



U.S. Additional Protocol Bulletin

Department of Commerce
Bureau of Industry and Security

Overview of the IAEA Safeguards Regime

Introduction

The Additional Protocol to the U.S.-International Atomic Energy Agency (IAEA) Safeguards Agreement is an expansion of the existing safeguards regime. The United States has been involved in the IAEA safeguards regime for over thirty years. Since ratification of the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) in 1970, the United States has been committed to and engaged in worldwide efforts aimed at promoting the peaceful uses of nuclear energy and preventing the spread of nuclear weapons.

The addition of commercial nuclear fuel cycle-related activities to the safeguards regime via the U.S.-IAEA Additional Protocol expands the impact of safeguards to nuclear industry activities not subject to licensing by the Nuclear Regulatory Commission (NRC). The U.S. Additional Protocol supplements the Safeguards Agreement. This bulletin is intended to provide background information on the safeguards regime from its origins to the development of the Additional Protocol.

The Nuclear Non-Proliferation Treaty

Ratification of the NPT in 1970 marked the culmination of over twenty years of international efforts to enact a multilateral international agreement aimed at curbing nuclear arms proliferation. The core aims of the NPT include preventing the spread of nuclear weapons beyond the five nuclear-weapon states (NWS)¹, providing assurance through safeguards that peaceful nuclear activities are not diverted, promoting the peaceful use of nuclear energy, and expressing the desire for further nuclear disarmament measures. Over 130 states are signatories to the NPT. The NPT mandates that NWS not transfer nuclear weapons or nuclear explosive devices to “any recipient whatsoever.” Non-Nuclear Weapons States (NNWS) undertake not to:

1) receive any transfers of such material;

¹ The NPT established China, France, the United States, the United Kingdom and the Russian Federation as the five Nuclear Weapons States (NWS). No other States Parties have been given this designation to date. Though the core aims of the NPT are the same for all States Parties, specific obligations differ depending on a State Party’s NWS/non-Nuclear Weapon State (NNWS) status.

- 2) manufacture or acquire nuclear weapons or explosive devices; and
- 3) seek or receive any assistance in such manufacturing.

Although the NPT contains no specific verification provisions, it mandates that all NNWS States Parties accept IAEA safeguards through a subsequent bilateral agreement concluded with the IAEA.

IAEA Safeguards and the U.S.-IAEA Safeguards Agreement

Loosely defined, safeguards are technical measures the IAEA employs to detect and deter diversion of nuclear material from peaceful to nuclear weapons use and to ensure compliance with NPT obligations. The IAEA safeguards regime includes provisions for nuclear material accountancy (e.g., material balance), provision of accountancy and facility information to the IAEA via declarations, ad hoc and routine inspections to verify provided information, and surveillance. Safeguards agreements provide the IAEA with the authority to verify States Parties’ fulfillment of their NPT obligations and prevent diversion of nuclear energy from peaceful uses to development of nuclear weapons or explosive devices.

Currently, 145 NPT States Parties have concluded safeguards agreements with the IAEA. During negotiations of the NPT, NNWS expressed concern that adopting IAEA safeguards may place them at a commercial and industrial disadvantage due to IAEA access to facilities and the possible interference of safeguards with peaceful nuclear operations. Although the NPT only requires NNWS to adopt safeguards agreements, each NWS agreed to share the burden of safeguards by concluding similar safeguards agreements with the IAEA. The commitment by NWS to adopt similar agreements and incur safeguards activity was key in gaining support for the NPT.

“Comprehensive” Safeguards Agreements cover all of a State Party’s nuclear materials and activities and are applied in NNWS. “Voluntary Offer” Safeguards Agreements refer to safeguards enacted for each of the five NWS. Although based on the model safeguards agreement, voluntary offer agreements apply safeguards only to the nuclear material and facilities voluntarily submitted to the IAEA. The NPT does not obligate NWS to accept IAEA safeguards.

The U.S.-IAEA Safeguards Agreement (also known as the U.S. Voluntary Offer”) entered into force in 1980 and

closely resembles the model safeguards agreement, with certain exceptions. The U.S. Voluntary Offer obliges the

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United States to accept IAEA safeguards at all civil nuclear facilities, excluding only those of “direct national security significance.” Additionally, the United States has the authority to determine which facilities are eligible for IAEA application of safeguards. The IAEA has applied safeguards at certain IAEA-selected sites in the United States since 1981. Though many commercial facilities are impacted by the Safeguards Agreement, these facilities are exclusively licensed and regulated by the NRC; BIS does not have a regulatory role under the safeguards regime.

Strengthened Safeguards and the Model Additional Protocol

Following the Persian Gulf War, the discovery in 1991 of Iraq’s illicit nuclear weapons development program illustrated that the safeguards system was inadequate in ensuring compliance with all NPT obligations. The IAEA and the NPT international community advocated enhancing nuclear safeguards to ensure that the correctness and completeness of State Party declarations could be verified; specifically, that the IAEA could provide credible assurance of the non-diversion of declared nuclear material and facilities as well as the absence of undeclared nuclear material and activities.

By the mid-1990’s, the IAEA developed and incorporated measures to enhance the capability and effectiveness of safeguards. These “strengthened safeguards” measures included obtaining more information from States Parties about their nuclear programs, gaining access to more locations, and incorporating new technology into the verification regime. Because some of these measures required additional legal authority, the IAEA and NPT States Parties developed the Model Additional Protocol. Once ratified, an Additional Protocol between the IAEA and a NPT-State Party is a binding agreement that provides the IAEA the additional authority to implement these strengthened safeguards measures in that state. To date, Additional Protocols are implemented in fifty-eight NPT States Parties.¹

Declarations. Both the scope of activities impacted by the Additional Protocol and the verification rights of the IAEA are expanded under the Model Additional Protocol. Information pertaining to nuclear material and aspects of nuclear fuel-cycle activities outside the scope of traditional safeguards are subject to declaration. “Sites” of declared nuclear facilities are subject to declaration and verification under the Additional Protocol (only “facilities” are subject to declaration and verification under the Safeguards Agreement). Additionally, nuclear fuel-cycle activities not

involving nuclear material (e.g., research and development, equipment manufacturing, uranium mining and thorium mining/milling, imports/exports of certain nuclear fuel-cycle related equipment) are subject to declaration under the Protocol.

Complementary Access. Although the Model Additional Protocol states that the IAEA will not “mechanistically or systematically” verify declarations, the IAEA maintains the right to conduct complementary access at declared locations for specific reasons. Any access will be conducted on a non-routine basis. For example, the IAEA may request complementary access to uranium mines and concentration plants, and thorium concentration plants in order to verify the absence of undeclared nuclear material and activities. The IAEA also may request access to equipment manufacturers and research and development locations not involving nuclear material in order to verify the accuracy and completeness of declarations.

The U.S. Additional Protocol

The United States signed its Additional Protocol on June 12, 1998 and the Senate provided advice and consent on March 31, 2004. Congress enacted implementing legislation on December 6, 2006 and the President issued Executive Order 13458 on February 5, 2008. The U.S. Additional Protocol is identical to the Model Additional Protocol with two exceptions. The U.S. Additional Protocol reinforces the national security exclusion established under the U.S.-IAEA Safeguards Agreement and provides for the use of managed access to protect information and activities of direct national security significance.

BIS will have regulatory authority for activities 1) taking place at locations not owned by or leased to other U.S. Government agencies, or 2) activities within a NRC-licensed controlled or restricted area. Such activities include certain types of public and private research and development not involving nuclear material, manufacture and import of certain fuel-cycle related equipment and non-nuclear materials, and hard rock uranium mining. These fuel-cycle related activities are not included in the Safeguards Agreement and their inclusion in the Additional Protocol indicates the broader scope of activities included in the strengthened safeguards regime.

Further Information

For more detailed information on the U.S. Additional Protocol, see BIS Outreach Publication AP-001 (“The Additional Protocol to the U.S.-IAEA Safeguards Agreement”). For questions relating to the Additional Protocol, please call BIS’s Treaty Compliance Division at 202-482-1001 or visit our website www.AP.gov.

¹ As of June 16, 2004.