



Australian Government
Department of Foreign Affairs and Trade



**Australian Safeguards and
Non-Proliferation Office
Regulatory Performance Framework
Self-Assessment Report 2016-17**

October 2017

Statement: This performance report is prepared for the Government's Regulatory Performance Framework (RPF). It covers financial year 2016-17. The report presents ASNO's performance during the reporting period and complies with the RPF requirements.

Overview of ASNO's Regulatory Functions

The principal focus of Australian Safeguards and Non-Proliferation Office (ASNO) is to enhance Australian and international security through activities which contribute to effective regimes against the proliferation of nuclear and chemical weapons. ASNO is a federal regulatory authority covering all States and Territories. Our legislation affects organisations or individuals holding nuclear material, associated material, equipment and technology, Chemical Weapons Convention (CWC)-Scheduled chemicals and producers of Discrete Organic Chemicals. Australia's permit and reporting systems ensure that ASNO is able to track relevant materials and activities, gather information and report to the International Atomic Energy Agency (IAEA) and the Organisation for the Prohibition of Chemical Weapons.

ASNO's domestic regulatory functions ensure that Australia complies with treaty commitments related to nuclear safeguards and security and chemical weapons, and that the public is protected through the application of high standards of control on relevant materials. ASNO also works to strengthen the operation and effectiveness of relevant treaty regimes through the application of specialist knowledge to complex policy problems in technical areas, including treaty verification and compliance.

The *Nuclear Non-Proliferation (Safeguards) Act 1987* (Safeguards Act) forms the legislative basis for ASNO's nuclear safeguards activities across Australia. The Safeguards Act also establishes a system for control over nuclear material and associated items in Australia through requirements for permits for their possession and transport.

The Safeguards Act gives effect to Australia's obligations under the Treaty on the Non-Proliferation of Nuclear Weapons (NPT); Australia's Comprehensive Safeguards Agreement and Additional Protocol with the IAEA; 24 agreements between Australia and various countries (and Euratom) concerning exports of uranium and cooperation in peaceful uses of nuclear energy; the Convention on the Physical Protection of Nuclear Material; and the International Convention for the Suppression of Acts of Nuclear Terrorism.

The Chemical Weapons Convention (CWC) prohibits the development, production, acquisition, stockpiling, retention, transfer and use of chemical weapons. Its verification regime is based on declaration by States Parties of facilities and activities dealing with particular chemicals, and on confirmation of compliance through on-site inspections. ASNO, as Australia's national authority for the CWC, is the focal point in Australia for liaison between domestic CWC stakeholders such as declared chemical facilities, the Organisation for the Prohibition of Chemical Weapons (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 has the right to conduct compliance inspections of relevant facilities in Australia, but such powers are exercised only in exceptional circumstances. ASNO conducts outreach activities, including site visits, to promote compliance and to check the accuracy of information provided by industry.

ASNO works closely with organisations holding items with proliferation risk. Examples include ANSTO, Defence, CSIRO, uranium mines, universities, hospitals, research and development and the chemical industry. Along with colleagues from the Department of Foreign Affairs and Trade, and other Government agencies, ASNO proactively engages with international organisations and other nations to shape the frameworks that ultimately affect Australian businesses.

This report provides summary and analysis of the information ASNO collected during 2016-17 reporting period and describes our ongoing reform effort.

Case study - Nuclear database development

Businesses and organisations with permits for the possession of nuclear material and associated items have a range of responsibilities. These include to account for, and control, their inventory and report changes and movements to ASNO on a regular basis.

ASNO permits are designed to manage Australia's compliance with nuclear safeguards and security obligations under a range of multilateral and bilateral treaty arrangements. The Department's Information Management Division began a multi-year project mid-2016 to develop a new database (NUMBAT) and web portal to improve the efficiency and effectiveness of the management of nuclear material inventory for the approximately 100 permit holders. An effective database strengthens ASNO's capacity to conduct compliance reviews and aids work flow efficiency.

Functionality for basic management of domestic inventory and movements is near completion, with the permit holder web portal planned for deployment before the end of 2017. By early 2018, functionality for managing and tracking international exports of uranium is scheduled to be completed. A comprehensive utility to fully streamline permit holder and ASNO management of inventories is scheduled for completion in 2019. Once completed this will significantly improve ASNO's management of nuclear treaty obligations and assist permit holders fulfil their reporting obligations.

Performance under the Commonwealth KPIs and ASNO metrics.

KPI 1: Regulators do not unnecessarily impede the efficient operation of regulated entities.

Metric 1: *Percentage of permit applications where options to eliminate the regulated material or equipment is discussed.*

Nuclear safeguards are the set of tools and techniques used by the IAEA to verify that countries comply with their international obligations not to divert nuclear materials to nuclear explosive devices. Under the Nuclear Non-Proliferation Treaty (NPT), nuclear safeguards apply to all nuclear material that is held in Australia, with limited exceptions. Safeguards are fundamental to international confidence that countries are abiding by NPT commitments.

Nuclear security requirements ensure that non-state actors do not use nuclear material for malicious purposes. Australia is party to the Convention on the Physical Protection of Nuclear Material. Australia meets its obligations under the Convention and its treaty-level bilateral nuclear cooperation agreements through implementation of IAEA guidance document, Nuclear Security Series No. 13.

Australia's nuclear safeguards obligations are identified in Australia's bilateral Comprehensive Safeguards Agreement and an Additional Protocol with the IAEA. The requirements in these instruments are non-discretionary for Australia. The *Nuclear Non-Proliferation (Safeguards) Act 1987* gives ASNO the authority to enact these requirements through a system of permits.

ASNO adopts a strategy of proactive engagement with businesses regarding material, equipment, information, facilities and activities covered under the *Safeguards Act* and *Chemical Weapons Prohibition Act*. The strategy includes targeting potential permit holders at conferences, industry events, outreach activities and on-site. Information is provided in the form of presentations, training material and guidance brochures. An important outcome from the engagement is an increased understanding of the options businesses have to use non-controlled material. For example, depleted uranium is used for X-ray shielding; however, it is controlled under the *Safeguards Act*. During outreach activities, ASNO specialists are able to highlight non-controlled alternatives, such as lead shielding. With this information businesses are better positioned to make informed choices when assessing their capability requirements and, potentially, choose non-regulated equipment.

The most frequent interaction with business is when ASNO is contacted directly via the general number about permit requirements. Although statistics are not held, calls to the ASNO number are received on a daily basis. The one-on-one discussions allow ASNO staff to assess the specific business operations and advise on regulated and non-regulated alternatives.

During the year, all permit and authority assessments began with a discussion between ASNO and the relevant organisation/business on their need for a permit. Businesses are provided with advice on which materials and activities are controlled and which do not need a permit. Some discussions occur with

potential applicants where the end-result is the conclusion that an ASNO permit is not required; however, ASNO's current database only captures information on formal applications. In all cases, ASNO conducted an initial evaluation of the activities to be undertaken e.g. discussions on the types and quantities of material produced, used, imported or held.

Table 1 lists examples of the advice given to businesses on whether an ASNO permit is required and, if so, which compliance conditions are relevant.

Table 1 – Nuclear Safeguards and Security Requirements

Item	Nuclear Safeguards requirements	Nuclear Security requirements
Sealed caesium-137 source in lead shielding	Nil	Nil
Sealed caesium-137 source in depleted uranium shielding	The shielding is subject IAEA safeguards and must be accounted for and remain available for inspection.	The shielding is not categorised under NSS-13, however, prudent management practices still apply.
Small jar of uranium ore concentrate.	The shielding is subject IAEA safeguards and must be accounted for and remain available for inspection.	Prudent management practices
Bulk quantities of waste contaminated with uranium ore concentrate.	Partial safeguards. Only relevant if importing/exporting for nuclear purposes.	Prudent management practices
Small jar of uranyl nitrate w/ natural isotopic ratio	The shielding is subject IAEA safeguards and must be accounted for and remain available for inspection.	Prudent management practices

Metric 2: Time to process permit applications.

ASNO issues new nuclear permits under s13, s16, s16A, s16B, or s18 of the *Nuclear Non-Proliferation (Safeguards) Act 1987*. ASNO also issues new CWC Schedule 1, Schedule 2 and Schedule 3 facility permits under s16, s17, s18 and s19 of the *Chemical Weapons (Prohibition) Act 1994*, and new CWC-Scheduled chemical import permits under Regulation 5J of the *Customs (Prohibited Imports) Regulations 1956*.

ASNO staff processed **28 permits and authorities** in 2016-17 covering activities such as production, processing and consumption of CWC-scheduled chemicals; possession of nuclear material or associated items; transport of nuclear material or associated items; authority to communicate information on associated technology.

Permit applications and processing times are captured in separate nuclear and chemical accounting databases. While many permits were renewed, the metric only captures new permit applications. For example, **Two** chemical facility permits were re-issued and **fifty-seven** import permits renewed before the previous permits expired, thus supporting continuity of business. **Fourteen** nuclear permits were reviewed and upgraded using a streamlined permit template.

Eighteen nuclear and **ten chemical** permits were processed during the reporting period. The average number of days to provide a permit to the applicant once the completed forms were received was **14.4 days**. **Eighty-one percent** of all permits applications were processed within the **21 day** standard that ASNO has set itself. The chemical team processed permits in an average of **6.6 days** and the nuclear team an average of **18.7 days**.

Table 2 – Permit Processing

ASNO Permit Processing 2016-17	
<u>Number of permit applications processed:</u>	
Nuclear	18
Chemical	<u>10</u>
Total	28
Average number of days	14.4 days
Percent of permits issued within 21 days of application	82%

Metric 3: *Number of compliance/performance reviews not involving a site visit.*

ASNO has in place a mature strategy for assessing permit holder compliance via available evidence and discussions with effected parties. ASNO uses information supplied in permit applications (new permits or modification to existing arrangements) as much as possible before considering a site visit.

Of the **fifty-seven** performance reviews that were conducted during the year, **thirty-five (sixty-one percent)**, of the reviews did not involve a site visit. **Twenty-two site visits** occurred during the year.

Table 3 shows the breakdown of those site visits. Site visits usually take the form of formal inspections. The selection of candidates for inspection is risk-informed. However, since ASNO has prime responsibility to oversee activities within Australia that are covered by nuclear and chemical treaties, ASNO inspections often coincide with inspections from the relevant international agencies. The International Atomic Energy Agency (IAEA) conducted **nine inspections** in Australia during the reporting period (six of which were combined in a one week inspection campaign at ANSTO) and the Organization for the Prohibition of Chemical Weapons (OPCW) conducted **four inspections**. ASNO inspectors conducted an additional **nine inspections** during the year based on the risk profile of the organisation/business. Hence, a **total of 22 inspections** were conducted during the year -**16 nuclear and six chemical**. Direct assessment of compliance under the Safeguards Act, ASNO permit requirements and Australia’s treaty obligations with the IAEA occurred. ASNO’s chemical team commonly conduct site visits in preparation for OPCW inspections.

Table 3 – Performance Assessments

Performance Assessment - no site visit		Discuss Efficiency
New location	4	0
Possess nuclear material	9	0
Transport nuclear material	17	0
Authority to communicate associated technology information	2	0
Possess associated items	3	0
Performance Assessment - site visit		
Inspection - nuclear	16	16
Inspection - chemical	6	6

KPI 2: Communication with regulated entities is clear, targeted and effective.

Metric 4: *Number of site visits that include an allocation of time to discuss efficiency measures.*

Of the **twenty-two site visits, one hundred percent** included an allocation of time to discuss with permit holders ASNO’s requirements and advice on good practice. On-site visits represent an excellent opportunity to discuss current and emerging regulatory requirements directly with a business. Context to their specific working environment is added and questions answered directly and immediately. The business can then absorb the guidance into their processes. These discussions have become a routine component of all inspection and site visit activities, including during IAEA and OPCW inspections.

ASNO engages regularly with the IAEA and OPCW and is able to use this experience to provide advice on effective compliance options. For example, in preparation for inspections conducted by ASNO, IAEA or OPCW, a notification is sent to the permit holder outlining information required and the anticipated inspection process. When on-site, ASNO officers involve the compliance officers from the business or organisation in entry and exit discussions with the IAEA or OPCW inspectors so that they can ask questions directly and hear recommendations on efficiency and good practice techniques.

KPI 3: Actions undertaken by regulators are proportionate to the regulatory risk being managed.

Metric 5: *Establish risk-based inspection program.*

A significant achievement during the 2015-16 reporting period was the beginning of a comprehensive revision of all of ASNO nuclear permits. The new permit system, and associated template permit, factors the risk profile of categories of businesses including the scale of regulated activities undertaken. Those businesses with a lower risk profile have now been provided with a permit that is simplified and reduces their reporting burden. For example, universities holding a small quantity of nuclear material in the form of laboratory reagents now hold a Level 1 Permit to Possess. As such, ASNO can accept a reduced frequency and timeliness of inventory change reports.

This year, ASNO completed a major portion of the permit reform project and now has new templates for businesses such as industrial radiographers and transport companies. An important step during the year was risk-based reconfiguration of special nuclear permits. These permits are tailored to support the activities of organisations with a higher risk profile. For example, the Australian Nuclear Science and Technology Organisation (ANSTO) operates an Open Pool Light Water reactor; a 20 megawatt nuclear reactor in which the irradiation of target material occurs. The outcome of irradiation includes the production of radioisotopes for nuclear medicine in Australia and internationally.

With the advancement of the permit reform system, ASNO has been able to reduce the time businesses spend on the administration of regulatory requirements. The system also establishes the foundation of ASNO's risk-based compliance assessment process. With the information provided by permit holders under the new permits, ASNO is able to conduct an initial analysis of non-compliance risk and make informed decisions on the best use of inspectors.

Using the newly categorised information available to ASNO on activities conducted by our permit holders, and the technical knowledge held by ASNO specialists, a detailed risk assessment has been completed on Australia's obligations under the Nuclear Non-Proliferation Treaty (NPT). The risk-assessment included a comparison with other nations with similar nuclear profiles to Australia, and the strategies they employ to plan their inspection schedule. The outcomes of the risk assessment are now influencing ASNO inspection planning.

Within the boundaries of available staff resources, ASNO continues to develop a Quality Management System (QMS) that will provide the anchor point for the plans and arrangements that ASNO uses to fulfil its strategic objectives. Our Quality Manual is complete and awaiting activation. The manual holds a detailed Risk Management Plan that conforms with the Commonwealth Risk Management Policy. It also holds a newly drafted Radiation Protection Plan that addresses the WHS risks faced by ASNO inspectors. It also supports the DFAT WHS Strategic Plan 2017-19 and Officer Due Diligence Manual. ASNO is also drafting a Compliance Strategy that describes responses to regulatory non-compliance. That document will also be supported by the QMS.

Using our risk assessment and information collected on permit holder activities, our inspection resources have been directed towards undertakings at ASNTO and uranium mines. With the continued development of analytical tools, ASNO is positioned to respond to changing risks within the regulated community and direct inspection resources accordingly.

Metric 6: *External review of ASNO's risk-based inspection program.*

The International Atomic Energy Agency (IAEA) reviews Australia's performance against our Nuclear Non-Proliferation Treaty obligations on an ongoing basis. Those obligations include a suitable national regulatory framework and an appropriate program to ensure that the reports provided to the IAEA describing permit holder activities are comprehensive and complete.

In 2017, the IAEA completed the development of an upgraded verification and review method for Australia called the State-level approach. The change in the IAEA's review method has been minimal given the small nuclear footprint in Australia and the fact that the IAEA has many years of experience reviewing Australia's activities. The key change is that the physical inventory verification inspections that were previously held once every two or three years at ANSTO's storage locations, will now be held annually.

ASNO's nuclear security review operates on a multi-year cycle. The IAEA is also the coordinating organisation for a system of voluntary peer reviews of a nation's nuclear security framework and operations called International Physical Protection Advisory Service (IPPAS) missions.

IPPAS missions address, inter alia, national legislation, the operation of nuclear security regulators, licensing and inspection processes and interaction and integration with other security related organisations. A 2013 mission in Australia produced 9 recommendations and 24 suggestions. A redacted version of the reported has been published on ASNO's web-site (<http://dfat.gov.au/international-relations/security/asno/Documents/international-physical-protection-advisory-service-ippas-mission-report.pdf>). The recommendations generated from the 2013 review are being actioned, and a follow up review is planned for November 2017.

The nuclear security review by the IAEA is conducted in concert with other significant national stakeholders including ASNTO and the Australian Radiation Protection and Nuclear Safety Agency. The stakeholder working group that is coordinating the implementation of the IPPAS recommendations met during the reporting period and assessed progress on the review recommendations.

KPI 4: Compliance and monitoring approaches are streamlined and coordinated.

Metric 7: *Establish streamlined inspection processes.*

As described under Metric 5 above, ASNO's selection of permit holders for inspection is risk-informed and relies on an analysis of available information. Information pertaining to the types and use of nuclear material, equipment and facilities is held in our databases. The databases are not only tools for holding and collating permit holder information but, importantly, generate the reports that ASNO sends to international agencies such as the IAEA.

In 2016-17 ASNO focused much of its resources on a database upgrade project. ASNO has transitioned its nuclear accounting database from one that generated fixed-format text reports for the IAEA, to one that generates labelled XML reports. The new database also provides ASNO with clearly defined links between permit holder inventories and nuclear transaction reports. As a result, transaction records are automatically generated for the IAEA when updates are made to inventory items, eliminating the need to enter data manually in multiple places, making the entire reporting process more efficient for all stakeholders concerned.

ASNO recognises the excellent work from the Information Management and Technology Division in the Department of Foreign Affairs and Trade over the last year in designing and delivering a new database to

meet a complex set of fixed requirements. Without their ongoing engagement and attention to detail, successful delivery would not have been possible.

The next phase of the database upgrade will see a move towards a secure, web-based portal for permit holders. This will give permit holders the ability to directly manage simple changes, such as updating contact details or receiving inventory from another permit holder. At present, permit holders are required to complete paper-based forms for all notifications and applications. The goal will be reduced administrative burden on permit holders and increase analytical and reporting vigour for ASNO.

Strengthened information analysis and developments in our risk assessment capacity are combined with new the inspection checklists, and inspection reports, developed during the previous reporting year. These tools are streamlining our inspections processes.

Metric 8: *External review of inspection method.*

No external review of ASNO's inspection processes was conducted during the reporting period.

KPI 5: Regulators are open and transparent in their dealings with regulated entities.

Metric 9: *Quality of regulatory information provided on ASNO's website and in the ASNO Annual Report.*

ASNO's regulatory information is supported by the DFAT website. Businesses that either currently hold an ASNO permit or potentially require a permit to conduct operations are able to access up-to-date requirements through the ASNO pages. The information is reviewed and updated periodically and reflects current international requirements. ASNO ensures that the application forms required for permits and approvals are functional and readily accessible on its website. An HTML version of our 2015-16 annual report was placed on the website immediately after tabling in parliament. The report provides detailed information on our activities, current and future focus, and performance.

ASNO distributes an annual newsletter to chemical stakeholders and periodically updates its three industry guidance brochures that are mailed out in hard copy and are available on the website.

In 2016-2017 ASNO published unclassified versions its International Physical Protection Advisory Service (IPPAS) mission report and its Design Basis Threat on its website to show openness and transparency in nuclear security. ASNO also updated Australia's nuclear security profile.

Metric 10: *Outreach activities conducted to communicate regulatory requirements to stakeholders.*

During the year, **seven nuclear** and **six chemical** outreach visits were conducted. To maximise the effectiveness of our communication on ASNO requirements, industry events were targeted. Presentations were delivered at the Australasian Radiation Protection Society and Australasian Institute of Mining and Metallurgy national conferences.

ASNO used a licence holder's forum conducted by fellow regulator, the Australian Radiation Protection and Nuclear Safety Agency to discuss ASNO regulatory requirements with common, and potential, permit holders. This event represented an excellent opportunity to discuss good practice techniques supported by both regulators and efficiencies to be found when managing multiple permits.

The ASNO team responsible for regulating the export of uranium ore concentrates conducted an outreach activity with BHP in May. Fellow uranium regulator, the Department of Industry, Innovation and Science also attended. This cooperative visit reduced the time burden on BHP and, importantly, presented an opportunity for them to seek clarity from both regulators and gain advice on good practice in a single, targeted forum.

The Australian Nuclear Science and Technology Organisation (ANSTO) is a significant stakeholder. Their research activities are expansive and include the irradiation of nuclear material in the OPAL nuclear reactor. ASNTO's activities can entail proliferation risk and, subsequently, ASNO engages closely with their research, operational, safeguards and security staff, as well as senior management. ASNO participated in two outreach activities at ANSTO during the year.

ASNO's Chemical outreach activities focussed on companies holding significant risk against OPCW requirements. Four business received targeted outreach from the ASNO chemical team. All four business were also inspected by the OPCW during the year. Additional outreach activities were conducted at a NSW Forensic Analytical Science Services facility and an Australian Federal Police facility.

Case study - Communicating ASNO requirements

ASNO uses the opportunity of the participation of most key permit holders at conferences such as the Australasian Radiation Protection Society and Australasian Institute of Mining and Metallurgy Australian uranium conference to communicate contemporary safeguards and security topics, keep abreast of issues affecting industry and interact with permit holders on an individual basis. The interaction assists both the regulator and industry to mutual benefit as it improves permit holder awareness of regulatory requirements and how best to meet these efficiently with limited disruption to core business operations.

KPI 6: Regulators actively contribute to the continuous improvement of regulatory frameworks.

Metric 11: *Number of meetings attended to influence international policy.*

As a division of the Department of Foreign Affairs and Trade, ASNO prioritises engagement with international organisation and national regulators from other countries. ASNO continued to actively engage relevant international organisations such as the Office for the Prohibition of Chemical Weapons (OPCW), the International Atomic Energy Agency (IAEA) and Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO) to shape policies and standards. These organisations develop the standards that are applied globally. By dynamically connecting with these organisations, ASNO is able to influence the development of international standards and ensure that they can be applied efficiently by Australia businesses and organisations.

Nineteen nuclear and **eight** chemical meetings were attended to shape international standards and policy. These included the:

- Global Initiative to Combat Nuclear Terrorism
- Nuclear Suppliers Group
- International Conference on Nuclear Security
- Comprehensive Test Ban Treaty technical working group meetings
- Fissile Material Cut-off Treaty meetings
- 21th Conference of the State Parties to the Chemical Weapons Convention
- International Atomic Energy Agency General Conference
- IAEA Standing Advisory Group on Safeguards Implementation meetings
- International Partnership for Nuclear Disarmament meetings

Additionally, ASNO representatives held meetings with specialists from similar national regulatory authorities to discuss common approaches to regulating and tracking obligated nuclear material, such as uranium ore concentrates.

Case study - Bilateral and multilateral meetings of nuclear regulators

ASNO's Bilateral Safeguards Section actively engages electronically and face-to-face with our counterparts under our nuclear cooperation agreements (NCA). This engagement is critical to sharing best practices, harmonising regulatory approaches and ensuring timely approvals for the Australian uranium industry and customers.

ASNO uses bilateral and multilateral meetings to engage on topics such as streamlining information and reporting flows with our counterparts. For example, ASNO is exploring novel reporting exchange methods with our most significant bilateral partners to reduce the administrative burden of manual data entry and remove sources of transcription and scaling error through common file formatting.

Metric 12: *Engagement with other regulators to explore opportunities for regulatory efficiencies.*

ASNO regularly meets with other Commonwealth and State regulators. Organisations that engage in or interact with nuclear and chemical regulation are targeted. At those meetings, regulatory frameworks are evaluated, lessons learned exchanged and discussions on efficiency strategies occurs. Opportunities for cooperation on strategies, and activities, to effectively and efficiently work with common regulated entities are explored.

Important regulatory partners include the Australian Radiation Protection and Nuclear Safety Agency, Defence Export Controls, Department of Industry, Innovation and Science and Department of Immigration and Border Protection.

Examples of coordinated activities that benefit regulated businesses include:

- Australian Border Force on the Fast Tracked Digital Transformation Project
- South Australian Government – transport of uranium ore concentrates
- Dept. of Industry, Innovation and Science – National Radioactive Waste Storage Facility
- Australian Radiation Protection and Nuclear Safety Agency – physical security of nuclear material

