and research results were published from projects that had previously received Verify funding.

In August 2025, outcomes from the IAEA Emerging Technologies Workshop, which was held in Vienna on 27-29 January 2025 were published online in a summary report available at: https://www.iaea.org/sites/default/files/25/07/emerging-technologies-workshop-artificial-intelligence-for-nuclear-verification.pdf. The summary report presents actionable ideas in enhancing the efficiency and effectiveness of IAEA safeguards in a range of areas

Enhancing environmental sample analysis remains a priority for the IAEA given the importance of this tool for safeguards inspections. To address this need, ASNO continued to fund research into novel analytical techniques that could improve the efficiency and effectiveness of environmental swipe sample analysis at NWAL facilities.

Under Verify, ASNO awarded contracts to ANSTO and the University of Western Australia, who are both part of the NWAL, as well as Curtin University, to undertake research in this area. A key requirement of these contracts was for the publication of informative results in peer-reviewed journals, to ensure that all NWAL members could benefit from the findings. Student participation in the research was also encouraged.

During the reporting period, various publications and conference presentations were published from the commissioned research into novel analytical techniques. Some research highlights include:

- P Kegler, AK Schmitt, A Hertwig, D Bosbach, I Niemeyer, S Neumeier (2025). *Age-dating of environmental samples: a review and recent developments* [Conference presentation]. 4th Interdisciplinary Conference on Technical Peace Research.
- M Kracica, J Davis, D Oldfield (2025). *3D Volume Analysis of Multi-Dimensional FIB-SIMS Datasets* [Conference presentation]. 8th International Conference on Methods and Applications of Radioanalytical Chemistry (MARC XIII).
- T Ditcham, J Holland and E Keegan (2025). *Impact of Sample Preparation Methodologies on Quantitative Particle Morphology Analysis* [Conference poster]. 8th International Conference on Methods and Applications of Radioanalytical Chemistry (MARC XIII).
- MV Adamos (2025). *Internship Report to the Australian Safeguards and Non-Proliferation Office – Development of ToF-SIMS Methods for the search for, and Characterisation of, Enriched Uranium Particles.*

Where possible, research will continue to be published as peer reviews are completed.



Verify is funding research to improve effectiveness of environmental sampling, including at Curtin University.

2.3

Sharing expertise to strengthen cooperation

Sharing Australian regulatory expertise to a global audience

ASNO was an active contributor at the 66th Annual Meeting of the Institute of Nuclear Materials Management (INMM).

I was invited to participate in the opening plenary panel with the topic - *Safety, Security and Safeguards: Exploring the Opportunities and Challenges of Cross-Domain Collaboration*. I shared ASNO's experience operating as a regulator in a changing nuclear landscape. I highlighted how ASNO's permits system integrates both safeguards and nuclear security to minimise regulatory burden for permit holders, consistent with the Government's regulatory reform agenda. I also noted the importance of working with fellow domestic nuclear regulators, where possible, and the value of building partnerships with regional safeguards and nuclear security regulators to strengthen implementation of the Non-Proliferation Treaty.

I was also invited to participate in the *Maritime Nuclear Panel*, where I outlined Australia's efforts to support the application of IAEA safeguards to naval nuclear propulsion while protecting classified information.

An accompanying ASNO officer provided senior-level contributions via two technical presentations. The first showcased Australia's safeguards research and development program – Verify. The presentation highlighted our efforts to align Verify investment with IAEA safeguards priorities.

The second presentation shared Australia's practical approach to IAEA safeguards at uranium mines. We detailed our reporting and uranium ore concentrate accountancy arrangements, preparations for complementary access and verification activities conducted during IAEA access to Australian uranium operations.

Together, these contributions provided international safeguards practitioners with practical regulatory and technical experience they can draw on in their own implementation. They also demonstrated Australia's commitment to strong verification arrangements, technical innovation and the efficient use of government investment to strengthen the international safeguards regime and Australia's reputation as a trusted non-proliferation partner.

Technical exchanges on the Additional Protocol

ASNO worked with counterparts in the United Kingdom on practical safeguards implementation measures. For example, ASNO engaged with the UK Office of Nuclear Regulation (UK ONR) to align how both countries report nuclear fuel cycle research and development activities under the Additional Protocol.

18th Global Dialogue on Nuclear Security Priorities

ASNO participated in the 18th Global Dialogue on Nuclear Security Priorities in Addis Ababa, Ethiopia. The event brought together nuclear security leaders from across government, industry, international organisations and civil society to discuss emerging nuclear security challenges and identify practical ways to strengthen the nuclear security architecture. Discussions focused on strengthening international cooperation, improving nuclear security guidance, preparing for the 2027 A/CPPNM Review Conference, and addressing risks posed by new technologies and security threats.

International nuclear security information exchange

During the year, ASNO and the US National Nuclear Security Administration (NNSA) and US Nuclear Regulatory Commission (NRC) exchanged information on cyber security, inspection practices, regulatory developments, and regional cooperation opportunities. These engagements led to planned joint nuclear security outreach with the IAEA to be held in our region in 2026.

Strengthening controls on CWC-Scheduled chemical trade

I was pleased to attend the 27th Annual Meeting of National Authorities of CWC States Parties in The Hague from 19 – 21 November 2025 and participated in a panel discussion on preventing illicit transfers of toxic chemicals, including CWC-Scheduled chemicals. I referenced ASNO's work in co-hosting with the OPCW, and Australian Border Force, a training activity for Pacific partners, focused on supporting customs officials to advance their enforcement and regulatory frameworks to ensure more effective monitoring and controls on international transfers of toxic chemicals.

Reducing the regulatory burden on the chemical industry

ASNO met separately in the margins of the National Authorities meeting and the 30th Conference of the States Parties (22-26 November 2025) with other national authority counterparts to discuss unresolved industry verification issues with the aim of minimising regulatory burden on industry. Examples included end-user certificate requirements for Australian chemical importers and fine tuning the OPCW's policy on inspection frequency at inspectable Schedule 2 facilities.



OPCW 27th Annual Meeting of National Authorities of CWC States Parties at OPCW Headquarters in The Hague, from 19 – 21 November 2025. Image courtesy OPCW (https://www.opcw.org/media-centre/photos-and-b-roll-video-footage)

Promoting best practice on chemical regulation through exchange of experiences

ASNO remotely attended the 2nd Annual Meeting of National Authorities of States Parties in the Western European and Other States Group (WEOG) held in a hybrid format on 4 July 2025. This meeting provided the opportunity for technical exchanges regarding CWC implementation with a focus on OPCW sampling and analysis inspections. ASNO provided a presentation on our experiences and challenges which included lessons learned from resolving transfer discrepancies of trade in CWC-Scheduled chemicals.



Australian Officials Delegation to the 30th Conference of States Parties to the Chemical Weapons Convention 2025

Pillar Three

Support regional non-proliferation implementation

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3.1

Regional workshops to support non-proliferation implementation

Safeguards Masterclass for mid-career practitioners

ASNO hosted the third Masterclass on Advanced Safeguards in Brisbane in March 2026 in the three-year cycle of advanced topics. This year's masterclass brought together 17 mid-career safeguards professionals from 7 countries to strengthen their expertise in nuclear safeguards implementation, leadership capabilities and IAEA expectations.

The Masterclass concept fills a gap ASNO identified between foundational safeguards training offerings and the practical requirements of an experienced safeguards practitioner. Working in close collaboration with the IAEA, ASNO funds and hosts participants from the Asia-Pacific to attend the week-long training activity designed to fill this training gap.

This year's curriculum was based on 'Advanced verification activities and techniques' and included an IAEA-led hands-on session with different verification technologies, hosted by CSIRO. This year's theme complemented previous themes of 'Decommissioning facilities and waste management' and 'Safeguards approaches across the nuclear fuel cycle and difficult to access areas'. Participants' satisfaction with the course is consistently high, with participants reporting improved confidence in applying advanced safeguards knowledge, verification techniques and engaging with the IAEA. Participants also appreciated the combination of technical skills, with those of leadership, communication and knowledge management.

Meeting the safeguards needs of the Pacific

In response to requests from Pacific countries for technical support, it was my pleasure to welcome representatives from 7 Pacific Island countries to a regional workshop on Safeguards Implementation under the modified Small Quantities Protocol (mSQP[1]). Held in Sydney during February 2026, ASNO co-hosted the workshop with the United States National Nuclear Security Administration (NNSA), supported by IAEA experts.

The workshop was tailored to address concerns that have been expressed by some regional States with regards to

[1] The mSQP was approved by the Board of Governors in 2005. It is designed for countries with very small inventories of nuclear material, to provide a balance between reducing the safeguards implementation burden on such States whilst still enabling the IAEA to meet its objectives.

their nuclear material accountancy and control obligations under their mSQP.

It focused on building implementation confidence through practical activities such as drafting mSQP declarations and conducting a mock-inspection at Australian Nuclear Science and Technology Organisation (ANSTO), which participants found particularly useful.

Supporting Pacific nations to strengthen CWC related customs capability

I was pleased to welcome 22 mid-level career professionals from 12 Pacific island countries to a CWC-related training course in Brisbane in September 2025. ASNO in partnership with the OPCW and the Australian Border Force (ABF), hosted the course, which focused on the prevention of illicit transfers of chemicals across borders. The course material was delivered by representatives of the OPCW, ABF, ASNO, the Oceania Customs Organization, Interpol, United Nations (UN) Office for Disarmament Affairs, UN Office on Drugs and Crime and a World Customs Organization accredited expert trainer.

In my welcome address, I emphasised the importance of regional cooperation in addressing the threats posed by the illicit transfer of toxic chemicals, and how, through the application of practical measures we can collectively send a strong message that the region is not a haven for this criminal activity. Through practical exercises, information sharing and expert instruction, participants enhanced their understanding of chemical trade controls and identified areas for legislative and border control improvements. Participants presented on their national practices to strengthen the technical capacity of their domestic customs administrations and national authorities to detect, prevent and intercept illicit transfers of toxic chemicals.



Director General ASNO presents at the OPCW Training course on preventing illicit transfers of chemicals for Pacific Island countries.

3.2

Regional collaboration to support non-proliferation implementation

Building CWC regional partnerships

With 40 per cent of Chemical Weapons Convention (CWC)-Scheduled chemicals being produced in Asia, effective National Authorities and strong regulatory frameworks are fundamental for effective CWC implementation. To support this, ASNO continued to work with CWC National Authorities across the region, participating in an Organization of the Prevention of Chemical Weapons (OPCW) workshop hosted by Malaysia in Kuala Lumpur focused on managing inspections. Bringing together officials and industry representatives, the workshop featured a mock inspection exercise at an operating industrial facility.

Drawing upon our experiences in facilitating over 70 OPCW inspections at declared chemical facilities since entry-into-force of the Convention, ASNO shared lessons learned in ensuring verification requirements are met while protecting confidential information. We also highlighted our efforts to both improve awareness of the CWC through regular industry outreach, and to reduce regulatory burden on industry by improving the database used by permit holders to report declarable activities.

ASNO also participated in the 23rd Regional Meeting of National Authorities of States Parties in Asia, held in New Delhi India, 1-3 July 2025. We presented to delegates from 24 State Parties on our experiences implementing our obligations under Article VI of the Convention. We held productive discussions with National Authority representatives from Singapore, Japan, ROK, Thailand, Philippines and Malaysia, with a focus on resolving transfer discrepancies of declared trade in CWC-Scheduled chemicals.



OPCW Asia Regional Meeting in New Delhi, India 1-3 July 2025

Australia hosts APSN Annual Meeting in Australia for the first time

The Asia-Pacific Safeguards Network (APSN) 16th Annual Meeting was held in Perth in November 2025, along with an APSN-International Atomic Energy Agency (IAEA) safeguards training workshop. This was the first time Australia has hosted the Annual Meeting which brought together participants from the Asia-Pacific and the IAEA. APSN formally invited Papua New Guinea and Timor-Leste to join the network, with Fiji also attending for the first time as an observer.

Highlights included the IAEA Deputy Director General of Safeguards, Massimo Aparo delivering a keynote address highlighting global and regional safeguards challenges amidst increased global interest in nuclear applications. The IAEA also led a roundtable discussion on safeguards implementation focusing on key priorities.



IAEA Deputy Director General, Safeguards, Massimo Aparo opens the APSN 16th Annual Meeting

APSN working groups – the backbone of APSN

APSN's work is driven by five working groups, led by different member countries. At each annual meeting the working groups host panels, discussions and presentations covering relevant regional topics. At this meeting the topics included:

- finalising the good practices for domestic safeguards inspections. The guide covers objectives of domestic safeguards inspections, competency for domestic inspectors and non-compliance response.
- capacity building and training coordination, based on a report on the APSN training providers meeting, providing an outline of safeguards training in 2025, discussing common challenges and future goals.
- updates on APSN website and communications within the network.
- nuclear accounting and safeguards by design, explaining the role played by Australia's state-level database, Nuclear Material Balance and Tracking (NUMBAT).
- managing small quantities of nuclear material, emphasising the importance of robust safeguards implementation and reporting, sharing best practices through presentations on member state experiences, challenges faced.



Women in Safeguards' panel at the Asia-Pacific Safeguards Network 16th Annual Meeting.

Real life experiences and opportunities to progress gender equality shared in panel event

A highlight of the APSN Annual Meeting was the introduction of the network's first Women in Safeguards panel, comprising senior officials from Thailand, Lao PDR, Republic of Korea (ROK) and the IAEA. The panel shared candid insights about their experiences of working in nuclear safeguards and non-proliferation. A recurring theme was that gender equality is not just about numbers, rather it needed to be driven by equal access to opportunities, inclusive language, and by embedding into organisational strategic planning. For safeguards in particular, practical measures such as planning for inspection travel, flexible work practices and sustaining a positive working environment, were identified as necessary to foster a culture of equal opportunity.

Showcasing Australia's safeguards analytics capability (technical site visit)

Participants visited the University of Western Australia (UWA), a member of IAEA's global Network of Analytical Laboratories (NWAL), for a technical tour. UWA showcased the capabilities of their analytical laboratory, including their large geometry secondary ion mass spectrometry (LG-SIMS). This is the most productive in the NWAL, used to analyse blind environmental samples the IAEA collects during inspections around the world.

Delivering the APSN Good Practices Guide

At the meeting, members formally accepted the APSN Good Practices Guide for Domestic Safeguards Inspection. Developed through peer exchanges among APSN members, the Guide consolidates APSN member experiences in planning, conducting and following up domestic inspections across a wide range of national contexts. It supports innovation and resilience in safeguards implementation by strengthening domestic inspection regimes, improving inspector competence and enhancing the quality and consistency of inspection outcomes. The text is now published as an IAEA information circular (INFCIRC/1407) to enhance global verification consistency.

ASNO-IAEA seminar advances APSN's regional capacity building role

Following the Annual Meeting, some participants joined the APSN-IAEA training workshop. The two-day workshop increased participant understanding and awareness of how domestic inspections can support declarations under the Additional Protocol.

Management and accountability

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Corporate governance

Overview

This section explains how ASNO is meeting the Minister's expectations as outlined in the Statement of Expectations (SOE) and the best practice principles outlined in the Department of Finance Regulator Performance Resource Management Guide.

Portfolio Minister

The Minister for Foreign Affairs administers the legislation under which ASNO operates – the *Nuclear Non-Proliferation (Safeguards) Act 1987*, *Chemical Weapons (Prohibition) Act 1994* and the *Comprehensive Nuclear-Test-Ban Treaty Act 1998*.

Director General

The Director General is a statutory officer position, appointed by the Governor-General. Remuneration for this position is determined by the Remuneration Tribunal.

I report directly to the Minister for Foreign Affairs. The position combines the statutory offices of the:

- Director of the national authority for nuclear safeguards (formerly Director of Safeguards), as established by the *Nuclear Non-Proliferation (Safeguards) Act 1987*
- Director of the national authority for the CWC, as established by the *Chemical Weapons (Prohibition) Act 1994*
- Director of the national authority for the CTBT, as established by the *Comprehensive Nuclear-Test-Ban Treaty Act 1998*

ASNO Staff

The distribution of APS levels in ASNO has a smaller span of control than many other work units in the APS, with more staff at the EL1 and EL2 classifications (Table 14). This is in line with the Australian Public Service Commission (APSC) Optimal Management Structures Guidance 2023, which recognises the need for such structures in specialist fields where management roles are conducting highly complex work requiring deep expertise.

This is also reinforced by the Australian Government's APS value of stewardship, which came into effect in 2024, under which ASNO is required to build capability and institutional knowledge. In ASNO's case, we require a highly technical and specialised workforce to manage the regulation of complex nuclear technology and international treaty obligations. This requires several years of training and development working within ASNO. It is important that a critical mass of experienced staff with several years of on-the-job training and development are retained to build the future workforce.

Table 14: ASNO staff at 30 June 2025

	Male	Female	Total
Director General	1	0	**1**
SES B1	2	0	**2**
Executive Level 2	4	3	**7**
Executive Level 1	5	9	**14**
APS Level 6	3	8	**11**
APS Level 5	0	2	**2**
APS Level 4	0	0	**0**
Total	**15**	**22**	**37**

We provide expert evidence to parliamentary committees

In October 2025, ASNO appeared before the Joint Standing Committee on Treaties hearing on the Nuclear-Powered Submarine Partnership and Collaboration Agreement between the Government of Australia and the Government of the United Kingdom of Great Britain and Northern Ireland, also known as the Geelong Treaty. ASNO provided evidence on aspects of IAEA safeguards implementation and ASNO's independent regulatory role.

Building organisational capability and profile

Overview

To meet the complex and expanding regulatory responsibilities associated with Australia's NNP program ASNO is building capacity and capability. This means investing in our core competencies, technical and regulatory. Over the past 12 months ASNO has attended workshops and training courses as part of this uplift.

Physical protection of nuclear material and facilities training

ASNO participated in various international nuclear security training courses, building on our nuclear security culture and capabilities. The courses covered nuclear material accountancy and control, physical protection, design-basis threats and cyber security.

Nuclear fuel cycle training

Under a Memorandum of Understanding between ASNO and the United Kingdom Department of Energy Security and Net Zero (DESNZ), ASNO has been able to participate in nuclear fuel cycle training in the United Kingdom. The course involves site visits to nuclear facilities covering fuel conversion, enrichment, fuel fabrication, nuclear power plant operation and spent fuel management. Access to such facilities is not possible in Australia. It provides invaluable professional development for ASNO in considering the associated safeguards and nuclear security requirements for each stage of the nuclear fuel cycle. This will be important to the NNP program as it develops.

Non-destructive assay (NDA) courses for nuclear material verification

NDA training enhances ASNO's ability to categorise nuclear material, which is essential to managing IAEA inspections in Australia and to building ASNO's own nuclear detection capability for domestic inspections. This training improves practical understanding of equipment used by the IAEA during inspection activities. For example, the use of an active well coincidence counter to verify the uranium content in ANSTO's solid waste from molybdenum-99 (Mo-99) radiopharmaceutical production.

Regional training on State Systems of Accounting for and Control of Nuclear Material (SSAC) and Nuclear Material Accounting and Control (NMAC) Measures

SSAC and NMAC training are fundamental skills for new safeguards officers. These courses provided participants with an understanding of the nuclear non-proliferation regime and international safeguards. They also developed the practical knowledge and skills required to establish, operate and maintain a State System of Accounting for and control of Nuclear Material.

Australian National University Nuclear 101 course

The ANU Nuclear 101 course provided an introductory overview of nuclear science. This included the fundamentals of nuclear materials, technologies and applications. This foundational knowledge helps participants provide informed engagement with nuclear related regulatory, security and policy issues. The course also covered a foundational understanding of the nuclear sector and the international non-proliferation and safeguards framework.

Australian National University Nuclear Fundamentals

The ANU Nuclear Fundamentals course strengthened participants' understanding of the scientific principles underpinning nuclear technologies. Participants developed a stronger understanding of core nuclear science concepts including nuclear reactions, radiation, nuclear materials and the nuclear fuel cycle. The course focused on enhancing the ability of participants to engage with technical discussions on nuclear technologies and their applications.

National Security College AUKUS Literacy Course

Participants developed a deeper understanding of the AUKUS partnership and the regulatory, security and governance arrangements required to support Australia's naval nuclear propulsion program. This knowledge supports informed engagement with the complex policy, safeguards and stakeholder considerations associated with AUKUS implementation.

IAEA Knowledge Management course

Held in February 2026, this IAEA course enhanced participants understanding of knowledge management principles, providing guidance on strengthening knowledge-sharing and knowledge-retention practices. The course strengthened participants' understanding of how knowledge management can support a regulator's core functions. Practical applications for ASNO covered regulatory decision-making, safety assessment, inspections, licensing, emergency preparedness, technical review and the development and implementation of regulatory requirements. Course outcomes align to ASNO's focus on our continuous improvement as a regulatory body.

ANSTO Radiation Safety Officer course

This course is required training for ASNO staff seeking to be appointed as inspectors under the Nuclear Non-Proliferation (Safeguards) Act 1987. The course trains participants to assess radiation risks, implement effective safety controls and apply radiation protection requirements in the workplace. Notably, the course also included a tour of the Open Pool Australian Lightwater (OPAL) reactor in Lucas Heights. This practical course is fundamental for ASNO's capacity to support safe and compliant nuclear and radiation-related activities.

Enrichment Cascade Theory

ASNO commissioned this course to provide foundation-level training in uranium enrichment cascade theory. Participants developed skills in analysing centrifuge cascade design and performance using mass balance, separation factors and separative work calculations. The course covered cascade configurations, operating parameters and methods for estimating enriched uranium production under declared and undeclared scenarios. It strengthened staff capability to assess enrichment activities and support safeguards verification.

Introduction to Environmental sampling course

ASNO commissioned this course to provide foundation-level training in environmental sampling – the workhorse technique used by the IAEA to verify the absence of undeclared activities. Participants developed skills in planning and conducting environmental sampling activities. The practical focus of the course covered constructing an environmental sampling kit, how to take a set of samples and differences between an IAEA and ASNO kit. The course strengthened staff capability to support verification activities and detect indicators of undeclared nuclear material or activities.

Reporting financial results

Overview

The Public Audit Act 2001 requires ASNO to submit an annual financial statement to the Auditor-General. As ASNO is funded as a division of DFAT, this financial statement is published in the DFAT Annual Report. Further details of ASNO activities relating to financial management and performance are also contained in the DFAT Annual Report.

Table 15: ASNO departmental expenditure

	2024-25	2025-26
Salaries	7,102,744	6,734,916
Running costs	3,185,849	2,513,036
Total	**$10,288,593**	**$9,247,951**

Table 16: ASNO administered costs

	2024–25	2025-26
Administered R&D	4,965,208	4,806,299
Seismic monitoring*	900,000	900,000
Total	**$5,865,208**	**$5,706,299**

*Undertaken by Geoscience Australia under Memorandum of Understanding

Uranium producers charge

ASNO is responsible for the Uranium Producers Charge. This charge is payable to Consolidated Revenue on each kilogram of uranium ore concentrate produced in Australia (last set on 1 November 2023 at 15.1953 cents per kilogram).

Appendices

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Appendix A: ASNO's regulatory functions

ASNO ensures that Australia meets its international obligations to the International Atomic Energy Agency (IAEA), the Organization for the Prohibition of Chemical Weapons (OPCW) and the Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO).

Three Acts administered by ASNO give effect to these agreements and provide the core of ASNO's domestic regulatory functions.

- *Nuclear Non-Proliferation (Safeguards) Act 1987 (Safeguards Act)*
- *Chemical Weapons (Prohibition) Act 1994 (CWP Act)*
- *Comprehensive Nuclear-Test-Ban Treaty Act 1998 (CTBT Act).*

1. Nuclear Non-Proliferation Treaty functions

Australia signed the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) on 27 February 1970 and ratified on 23 January 1973. As a non-nuclear-weapon state party to the NPT, Australia agreed to safeguards obligations under the NPT as detailed in the Comprehensive Safeguards Agreement (CSA). Reflecting the contemporary verification standard, most countries, including Australia, also have an Additional Protocol agreement which strengthens the IAEA's ability to detect undeclared nuclear activities.

ASNO is Australia's national authority responsible for ensuring that Australia meets these safeguards obligations and for administering corresponding domestic regulation under the Safeguards Act.

2. *Nuclear Non-Proliferation (Safeguards) Act 1987*

The Nuclear Non-Proliferation (Safeguards) Act 1987 (Safeguards Act), which took effect on 31 March 1987, forms the legislative basis for ASNO's nuclear safeguards and security activities across Australia.

The *Safeguards Act* gives effect to Australia's obligations including under:

- the NPT
- Australia's CSA and Additional Protocol with the IAEA
- treaty-level agreements between Australia and various countries (and Euratom) concerning transfers of nuclear items and cooperation in peaceful uses of nuclear energy, knows as nuclear cooperation agreements (NCAs)
- the Amended Convention on the Physical Protection of Nuclear Material (A/CPPNM)
- the International Convention for the Suppression of Acts of Nuclear Terrorism (ICSANT).

The *Safeguards Act* also establishes a system for control over nuclear material and associated items in Australia through requirements for permits for possession and transport. Communication of information

contained in sensitive nuclear technology is also controlled through the grant of authorities.

The functions of ASNO are set out in Part IV of the *Safeguards Act* and include:

- ensuring the effective operation of the Australian safeguards system
- ensuring the physical protection and security of nuclear material and items in Australia
- carrying out Australia's obligations under Australia's safeguards agreement and AP with the IAEA
- carrying out Australia's obligations under Australia's NCAs with other countries and Euratom
- operating Australia's bilateral NCAs and monitoring compliance with the provisions of these agreements
- undertaking, coordinating and facilitating research and development in relation to safeguards
- advising the Minister for Foreign Affairs on matters relating to the international nuclear non-proliferation regime and the international safeguards system.

3. Comprehensive Nuclear-Test-Ban Treaty Functions

Article IV of the CTBT provides that its verification regime shall be capable of meeting the requirements of the Treaty when it enters into force. This has required a substantial program of preparation in advance of the Treaty's entry into force.

To make the necessary preparations, a Preparatory Commission CTBTO was established in 1997, made up of CTBT States Signatories and supported by a Provisional Technical Secretariat.

The tasks of the CTBTO include the establishment and provisional operation of an International Monitoring System (IMS) comprising 337 facilities around the world and an International Data Centre in Vienna.

The CTBTO must also establish a capability to conduct an on-site Inspection if concerns are raised about a possible nuclear explosion.

ASNO is Australia's designated national authority for the CTBT. This role is one of liaison and facilitation to ensure that the IMS is established efficiently, and relevant domestic arrangements are in place. Key functions include:

- national point of contact for liaison on CTBT implementation
- establishing and maintaining legal, administrative and financial mechanisms to give effect to the CTBT in Australia
- coordinating the operation of IMS facilities in Australia and of measures to enable Australia to effectively monitor and analyse IMS and other CTBT verification data
- contributing to the development of Treaty verification, through the CTBTO and its working groups
- participating in development and implementation of Australian policy relevant to the CTBT
- supporting regional CTBT implementation.

4. *Comprehensive Nuclear-Test-Ban Treaty Act 1998*

The Comprehensive Nuclear-Test-Ban Treaty Act 1998 (CTBT Act) gives effect to Australia's obligations as a party to the CTBT. It prohibits the causing of any nuclear explosion at any place

within Australian jurisdiction or control and establishes a penalty of life imprisonment for an offence against this prohibition. The CTBT Act also prohibits Australian nationals from causing a nuclear explosion in any other place.

The CTBT Act requires the Australian Government to facilitate verification of compliance with CTBT provisions, including the obligation to arrange for the establishment and operation of Australian IMS stations and the provision of data from these. It provides the Government with the authority to establish IMS stations and to make provision for access to them for CTBT monitoring purposes. The CTBT Act makes provision for the Minister for Foreign Affairs to enter into arrangements with the CTBTO to facilitate cooperation in relation to monitoring stations under Australian control.

5. *Chemical Weapons Convention Functions*

The Convention on the Development, Production, Stockpiling and Use of Chemical Weapons and Their Destruction (or Chemical Weapons Convention (CWC)) prohibits the development, production, acquisition, stockpiling, retention, transfer and use of chemical weapons.

Its verification regime is based on declarations by States Parties of facilities and activities dealing with particular chemicals, and on confirmation of compliance through on-site inspections.

ASNO is Australia's designated national authority for the CWC. It acts as the primary liaison between domestic CWC stakeholders (such as declared chemical facilities), the OPCW and the national authorities of other States Parties.

Through a system of permits and notifications under the *Chemical Weapons (Prohibition) Act 1994* and the *Customs (Prohibited Imports) Regulations 1956*, ASNO gathers information from the chemical industry, traders, universities and research institutions to compile declarations that Australia must submit to the OPCW. ASNO conducts compliance inspections of relevant facilities in Australia. ASNO conducts outreach activities, including site visits, to promote compliance and to check the accuracy of information provided by industry.

The OPCW conducts routine inspections of facilities listed in Australia's CWC declarations. ASNO facilitates these inspections to ensure Australia's obligations are met and to protect the rights of facility operators.

ASNO promotes effective international implementation of the CWC, particularly in Australia's region. It works with the OPCW and other States Parties to formulate policy and provide practical implementation assistance.

ASNO's key CWC functions are:

- Australia's point of contact for liaison on CWC implementation
- identifying and gathering information on industrial chemical facilities and other activities, subsequently reported to the OPCW if declarable
- preparing for and facilitating OPCW inspections in Australia
- promoting awareness and effective implementation of the CWC, both domestically and internationally
- providing technical and policy advice to Government
- administering and developing related regulatory and administrative mechanisms.

6. *Chemical Weapons (Prohibition) Act 1994*

The *Chemical Weapons (Prohibition) Act 1994* (CWP Act) was enacted on 25 February 1994.

The CWP Act gives effect to Australia's obligations, responsibilities and rights as a State Party to the CWC. In particular, the CWP Act:

- prohibits activities connected to the development, production or use of chemical weapons, including assisting anyone engaged in these activities, whether intentionally or recklessly – such offences are punishable by life imprisonment
- establishes permit and notification systems to provide a legal framework for the mandatory provision of data to ASNO by facilities which produce or use chemicals as specified by the CWC, so that ASNO can lodge declarations with the OPCW
- provides for routine inspections of declared facilities and challenges inspections of any facility or other place in Australia by OPCW inspectors to verify compliance with the CWC and for inspections by ASNO to verify compliance with the CWP Act
- provides for procedures should another State Party seek clarification concerning compliance with the CWC at any facility or other place or by any person in Australia.

Regulations under the CWP Act prescribe procedures and details of other arrangements. In particular, the Regulations define conditions that are to be met by holders of permits issued under the CWP Act and for granting privileges and immunities to OPCW inspectors when carrying out inspections in Australia.

7. *Regulation 5J of the Customs (Prohibited Imports) Regulations 1956*

ASNO administers a system of permits for anyone who:

- imports Schedule 1 chemicals (an individual permit is required per shipment)
- imports Schedule 2 or 3 chemicals (a permit covers all such imports for up to one year).

Import permit holders must report within one month of receipt of Schedule 1 chemicals imported or retrospectively all imports of Schedule 2 and 3 chemicals from the previous calendar year.

Other Functions

8. *South Pacific Nuclear Free Zone Treaty*

The South Pacific Nuclear Free Zone (SPNFZ) Treaty (also known as the Treaty of Rarotonga) prohibits the manufacture, possession, stationing and testing of nuclear explosive devices, as well as research and development relating to manufacture or production of nuclear explosive devices, in any area for which the Signatory Parties are responsible. The SPNFZ Treaty also bans the dumping of radioactive waste at sea. Australia ratified the Treaty on 11 December 1986, which enabled its entry into force. The Treaty has 13 Parties: Australia, Cook Islands, Fiji, Kiribati, Nauru, New Zealand, Niue, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu.

The SPNFZ Treaty has three protocols. Under Protocol 1, the US, UK and France are required to apply the basic provisions of the Treaty to their respective territories in the zone established by the Treaty.

Under Protocol 2, the US, France, UK, Russia and China agree not to use or threaten to use nuclear explosive devices against any party to the Treaty or to each other's territories located within the zone.

Under Protocol 3, the US, France, UK, Russia and China agree not to test nuclear explosive devices within the zone established by the Treaty.

France and the UK have ratified all three protocols. Russia and China have ratified the protocols relevant to them, Protocols 2 and 3. The US is yet to ratify the SPNFZ Treaty protocols.

9. *South Pacific Nuclear Free Zone Treaty Act 1986*

The South Pacific Nuclear Free Zone Treaty Act 1986 (SPNFZ Act) came into force in Australia on 11 December 1986 and gives effect to Australia's obligations, responsibilities and rights under the SPNFZ Treaty.

The SPNFZ Act also establishes the framework for SPNFZ Treaty inspections.

Inspectors appointed under the *Safeguards Act* are also Australia's inspectors for the purposes of the *SPNFZ Act*. These inspectors are to assist SPNFZ Treaty inspectors and authorised officers in carrying out SPNFZ Treaty inspections and to investigate possible breaches of the *SPNFZ Act*.

Appendix B: Australia uranium exports

Australia's Nuclear Safeguards Policy

The Australian Government's uranium policy limits the export of Australian uranium to countries that: are a party to the Treaty on the Non-Proliferation of Nuclear Weapons (NPT)[1]; have a Safeguards Agreement and Additional Protocol with the IAEA in force; and are within Australia's network of bilateral nuclear cooperation agreements (NCAs). These NCAs are designed to ensure IAEA safeguards and appropriate nuclear security measures are applied to Australian Obligated Nuclear Material (AONM) exported overseas, in addition to several supplementary conditions. Nuclear material subject to the provisions of an Australian nuclear cooperation agreement is known as AONM. The obligations of Australia's agreements apply to uranium as it moves through the different stages of the nuclear fuel cycle and to nuclear material generated using that uranium.

All of Australia's NCAs contain treaty-level assurances that AONM will be used exclusively for peaceful purposes and will be covered by safeguards arrangements under each country's safeguards agreement with the IAEA. In the case of Non-Nuclear Weapons States, it is a minimum requirement that IAEA safeguards apply to all existing and future nuclear material and activities in that country. In the case of nuclear-weapon States, AONM must be covered by safeguards arrangements under that country's safeguards agreement with the IAEA and is limited to use for civil, that is, non-military, purposes.

The principal conditions for the use of AONM set out in Australia's NCAs are:

- AONM will be used only for peaceful purposes and will not be diverted to any military or explosive purposes. Here 'military purpose' includes nuclear weapons; any nuclear explosive device; military nuclear reactors; military propulsion; depleted uranium munitions; and tritium production for nuclear weapons.
- IAEA safeguards will apply.
- Australia's prior consent will be sought for transfers of AONM to third parties, enrichment to 20 per cent or more in the isotope 235U and reprocessing.
- Fall-back safeguards or contingency arrangements will apply if, for any reason, NPT or IAEA safeguards cease to apply in the country concerned.
- Internationally agreed standards of physical security will be applied to AONM in the country concerned.
- Detailed administrative arrangements will apply between ASNO and its counterpart organisation, setting out the procedures to apply in accounting for AONM.
- Regular consultations on the operation of the agreement will be undertaken.
- Provision will be made for the removal of AONM in the event of a breach of the agreement.

Australia currently has 25 bilateral NCAs in force, covering 43 countries plus Taiwan.

[1] In October 2012, the Australian Government announced that it would exempt India from its policy allowing supply of Australian uranium only to those States that are Parties to the NPT, in line with an exemption approved by the Nuclear Suppliers Group in 2008.

Australia has given reprocessing consent on a programmatic basis to EURATOM and Japan. Separated Australian-obligated plutonium is intended for blending with uranium into mixed oxide fuel (MOX) for further use for nuclear power generation.

Euratom is the European Atomic Energy Community. The Australia–Euratom NCA covers all 27 Member States of the European Union.

Accounting for Australian Uranium

Australia's bilateral partners holding AONM are required to maintain detailed records of transactions involving AONM. In addition, counterpart organisations in bilateral partner countries are required to submit regular reports, consent requests and transfer and receipt documentation to ASNO.

We account for AONM based on information and knowledge including:

- reports from each bilateral partner
- shipping and transfer documentation
- calculations of process losses, nuclear consumption and nuclear production
- knowledge of the fuel cycle in each country
- regular liaison with, and reconciliation and bilateral visits to, counterpart organisations
- regular liaison with industry
- IAEA safeguards activities and IAEA conclusions on each country.

Australia's Uranium Transhipment Security Policy

Australian uranium ore concentrate (UOC) may be transhipped through countries that do not have a bilateral nuclear cooperation agreement with Australia. In these cases, there must be arrangements in place with those States, to ensure the security of UOC during transhipment. If the State:

- is a party to the Convention on the Physical Protection of Nuclear Material (CPPNM)
- has a safeguards agreement and has adopted the IAEA's Additional Protocol on strengthened safeguards
- acts in accordance with these agreements

then arrangements on appropriate security can be set out in an instrument with less than treaty status.[2] Any arrangements of this kind are subject to risk assessments of port security. For States that do not meet the above requirements, treaty-level arrangements on appropriate security may be required.

[2] See page 26 of ASNO's 2008–09 Annual Report for more details on the establishment of this policy.

Appendix C:
Australia's Nuclear Cooperation Agreements

Table 17: Australia's NCAs at 30 June 2026[a]

Country/region	Date of entry into force
Republic of Korea (ROK)	2 May 1979
Finland	9 February 1980
Canada	9 March 1981
Sweden	22 May 1981
France	12 September 1981
Philippines	11 May 1982
Japan	17 August 1982
Switzerland	27 July 1988
Egypt	2 June 1989
Mexico	17 July 1992
New Zealand	1 May 2000
United States (covering cooperation on SILEX Technology)	24 May 2000
Czech Republic	17 May 2002
United States (covering supply to Taiwan)	17 May 2002
Hungary	15 June 2002
Argentina	12 January 2005
People's Republic of China[b]	3 February 2007
Russian Federation	11 November 2010
United States	22 December 2010
Euratom[c]	1 January 2012
United Arab Emirates	14 April 2014
India	13 November 2015
Ukraine	15 June 2017
United Kingdom	1 January 2021

Note: This list does not include Australia's Comprehensive Safeguards Agreement with the IAEA, concluded on 10 July 1974; or the Additional Protocol to that Safeguards Agreement, concluded on 23 September 1997. In addition to these Agreements, Australia has an Exchange of Notes, constituting an Agreement, with Singapore Concerning Cooperation on the Physical Protection of Nuclear Materials, which entered into force on 15 December 1989.

[a] Several NCAs have been renegotiated over the years to keep them up to date. This list only includes the most recent NCAs for each country/region.

[b] Australia has two agreements with China: one covering nuclear material transfers and one covering nuclear cooperation.

[c] Euratom is the European Atomic Energy Community. The Australia–Euratom NCA covers all 27 Member States of the European Union.

Appendix D:
The International Nuclear Fuel Cycle

A characteristic of the nuclear fuel cycle is the international interdependence of facility operators and power utilities. It is unusual for a country to be entirely self-contained in the processing of uranium for civil use. Even in nuclear-weapon States, power utilities will often go to other countries seeking the most favourable terms for uranium processing and enrichment. For example, a Japanese utility buying Australian uranium may have the uranium converted to uranium hexafluoride in Canada, enriched in France and finally fabricated into fuel in Japan.

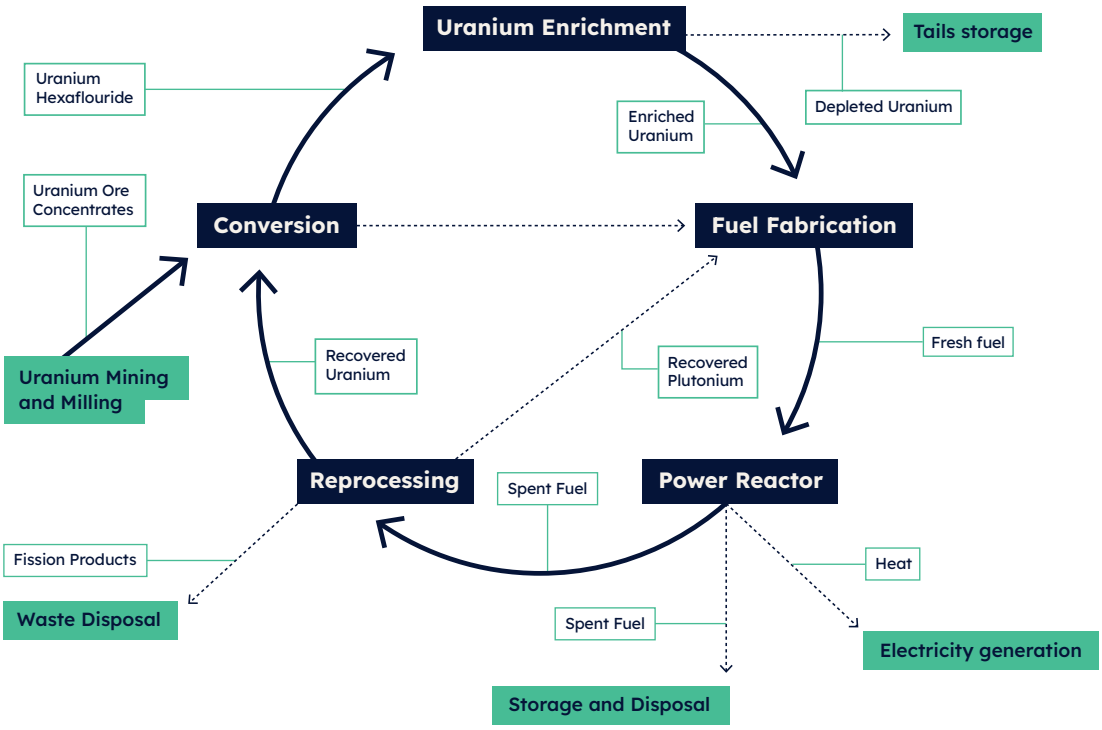
The international flow of nuclear material means that nuclear materials are routinely mixed during processes such as conversion and enrichment and as such, cannot be separated by origin thereafter. Therefore, tracking of individual uranium atoms is not possible. As nuclear material is fungible — that is, any given atom is the same as any other — one batch of the same weight and composition can be seen as effectively the same as another.

Uranium exporters can prevent its exports from contributing to military applications by applying safeguards obligations to the total amount of material it exports.

This practice of tracking quantities rather than atoms has led to the establishment of universal conventions for the industry, known as the principles of equivalence and proportionality. The equivalence principle provides that, where AONM loses its separate identity because of process characteristics (for example, mixing), an equivalent quantity of that material is designated as AONM. These equivalent quantities may be derived by calculation, measurement, or from operating plant parameters. The equivalence principle does not permit substitution by a lower-quality material.

The proportionality principle provides that where AONM is mixed with other nuclear material and is then processed or irradiated, a corresponding proportion of the resulting material will be regarded as AONM.

Figure 2: Civil Nuclear Fuel Cycle



Appendix E:
IAEA Statements of Conclusions and Other Inspection Findings for Australia in 2025–26

IAEA Inspection Regime in Australia

The IAEA conducts verification activities, under different names but all essentially inspections, in Australia under the CSA and under the Additional Protocol. The scope and focus of inspection activities is different for the two agreements.

Under the CSA the IAEA conducts inspections to verify nuclear material inventory and facility design features. There are four types of inspection conducted in Australia each year under the CSA:

- Physical inventory verification (PIV): a scheduled inspection at a selected location or material balance area (MBA). The purpose of a PIV is to verify that the inventory of nuclear material held at the MBA has been declared correctly. PIVs involve a more complete verification of inventory than random interim inspections (RII). The frequency of PIVs depends on the types and quantities of nuclear material held in the MBA. In Australia's case, PIVs are scheduled annually for the OPAL reactor (AS-F) and ANSTO's R&D laboratories (AS-C). PIVs for each MBA may be scheduled together and in conjunction with DIVs, see below, in those MBAs. Each year these activities are completed during the same visit by the IAEA, taking approximately six days.
- For other MBAs, AS-E, ASE1, ASE2 and AS-I, the IAEA schedules PIVs periodically, selecting a few locations as a representative sample of all such locations, such as universities. Each of these PIVs is usually conducted in one day.
- Interim inventory verification (IIV): an inspection in a selected MBA to verify specific types of nuclear material, scheduled between PIVs. The IAEA conducted an IIV at ANSTO's OPAL reactor (AS-F) in August 2025 to verify the transfer of spent fuel from the spent fuel pond to transfer casks and seal those casks prior to its export. It is also anticipated that the IAEA will undertake an IIV at ANSTO's R&D laboratories (AS-C) in November 2026 to measure the uranium content in solid waste from molybdenum-99 (Mo-99) radiopharmaceutical production using an active well coincidence counter (AWCC) as this activity repeats approximately once every two years.
- Random interim inspection (RII): an inspection called by the IAEA at a random time with limited notice. The IAEA calls an RII once or twice each year at the OPAL reactor and/or at buildings with hot cells at ANSTO. An RII takes place with three hours' notice to ASNO and ANSTO. It usually lasts for one or two days.
- Design information verification (DIV): an inspection to verify the correctness and completeness of information provided by Australia on the design features of a facility relevant to the application of safeguards. The IAEA typically conducts a few DIVs together with annual PIVs.

Under the Additional Protocol the IAEA has the right to conduct verification activities, essentially inspections, known as complementary access. A complementary access may have four purposes:

- Additional Protocol Article 4.a.i — assuring the absence of undeclared nuclear material or activities in Australia.
- Additional Protocol Article 4.a.ii — resolving any questions or inconsistencies related to the correctness and completeness of Australia's declarations under the Additional Protocol.
- Additional Protocol Article 4.a.iii — confirming the decommissioned status of a facility.
- Additional Protocol Article 8 — where Australia offers more access or requests, conducting additional verification activities at particular locations.

Since 1998, the IAEA has conducted a total of 116 complementary accesses in Australia, the most common purpose being Article 4.a.i. The IAEA has conducted seven complementary accesses under Article 4.a.ii, one under Article 4.a.iii and three under Article 8.

Complementary access activities called while IAEA inspectors are already on the Lucas Heights site for other inspections, for example at ANSTO, can be conducted at any building on site with two hours' notice. Complementary access activities for locations outside Lucas Heights, for example universities or uranium mines, require a minimum of 24 hours' notice; however, given the considerable distances in Australia, they are often issued with several days' notice. Historically, the IAEA would conduct two to three complementary access activities in Australia each year. However, this has increased in the few years, with six conducted in this reporting period.

IAEA Conclusions on Australia's Compliance

The IAEA's conclusions for Australia are provided at two levels: the IAEA's overarching summary of findings and conclusions published in the IAEA's Safeguards Statement for 2025, see Appendix F, for all States with safeguards agreements with the IAEA, including Australia; and the statements of conclusions of inspections in Australia.

The highest level conclusion the IAEA draws, known as the 'broader conclusion', is in paragraph 1(a) of the Safeguards Statement: 'the Secretariat found no indication of the diversion of declared nuclear material from peaceful nuclear activities, no indication of undeclared production or processing of nuclear material at declared facilities and LOFs and no indication of undeclared nuclear material or activities. On this basis, the Secretariat concluded that, for these States, all nuclear material remained in peaceful activities.'

Australia is on the list of 75 countries1 covered by the IAEA's broader conclusion in the Safeguards Statement for 2025. Australia was the first country to receive the 'broader conclusion' for 1999 and has received it every year since.

The IAEA's statements of conclusions related to inspections in Australia are provided in several ways:

- Article 91(a) of Australia's Comprehensive Safeguards Agreement: the results of each inspection at each individual material balance area (MBA).

- Article 91(b) of Australia's Comprehensive Safeguards Agreement: the conclusions the IAEA has drawn from all its verification activities, including headquarters analysis and inspections, in Australia for each individual MBA.
- Statement of results of design information verification activities (DIVs).
- Article 10.a of the Additional Protocol: Statement on each complementary access activity undertaken.
- Article 10.b of the Additional Protocol: Statement of results of activities in respect of any questions or inconsistencies the IAEA has raised with Australia.
- Article 10.c of the Additional Protocol: Statement on the conclusions the IAEA has drawn from all complementary access activities in a year.

Material balance area: AS-A (HIFAR)
Material balance period: N/A (MBA closed for safeguards purposes)

Inspection activity	Date(s) of inspection	Inspection location	Statement of results	Date statement provided
No inspection activity to report				

Note: An inspection was not undertaken by the IAEA for MBA AS-A (HIFAR) during FY2025–26

Material balance area: AS-C (research and development laboratories)
Material balance period: 15 May 2024–26 May 2025

Inspection activity	Date(s) of inspection	Inspection location	Statement of results	Date statement provided
Interim Inventory Verification	11–13 November 2024	ANSTO	Based on the activities conducted and the information available to date in connection with such activities, the results from this inspection were satisfactory.	27 January 2025
Random Interim Inspection of Hot Cells	26 February 2025	ANSTO	Based on the activities conducted and the information available to date in connection with such activities, the results from this inspection were satisfactory.	4 April 2025
Physical Inventory Verification	27–30 May 2025	ANSTO	Based on the activities conducted and the information available to date in connection with such activities, the results from this inspection were satisfactory.	9 September 2026
Design Information Verification	27–30 May 2025	ANSTO	Based on the activities conducted and the information available to date in connection with such activities, the results from this inspection were satisfactory.	9 September 2026
91(b) Statement of Conclusions			The IAEA has concluded from its verification activities carried out at AS-C during the material balance period from 15 May 2024 to 26 May 2025 and based on the information available to date in connection with such activities, that all declared nuclear material has been accounted for and that there were no indications of the undeclared presence, production or processing of nuclear material.	29 January 2026

Material balance area: AS-C (research and development laboratories)
Material balance period: 27 May 2025–2 June 2026

Inspection activity	Date(s) of inspection	Inspection location	Statement of results	Date statement provided
Physical Inventory Verification	3–5 June 2026	ANSTO	Based on the activities conducted and the information available to date in connection with such activities, the results from this inspection were satisfactory.	3 August 2026
Design Information Verification	3–5 June 2026	ANSTO	Based on the activities conducted and the information available to date in connection with such activities, the results of the DIV were satisfactory.	3 August 2026
91(b) Statement of Conclusions	Not available at time of publication			

Material balance area: AS-D (vault storage)
Material balance period: 14 May 2024–25 May 2025

Inspection activity	Date(s) of inspection	Inspection location	Statement of results	Date statement provided
Physical Inventory Verification	26 May 2025	ANSTO	Based on the activities conducted and the information available to date in connection with such activities, the results from this inspection were satisfactory.	1 August 2025
Design Information Verification	26 May 2025	ANSTO	Based on the activities conducted and the information available to date in connection with such activities, the results of the DIV were satisfactory.	1 August 2025
91(b) Statement of Conclusions			The IAEA has concluded from its verification activities carried out at AS-D during the material balance period from 14 May 2024 to 25 May 2025 and based on the information available to date in connection with such activities, that all declared nuclear material has been accounted for and that there were no indications of the undeclared presence, production or processing of nuclear material.	9 January 2026

Material balance area: AS-D (vault storage)
Material balance period: 26 May 2025 to continues

Inspection activity	Date(s) of inspection	Inspection location	Statement of results	Date statement provided
No inspection activity to report				
91(b) Statement of Conclusions	No conclusions to report			

Note: An inspection was not undertaken by the IAEA for MBA AS-D (Vault storage) during FY2025–26.

Material balance area: AS-E, ASE1 and ASE2 (other locations)
Material balance period: 1 July 2024–30 June 2025 (AS-E, ASE1, ASE2)

Inspection activity	Date(s) of inspection	Inspection location	Statement of results	Date statement provided
Physical Inventory Verification	15 November 2024	SA Pathology T/A IMVS	Based on the activities conducted and the information available to date in connection with such activities, the results from this inspection were satisfactory.	20 February 2025
91(b) Statement of Conclusions			The IAEA has concluded from its verification activities carried out at AS-E, ASEl and ASE2 during the material balance period from 1 July 2024 to 30 June 2025, and based on the information available to date in connection with such activities, that all declared nuclear material has been accounted for and that there were no indications of the undeclared presence, production or processing of nuclear material.	10 March 2026

Material balance area: AS-E, ASE1 and ASE2 (other locations)
Material balance period: 1 July 2025 - 30 June 2026 (AS-E, ASE1, ASE2)

Inspection activity	Date(s) of inspection	Inspection location	Statement of results	Date statement provided
Physical Inventory Verification	12 August 2025	Ubaryon	Based on the activities conducted and the information available to date in connection with such activities, the results from this inspection were satisfactory.	10 February 2026
Physical Inventory Verification	14 August 2025	Flinders University	Based on the activities conducted and the information available to date in connection with such activities, the results from this inspection were satisfactory.	10 February 2026
91(b) Statement of Conclusions	Not available at time of publication			

Material balance area: AS-F (OPAL)
Material balance period: 21 May 2025 - 31 May 2026

Inspection activity	Date(s) of inspection	Inspection location	Statement of results	Date statement provided
Interim Inspection of OPAL Reactor	11 August 2025	ANSTO	Based on the activities conducted and the information available to date in connection with such activities, the results from this inspection were satisfactory.	15 December 2025
Physical Inventory Verification	1 June 2026	ANSTO	Based on the activities conducted and the information available to date in connection with such activities, the results from this inspection were satisfactory.	31 July 2026
Design Information Verification	1 June 2026	ANSTO	Based on the activities conducted and the information available to date in connection with such activities, the results of the DIV were satisfactory.	31 July 2026
91(b) Statement of Conclusions	Not available at time of publication			

Material balance area: AS-H (SyMo)
Material balance period: N/A (nil nuclear material present)

Inspection activity	Date(s) of inspection	Inspection location	Statement of results	Date statement provided
No inspection activity to report				

Note: A physical inventory verification was not undertaken by the IAEA for MBA AS-H (SyMo) during FY2025–26.

Material balance area: AS-I (CSIRO)
Material balance period: 1 July 2022 to continues

Inspection activity	Date(s) of inspection	Inspection location	Statement of results	Date statement provided
No inspection activity to report				
91(b) Statement of Conclusions	No conclusions to report			

Note: A physical inventory verification was not undertaken by the IAEA for MBA-I (CSIRO) during FY2025-26.

Material balance area: AS-J (research and development)
Material balance period: N/A (MBA established in reporting period)

Inspection activity	Date(s) of inspection	Inspection location	Statement of results	Date statement provided
Physical Inventory Verification	2 June 2026	Ubaryon	Based on the activities conducted and the information available to date in connection with such activities, the results from this inspection were satisfactory.	21 July 2026
Design Information Verification	2 June 2026	Ubaryon	Based on the activities conducted and the information available to date in connection with such activities, the results from this DIV were satisfactory.	21 July 2026
91(b) Statement of Conclusions	Not available at time of publication			

Additional Protocol Assessment Period: 1 January 2025-31 December 2025

Date of Complementary Access (CA)	Location	10.a. or 10.b Statement on activities	Date statement provided
25 February 2025	Ubaryon	The IAEA was able to carry out all planned activities during the CA.	1 April 2025
25 February 2025	ANSTO	The IAEA was able to carry out all planned activities during the CA.	1 April 2025
22 May 2025	ANSTO	The IAEA was able to carry out all planned activities during the CA.	5 August 2025
5 November 2025	Defence Precinct at Henderson shipyard	The IAEA was able to carry out all planned activities during the CA.	29 January 2026
7 November 2025	Australian National University	The IAEA was able to carry out all planned activities during the CA.	20 January 2026
		Based on the IAEA analysis of ASNO's response dated 05 September 2025, and the results of the complementary access carried out on 07 November 2025, the IAEA considers the question to be resolved.	23 March 2026
24 November 2025	Lynas Kalgoorlie	The IAEA was able to carry out all planned activities during the CA.	29 December 2025
		Based on the IAEA analysis of ASNO's response dated 12 November 2025, and the results of the complementary access carried out on 24 and 25 November 2025, the IAEA considers the questions to be resolved.	23 March 2026
27 November 2025	BHP Olympic Dam Corporation Pty Ltd	The IAEA was able to carry out all planned activities during the CA.	22 January 2026

Date of Complementary Access (CA)	Location	10.a. or 10.b Statement on activities	Date statement provided
10.c. Statement of Conclusions		The IAEA has concluded from its activities carried out during this period and for which Article 10.a. statements were issued and based on the information available to date in connection with such activities that: Access pursuant to Article 4.a.(i) did not indicate the presence of undeclared nuclear material or activities at: • PN001 ANSTO and others - Lucas Heights Centre • Olympic Dam Access pursuant to Article 4.a.(ii) resolved the questions brought to Australia's attention pursuant to Article 4.d. at: • Australian National University • Lynas Rare Earth Processing Plant in Kalgoorlie Access pursuant to Article 8 was carried out at Defence Precinct in Henderson, Western Australia.	24 March 2026

Additional Protocol Assessment Period: 1 January 2026–31 December 2026

Date of Complementary Access (CA)	Location	10.a. or 10.b Statement on activities	Date statement provided
23 April 2026	Former British nuclear weapons test site at Maralinga (South Australia)	The IAEA was able to carry out all planned activities during the CA.	20 May 2026
2 June 2026	Silex	The IAEA was able to carry out all planned activities during the CA.	19 June 2026
10.c. Statement of Conclusions	10.c Statements are provided in the year following the assessment period.		

Appendix F:
IAEA Safeguards Statement for 2025[1,2]

This Statement plus further details on safeguards implementation is available at: https://www.iaea.org/sites/default/files/sir-2025.pdf

In 2025, safeguards were applied for 190 States[3,4] with safeguards agreements in force with the Agency. The Secretariat's findings and conclusions for 2025 are reported below with regard to each type of safeguards agreement. These findings and conclusions are based upon an evaluation of all safeguards relevant information available to the Agency in exercising its rights and fulfilling its safeguards obligations for that year.

1. **One hundred and thirty-eight States had both comprehensive safeguards agreements and additional protocols in force:**
   a. For 75 of these States[4], the Secretariat found no indication of the diversion of declared nuclear material from peaceful nuclear activities, no indication of undeclared production or processing of nuclear material at declared facilities and LOFs and no indication of undeclared nuclear material or activities. On this basis, the Secretariat concluded that, for these States, all nuclear material remained in peaceful activities.
   b. For 63 of these States, the Secretariat found no indication of the diversion of declared nuclear material from peaceful nuclear activities and no indication of undeclared production or processing of nuclear material at declared facilities and LOFs. Evaluations regarding the absence of undeclared nuclear material and activities for each of these States remained ongoing. On this basis, the Secretariat concluded that, for these States, declared nuclear material remained in peaceful activities.

2. **Forty-four States had comprehensive safeguards agreements in force, but no additional protocols in force:**
   a. For 32 of these States, the Secretariat found no indication of the diversion of declared nuclear material from peaceful nuclear activities and no indication of undeclared production or processing of nuclear material at declared facilities and LOFs. On this basis, the Secretariat concluded that, for these States, declared nuclear material remained in peaceful activities.

[1] The designations employed and the presentation of material in this report, including the numbers cited, do not imply the expression of any opinion whatsoever on the part of the Agency or its Member States concerning the legal status of any country or territory or of its authorities, or concerning the delimitation of its frontiers.
[2] The referenced number of States Parties to the NPT is based on the number of instruments of ratification, accession or succession that have been deposited.
[3] These States do not include the Democratic People's Republic of Korea (DPRK), where the Agency did not implement safeguards and therefore, could not draw any conclusion.
[4] And Taiwan, China.

b. For one State, the Secretariat found no indication of the diversion of declared nuclear material and no indication of undeclared production or processing of nuclear material at declared facilities and LOFs not affected by the military attacks of June 2025. On this basis, the Secretariat concluded that, for this State, declared nuclear material at these facilities and LOFs remained in peaceful activities. This conclusion does not apply to nuclear material — previously declared by the State at certain facilities affected by the above-mentioned military attacks — which the Agency was unable to verify.[5] Therefore, the Agency could not draw any conclusion regarding this nuclear material. This gives rise to a proliferation concern as this nuclear material, which the Agency was not able to verify, includes a large amount of high enriched uranium.

c. For 11 of these States that had operative small quantities protocols based on the original standard text the Secretariat could not draw any safeguards conclusion.

3. As of the end of 2025, three States Parties to the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) had yet to bring into force comprehensive safeguards agreements with the Agency as required by Article III of that Treaty. For these States Parties, the Secretariat could not draw any safeguards conclusions.

4. Three States had safeguards agreements based on INFCIRC/66/Rev.2 in force, requiring the application of safeguards to nuclear material, facilities and other items specified in the relevant safeguards agreement. One of these States had an additional protocol in force. For these States, the Secretariat found no indication of the diversion of nuclear material or of the misuse of the facilities or other items to which safeguards had been applied. On this basis, the Secretariat concluded that, for these States, nuclear material, facilities or other items to which safeguards had been applied remained in peaceful activities.

5. Five nuclear-weapon States had voluntary offer agreements and additional protocols in force. Safeguards were implemented regarding declared nuclear material in selected facilities in all five States. For these States, the Secretariat found no indication of the undeclared withdrawal from safeguards of nuclear material to which safeguards had been applied. On this basis, the Secretariat concluded that, for these States, nuclear material in selected facilities to which safeguards had been applied remained in peaceful activities or had been withdrawn from safeguards as provided for in the agreements.

[5] In order to address the State's concerns following the military attacks on its nuclear facilities, the Agency signed an agreement with the State in September 2025 that provided an understanding of the procedures for Agency inspections, notifications and safeguards implementation covering all declared nuclear facilities and nuclear material in the State in line with the relevant provisions of the NPT Safeguards Agreement. The agreement was subsequently terminated by the State in November 2025.

Appendix G:
Summary of regulated chemical activities and common industrial applications

Chemical	Regulated activities	Common industrial applications
Schedule 1 High risk chemicals with limited use. Includes chemical warfare agents and their precursors.	• Production • Consumption • Acquisition, retention and/or domestic transfers • Import • Export	• Medical, research or pharmaceutical uses • Defence research purposes (e.g. testing protective clothing)
Schedule 2 Medium risk chemicals with industrial uses. Includes key chemical weapon precursors.	• Production • Processing • Consumption • Import • Export	• Textiles and polyurethane foam (e.g. flame retardants) • Agriculture (e.g. pesticides and herbicides) • Antifreeze additives
Schedule 3 Lower risk chemicals with wide industrial use.	• Production • Import • Export	• Cosmetics (e.g. surfactants and buffers) • Pharmaceuticals (e.g. active ingredients and surfactants) • Agriculture (e.g. pesticides) • Mining (e.g. natural gas treatment and ore-extraction processes) • Automotive products • Cement additives
Discrete Organic Chemicals (DOCs) including those containing phosphorus, sulphur or fluorine (PSF-DOCs)	• Production	• Agriculture (e.g. pesticides, herbicides and fertilisers) • Cosmetics (e.g. surfactants and buffers) • Inks and dyes • Plastics (synthesis of monomers for polymerisation)

Appendix H:
Information Publication Scheme Statement

Agencies subject to the *Freedom of Information Act 1982* (FOI Act) are required to publish information for the public as part of the Information Publication Scheme (IPS). This requirement is in Part II of the FOI Act and has replaced the former requirement to publish a section 8 statement in an annual report. Under IPS requirements, each agency must display a plan showing what information it publishes on its website.

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Glossary

Term	Description
Additional Protocol (AP)	An agreement designed to complement a State's safeguards agreement with the IAEA that provides additional tools for verification by granting the IAEA expanded rights of access to information and locations in the State. It strengthens the effectiveness and improves the efficiency of the safeguards system by enabling the IAEA to obtain a much fuller picture of a State's nuclear program, plans, nuclear material holdings and trade. The model text of the Additional Protocol is set out in IAEA document INFCIRC/540 (Corrected).
Asia-Pacific Safe-guards Network (APSN)	A professional network that draws upon safeguards expertise in the Asia-Pacific to facilitate the exchange of safeguards information, knowledge and practical experience among Members to strengthen safeguards capabilities in the region.
Australian Training Course on the Physical Protection of Nuclear and Radiological Materials and Facilities (ATC)	The ATC is a nuclear security course based on Australia's international treaty obligations and legislative/regulatory requirements.
AUKUS	A trilateral enhanced security partnership between Australia, the UK and US. AUKUS aims to build on the three countries' longstanding and ongoing bilateral ties to enable the countries to significantly deepen cooperation on a range of emerging security and defence capabilities.
Australian Naval Nuclear Power Safety Regulator (ANNPSR)	ANNPSR is Australia's independent safety regulator for naval nuclear propulsion.
Australian Nuclear Science and Technology Organisation (ANSTO)	ANSTO is the Australian public research organisation focused on nuclear science and technology with applications in health including radiopharmaceutical production, engineering, materials science, the environment and the nuclear fuel cycle. ANSTO's operations include the OPAL research reactor and ANSTO Nuclear Medicine (ANM).
Australian Obligated Nuclear Material (AONM)	Nuclear material exported from Australia and nuclear material derived therefrom, which is subject to obligations pursuant to Australia's bilateral NCAs.
Australian Radiation Protection and Nuclear Safety Agency (ARPANSA)	The Australian Government's primary authority on radiation protection and nuclear safety. ARPANSA regulates Commonwealth entities that use radiation with the objective of protecting people and the environment.
Australian Safeguards Support Program (ASSP)	ASSP is one of 24 programs established by Member States and the European Commission to assist the IAEA in safeguards research and development and is coordinated by ASNO.
Broader Conclusion (Nuclear)	The IAEA can draw the 'broader conclusion' for a State as a whole that 'all nuclear material remains in peaceful activities'. This is a more fulsome assessment for a State than 'declared nuclear material remain in peaceful activities'.
Central Nervous System-Acting Chemicals (CNSACs)	Toxic (and potentially lethal) chemicals that target the central nervous system.

Term	Description
Chemical Weapon Production Facility (CWPF)	Provisions for dealing with chemical weapon production facilities are addressed in Article V of the CWC.
Chemical Weapons Convention (CWC)	Commonly used name given to the Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on their Destruction.
Complementary Access (CA)	The right of the IAEA, pursuant to the Additional Protocol, for access to a site or location to carry out verification activities.
Comprehensive Nuclear-Test-Ban Treaty (CTBT)	The CTBT bans all nuclear explosions – everywhere, by everyone. While there is almost universal adoption of the Treaty, it will not enter into force until the 44 States specified in Annex 2 have signed and ratified the Treaty.
Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO)	The Vienna-based international organisation established at entry into force of the CTBT to ensure the implementation of its provisions.
Comprehensive Safeguards Agreement (CSA)	Agreement between a State and the IAEA for the application of safeguards to all of the State's current and future nuclear activities (equivalent to 'full scope' safeguards) based on IAEA document INFCIRC/153 (corrected). The structure and content of a CSA is set out in IAEA document INFCIRC/153 (Corrected)
Convention on the Physical Protection of Nuclear Material (CPPNM)	The CPPNM establishes physical protection measures that must be applied to nuclear material in international transport, as well as measures related to criminal offenses related to nuclear material.
Amended Convention on the Physical Protection of Nuclear Material (A/CPPNM)	The amended CPPNM additionally requires physical protection measures for nuclear facilities and material in domestic use, storage and transport. It also requires States to criminalise malicious acts involving nuclear facilities and material and expands State-to-State cooperation in responding to such acts.
Conversion	Purification of UOC or recycled nuclear material and conversion to a chemical form suitable for isotopic enrichment or fuel fabrication.
Conventionally armed	Utilising and containing only weapons that are not weapons of mass destruction.
CWC-Scheduled Chemicals	Chemicals listed in the Annex on Chemicals to the Chemical Weapons Convention. Some are chemical warfare agents and others are dual-use chemicals that can be used in industry or in the manufacture of chemical warfare agents.
Defence Science and Technology Group (DSTG)	The Australian Government's lead agency responsible for applying science and technology to Defence and national security.
Democratic People's Republic of Korea (DPRK)	Also known as North Korea.
Depleted Uranium (DU)	Uranium with a ^{235}U content less than that found in nature, (for example, the uranium contains less than 0.711% ^{235}U). Depleted uranium is usually the waste product of the uranium enrichment processes.

Term	Description
Direct-Use Material	Nuclear material defined for safeguards purposes as being usable for nuclear explosives without transmutation or further enrichment, for example, plutonium, high enriched uranium (HEU) and ^{233}U.
Discrete Organic Chemical	Any chemical belonging to the class of chemical compounds consisting of all compounds of carbon, except for its oxides, sulphides and metal carbonates, identifiable by chemical name, by structural formula, if known and by Chemical Abstracts Service registry number, if assigned. Long chain polymers are not included in this definition. DOCs are produced at Other Chemical Production Facilities (OCPFs).
Enrichment	A physical or chemical process for increasing the proportion of a particular isotope. Uranium enrichment involves increasing the proportion of ^{235}U from its level in natural uranium, 0.711%. For low enriched uranium (LEU) fuel used in a power reactor the proportion of ^{235}U (the enrichment level) is typically increased to between 3% and 5%.
Euratom	Atomic Energy Agency of the European Union. Euratom's safeguards office, called the Directorate-General of Energy E – Nuclear Safeguards, is responsible for the application of safeguards to all nuclear material in Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain and Sweden; and to all nuclear material in civil facilities in France.
Facility	(For CWC purposes) a plant, plant site or production/ processing unit. (For CSA purposes) a reactor, critical facility, conversion plant, fabrication plant, reprocessing plant, isotope separation plant, separate storage location or any location where safeguards-significant amounts of nuclear material are customarily used. For the purposes of the Safeguards Act, "facility" also includes other facilities for the carrying out of nuclear activities or for the use of associated equipment.
Fissile	Referring to a nuclide capable of undergoing fission by neutrons of any energy, including 'thermal' neutrons (for example, ^{233}U, ^{235}U, ^{239}Pu and ^{241}Pu).
Fissile Material Cut-off Treaty	A proposed international treaty to prohibit production of fissile material for nuclear weapons.
Fission	The splitting of an atomic nucleus into roughly equal parts, often triggered by a bombarding neutron. In a nuclear reactor, a neutron collides with a fissile nuclide (for example, ^{235}U) that then splits, releasing energy and further neutrons. Some of these neutrons go on to collide with other fissile nuclei, setting up a nuclear chain reaction.
Fissionable	Referring to a nuclide capable of undergoing fission by 'fast' neutrons (for example, ^{233}U, ^{235}U, ^{238}U, ^{239}Pu, ^{240}Pu, ^{241}Pu and ^{242}Pu).
Geoscience Australia (GA)	Geoscience Australia is Australia's leading public sector geoscience organisation. GA conducts nuclear monitoring activities on behalf of the Australian Government agreed through a Letter of Understanding between ASNO and GA. GA is also involved in the installation and maintenance of some of the CTBT IMS stations in Australia and its territories.

Term	Description
Heavy Water (D_2O)	Water enriched in the 'heavy' hydrogen isotope deuterium (^2H) which consists of a proton and a neutron. D_2O occurs naturally as about one part in 6,000 of ordinary water. D_2O is a very efficient moderator, enabling the use of natural uranium in a nuclear reactor.
High Flux Australian Reactor (HIFAR)	The 10 MWth research reactor located at ANSTO, Lucas Heights. Currently undergoing decommissioning.
High Enriched Uranium (HEU)	Uranium enriched to 20% or more in ^{235}U. Weapons-grade HEU is enriched to over 90% ^{235}U.
Hydroacoustic	The study and application of sound in water. One category of CTBT IMS station monitoring changes in water pressure generated by sound waves in the water.
Indirect-Use Material	Nuclear material that cannot be used for a nuclear explosive without transmutation or further enrichment (for example, depleted uranium, natural uranium, LEU and thorium).
INFCIRC/153 (Corrected)	The model agreement used by the IAEA as a basis for comprehensive safeguards agreements with NNWS Parties to the NPT. Also referred to as the Comprehensive Safeguards Agreement (CSA).
INFCIRC/225 Rev.5 (Corrected)	The IAEA document *Nuclear Security Recommendations on Physical Protection of Nuclear Materials and Nuclear Facilities*. Its recommendations reflect a consensus of views among IAEA Member States on desirable requirements for physical protection measures on nuclear material and facilities; that is, measures taken for their physical security.
INFCIRC/540 (Corrected)	The model text of the IAEA's Additional Protocol.
INFCIRC/66 Rev.2	The model safeguards agreement used by the IAEA since 1965. Essentially, this agreement is facility specific. For NNWS party to the NPT it has been replaced by INFCIRC/153.
Infrasound	Sound in the frequency range of about 0.02 to 4 Hertz. One category of CTBT IMS stations will monitor sound at these frequencies with the aim of detecting explosive events such as a nuclear test explosion at a range up to 5,000 km.
Integrated Safeguards	The optimum combination of all safeguards measures under comprehensive safeguards agreements and the Additional Protocol to achieve maximum effectiveness and efficiency.
International Atomic Energy Agency (IAEA)	The IAEA is the international centre for cooperation in the nuclear field and seeks to promote the safe, secure and peaceful use of nuclear technologies.
International Data Centre (IDC)	Data gathered by monitoring stations in the CTBT IMS network are compiled, analysed to identify events and archived by the Vienna-based IDC. IDC products giving the data about events are made available to CTBT signatories.
International Monitoring System (IMS)	A network of monitoring stations and analytical laboratories established pursuant to the CTBT which, together with the IDC, gather and analyse data with the aim of detecting any nuclear explosion.
International Partnership of Nuclear Disarmament Verification (IPNDV)	IPNDV is an ongoing initiative of more than 25 countries with and without nuclear weapons. The Partners are identifying challenges associated with nuclear disarmament verification and developing potential approaches and technologies to address those challenges.

Term	Description
Isotopes	Atoms of the same element with the same number of protons, but different numbers of neutrons, for example, ^{235}U (92 protons and 143 neutrons) and ^{238}U (92 protons and 146 neutrons). While different isotopes of the same element behave the same in a chemical reaction, they behave differently in a nuclear reaction.
Light Water	H_2O. Ordinary water.
Light Water Reactor (LWR)	A power reactor which is both moderated and cooled by ordinary (light) water. In this type of reactor, the uranium fuel must be slightly enriched (that is, LEU).
Low Enriched Uranium (LEU)	Low enriched uranium. Uranium enriched to less than 20% ^{235}U. Commonly, LEU used as fuel in light water reactors is enriched to between 3% and 5% ^{235}U.
Material Balance Area (MBA)	A delineation for nuclear accounting purposes as required under comprehensive safeguards agreements. It is a defined and delineated area in or outside of a facility such that: (a) the quantity of nuclear material in each transfer into or out of the MBA can be determined; and (b) The physical inventory of nuclear material in the MBA can be determined, in order that the nuclear material balance can be established for IAEA safeguards purposes.
Material Balance Report (MBR)	A formal report from a national safeguards authority to the IAEA comparing consolidated inventory changes in a given period with the verified inventories at the start and end of that period.
Material Unaccounted For (MUF)	A term used in nuclear materials accountancy to mean the difference between operator records and the verified physical inventory. A certain level of MUF is expected due to measurement processes. MUF does not usually indicate 'missing' material – because it is a difference due to measurement, MUF can have either a negative or a positive value.
Mixed Oxide Fuel (MOX)	Mixed oxide reactor fuel, consisting of a mixture of uranium and plutonium oxides. The plutonium content of fresh MOX fuel for an LWR is typically around 5–7%.
Moderator	A material used to slow fast neutrons to thermal speeds where they can readily be absorbed by ^{235}U or plutonium nuclei and initiate a fission reaction. The most commonly used moderator materials are light water, heavy water or graphite.
National Nuclear Security Administration (NNSA)	The US NNSA is responsible, amongst other things, for reducing the global danger of weapons of mass destruction, providing the US Navy with nuclear propulsion and responds to nuclear and radiological emergencies.
Natural Uranium	In nature, uranium consists predominantly of the isotope ^{238}U (approximately 99.3%), with the fissile isotope ^{235}U comprising only 0.711%.
Naval Nuclear Propulsion (NNP)	Naval nuclear propulsion utilises nuclear reactors to generate energy for the propulsion of a vessel and/or electricity for use on board.
Non-Nuclear-Weapon State(s) (NNWS)	States not recognised by the NPT as having nuclear weapons at 1 January 1967 when the Treaty was negotiated.
Nuclear Material	Any source material or special fissionable material as defined in Article XX of the IAEA Statute (in practice, this means uranium, thorium and plutonium).

Term	Description
Nuclear Regulatory Commission (NRC)	The US NRC regulates commercial nuclear power plants, and other uses of nuclear materials, within the USA.
Nuclear-Weapon State(s) (NWS)	States recognised by the NPT as having nuclear weapons at 1 January 1967 when the Treaty was negotiated, namely the US, Russia, the UK, France and China.
Nuclear-powered submarine (NPS)	A submarine that is powered by a nuclear reactor but isn't necessarily nuclear-armed.
Nuclear Powered Submarine Program	See AUKUS
NUMBAT	Nuclear Material Balances and Tracking – ASNO's custom-built nuclear database used to fulfill reporting requirements under Australia's safeguards agreements with the IAEA, track Australian AONM overseas and maintain a register of permit holders, as required under the *Nuclear Non-Proliferation (Safeguards) Act 1987*.
Old Chemical Weapons (OCW)	Defined under the CWC as: • chemical weapons produced before 1925; or • chemical weapons produced between 1925 and 1946 that have deteriorated to such extent that they can no longer be used as chemical weapons.
On-Site Inspection (OSI)	A short-notice, challenge-type inspection provided for in the CTBT as a means for investigating concerns about non-compliance with the prohibition on nuclear explosions.
Open Pool Australian Light-Water Reactor (OPAL)	The 20 MWth research reactor located at ANSTO, Lucas Heights, reached full power on 3 November 2006 and was officially opened on 20 April 2007.
Organization for the Prohibition of Chemical Weapons (OPCW)	OPCW is an intergovernmental organisation and the implementing body for the CWC based in The Hague, The Netherlands. It oversees the global endeavour for the permanent and verifiable elimination of chemical weapons.
Other Chemical Production Facility (OCPF)	Defined under the CWC as all plant sites that: • produced by synthesis during the previous calendar year more than 200 tonnes of unscheduled discrete organic chemicals; or • comprised one or more plants which produced by synthesis during the previous calendar year more than 30 tonnes of an unscheduled discrete organic chemical containing the elements phosphorus, sulphur or fluorine.
Physical Inventory Listing (PIL)	A formal report from a national safeguards authority to the IAEA on nuclear materials inventories at a given time (generally the end of a material balance period).
Production	(For CWC purposes) the formation of a chemical through chemical reaction. Production of chemicals specified by the CWC is declarable, even if produced as intermediates and irrespective of whether or not they are isolated. (For safeguards purposes) Nuclear Production is the generation of special fissionable material through irradiation of fertile material in a reactor.
Provisional Technical Secretariat (PTS)	The PTS assists the CTBTO Preparatory Commission in the establishment of a global verification regime to monitor compliance with the CTBT.

Term	Description
^{239}Pu	An isotope of plutonium with atomic mass 239 (94 protons and 145 neutrons). ^{239}Pu is the fissile isotope of plutonium most suitable for nuclear weapons.
Radionuclide	An isotope with an unstable nucleus that disintegrates and emits energy in the process. Radionuclides may occur naturally, but they can also be artificially produced and are often called radioisotopes. One category of CTBT IMS stations is used to detect radionuclide particles in the air. Other IMS stations are equipped with radionuclide noble gas technology to detect the abundance of the noble gas xenon in the air.
Reprocessing	Processing of spent nuclear fuel to separate uranium and plutonium from highly radioactive fission products.
Safeguards Inspector	For domestic purposes, a person declared under section 57 of the Safeguards Act to undertake inspections to ensure compliance with provisions of the Act and to assist IAEA inspectors in the conduct of IAEA inspections and complementary access in Australia.
Seismic	Referring to the movements of the earth and its crust that can be generated by, among other things, earthquakes, explosions and large impacts (for example, meteors). The seismic component of the CTBT's IMS is a network of 50 primary stations and 120 auxiliary stations. Analysis of seismic waves can be used to distinguish between earthquakes and explosive events.
Small Quantities Protocol (SQP)	A protocol to a State's comprehensive safeguards agreement with the IAEA, for States with small quantities of nuclear material and no nuclear facilities. The protocol holds in abeyance most of the provisions of the State's safeguards agreement.
Source Material	Uranium containing the mixture of isotopes occurring in nature; uranium depleted in the isotope 235U; thorium; or any of the foregoing in the form of metal, alloy, chemical compound or concentrates.
Special Fissionable Material (SFM)	239Pu; 233U; uranium enriched in the isotopes 235 or 233; any material containing one or more of the foregoing.
Standing Advisory Group on Safeguard Implementation (SAGSI)	An international group of experts appointed by, and advising, the IAEA Director General on safeguards implementation matters.
Treaty on the Non-Proliferation of Nuclear Weapons (NPT)	The Treaty on the Non-Proliferation of Nuclear Weapons, commonly referred to as the NPT, is an international treaty with the objectives of preventing the spread of nuclear weapons and weapons technology, promoting cooperation in the peaceful uses of nuclear energy and to further the goal of nuclear disarmament.
^{232}Th	The only naturally occurring isotope of thorium, having an atomic mass of 232 (90 protons and 142 neutrons).
^{233}U	An isotope of uranium containing 233 nucleons, usually produced through neutron irradiation of 232Th.
^{235}U	An isotope of uranium containing 235 nucleons (92 protons and 143 neutrons) which occurs as 0.711% of natural uranium.
^{238}U	An isotope of uranium containing 238 nucleons (92 protons and 146 neutrons) which occurs as about 99.3% of natural uranium.

Term	Description
Uranium ore concentrate (UOC)	A commercial product of a uranium mining and milling operation usually containing a high proportion (greater than 90%) of uranium oxide.
Weapons of Mass Destruction (WMD)	Refers to nuclear, chemical, biological and occasionally radiological weapons.

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