



OFFICE OF
**NONPROLIFERATION AND
ARMS CONTROL (NPAC)**

INTERNATIONAL NUCLEAR SAFEGUARDS ENGAGEMENT PROGRAM

Nuclear Safeguards





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The International Nuclear Safeguards Engagement Program

The U.S. Department of Energy's National Nuclear Security Administration (DOE/NNSA) works with over 40 partner countries and organizations around the world to enhance the effectiveness and efficiency of international nuclear safeguards implementation through DOE/NNSA's International Nuclear Safeguards Engagement Program (INSEP). INSEP engagement primarily focuses on working with countries to help build their capacity to account for and declare nuclear materials and activities to the International Atomic Energy Agency (IAEA) in accordance with their international safeguards obligations. IAEA safeguards are an integral part of the nonproliferation regime and a requirement for non-nuclear weapons states (NNWS) party to the Treaty on the Non-Proliferation of Nuclear Weapons (NPT).

DOE/NNSA draws on the vast expertise and resources within the U.S. National Laboratories and U.S. Government to implement and support safeguards engagements. By leveraging these unique capabilities, DOE/NNSA brings innovative and practical solutions to safeguards implementation challenges around the world.

DOE/NNSA's INSEP has three main objectives: (1) to promote a robust nonproliferation regime through adherence to IAEA safeguards agreements; (2) to build sustainable capacity within a State through its State or Regional System of Accounting for and Control of Nuclear Material (SSAC or RSAC) to implement safeguards effectively and efficiently; and (3) to test and deploy advanced safeguards technologies and tools to meet current and future safeguards challenges.

International Nuclear Safeguards Engagement Program

Three Main Objectives



Promote a robust nonproliferation regime



Build sustainable capacity within a SSAC or RSAC



Test and deploy advanced safeguards technologies and tools





About IAEA Safeguards

What are International Nuclear Safeguards?

International nuclear safeguards provide assurances to the international community that nuclear material is not being used for the illicit manufacture of nuclear weapons. Safeguards are a set of technical measures intended to verify that a State's nuclear material is accounted for and not diverted to nuclear weapons or other nuclear explosive devices and to provide credible assurance of the absence of undeclared nuclear material and activities. These technical measures include, for example, on-site inspections, nuclear material accountancy, physical measurements, facility design information verification, containment using tamper-indicating tags and seals, surveillance, and environmental sampling.

Safeguards Agreements

Since the IAEA was founded in 1957, the international safeguards system has been an indispensable component of the nuclear nonproliferation regime and essential to peaceful nuclear cooperation. The NPT makes it mandatory for each NNWS party to the Treaty to conclude a Comprehensive Safeguards Agreement (CSA) with the IAEA. A CSA provides for the application of safeguards to all nuclear material in the State to verify that it is not diverted to nuclear weapons or other nuclear explosive devices.

In 1997, the IAEA Board of Governors approved the Model Additional Protocol (AP). The AP provides the IAEA with broader access to information and locations related to all aspects of a State's nuclear fuel cycle. Together, a State's CSA and AP are the international standard for safeguards and give the IAEA legal authority to verify that nuclear material and equipment are being used for declared, peaceful purposes and that no undeclared or illicit activities are occurring.





In order to simplify procedures under a CSA for States with gram quantities of nuclear material and who have not taken a decision to construct or authorize construction of a nuclear facility, the IAEA makes available a Small Quantities Protocol (SQP), which holds in abeyance the implementation of most of the reporting and inspection provisions in a CSA. In 2005, the IAEA Board of Governors adopted a modified SQP (MSQP) that addresses certain weaknesses in the original version. The MSQP requires the State to provide additional information to the IAEA including an initial nuclear materials declaration.

Bringing into force a CSA with an AP (and an MSQP where appropriate) demonstrates to the international community a State's commitment to meeting the highest standard of transparency and safeguards verification.



How are international safeguards different from nuclear security?

International safeguards are aimed at verifying a State's compliance with its legal obligations under its safeguards agreements, and nuclear security measures are concerned with preventing and detecting activities by non-State actors. International nuclear safeguards are based on legal agreements (i.e., the NPT, CSAs, and APs) and associated obligations that States and the IAEA must fulfill. These legal agreements and the IAEA Statute give the IAEA the legal authority to verify States' compliance with relevant safeguards

agreements. Nuclear security is based on the Convention on the Physical Protection of Nuclear Material and Nuclear Facilities (CPPNM-A) and the International Convention for the Suppression of Acts of Nuclear Terrorism (ICSANT), as well as other non-legally-binding guidance. Under the CPPNM-A, States are responsible for establishing a nuclear security regime; however, the IAEA does not have a legal basis for verifying a State's compliance with the CPPNM-A.





SAFEGUARDS Engagement



Through customized safeguards engagement, DOE/NNSA strives to build partners' capabilities so that they can achieve a number of shared goals that ultimately strengthen the nonproliferation regime and international safeguards system, such as:

- Entry into force of a CSA and AP
- Modification of an SQP
- Establishment of national laws and regulations to enable the fulfillment of safeguards obligations
- Allocation of adequate expertise and resources to fulfill safeguards obligations
- Provision of correct, complete, and timely declarations to the IAEA
- Transparency and cooperation with the IAEA

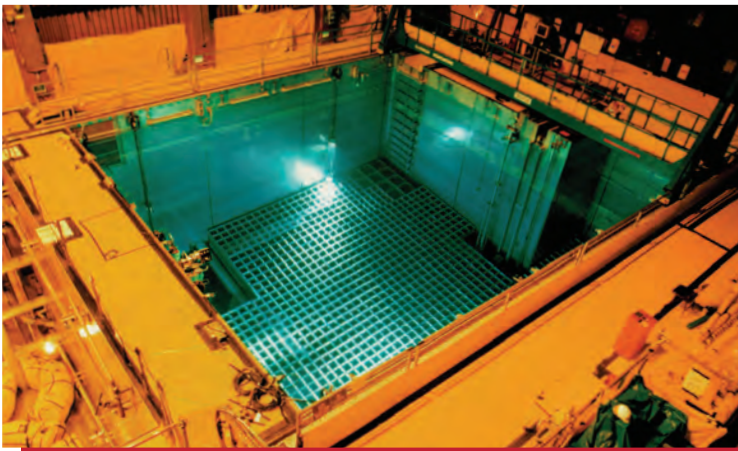




What are common safeguards needs and challenges in our partner States?

States may request external assistance with safeguards implementation for a variety of reasons. For example, a State may need assistance ensuring that it has a system in place to provide correct, complete, and timely information to the IAEA. Another State might need assistance educating stakeholders in that State (e.g., policymakers, facility operators, or non-governmental entities) on the requirements of its safeguards agreements and the importance of fulfilling those obligations. Still others may need to apply safeguards to new nuclear-related technologies or may encounter a difficult nuclear material measurement issue that requires input from world-class experts.

The scope of DOE/NNSA's safeguards engagement depends upon a number of factors, such as a State's nuclear fuel cycle, plans for nuclear power, safeguards needs, history of engagement, and existing SSAC capacity. DOE/NNSA engagements are carefully customized to meet the needs of a specific State, through consultations with the SSAC staff and other stakeholders including the IAEA.



Example Forms of Cooperation:

- Training courses
- Technical consultations
- Peer review of legislation, regulations, and procedures
- Joint development of outreach materials
- Exchange and provision of samples, materials, tools, and equipment
- Exchange of scientific and technical information for collaborative studies
- Technology modification and testing

Example Areas of Cooperation:

- Comprehensive Safeguards Agreement
- Additional Protocol
- Modified Small Quantities Protocol
- Laws and regulations for safeguards implementation
- National safeguards inspections
- Safeguards information management
- Nuclear material accounting and measurements
- Quality management systems

What opportunities does the IAEA Department of Safeguards offer to States?

The IAEA Department of Safeguards sponsors international, regional, and national training courses for Member States to support effective safeguards implementation. Upon request, the IAEA also offers an International SSAC Advisory Services (ISSAS) to Member States to review and provide recommendations on the regulatory, technical, and administrative measures within a State's SSAC. The IAEA also has a series of guidance documents about effective safeguards implementation, including good practices, which can be found on the IAEA website.



Partnerships

Through INSEP, DOE/NNSA collaborates with partners at all stages of nuclear development. Primarily, DOE/NNSA engages the regulatory authorities responsible for safeguards in partner States. Such collaboration may include outreach to other entities within the State that have reportable materials and/or activities (e.g., nuclear facilities, universities, and industry) or decision-making authority (e.g., policymakers).

DOE/NNSA works closely with the IAEA Department of Safeguards to optimize collaboration. DOE/NNSA makes a concerted effort to understand IAEA priorities, respond to IAEA requests, and maintain consistency with IAEA safeguards requirements and guidance in its engagement activities. DOE/NNSA frequently invites the IAEA to participate in technical trainings, workshops, conferences, and seminars with partner countries. DOE/NNSA and IAEA also co-sponsor events.

In addition, DOE/NNSA partners with other entities, including non-governmental organizations (NGOs), to promote effective safeguards implementation. Examples of partner NGOs include the Arab Network of Nuclear Regulators (ANNuR) and the Asia Pacific Safeguards Network (APSN).



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