

International Safeguards Additional Protocol Implementation in the
Department of Energy and National Nuclear Security Administration

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Abstract

The Additional Protocol was signed by the United States in June 1998 and is a supplement to the Safeguards Agreement with the International Atomic Energy Agency (IAEA). Safeguards measures are enacted to provide independent international verification of the country's commitments to nonproliferation and peaceful uses of nuclear energy. The President submitted the Additional Protocol to the U.S. Senate in May 2002 for advice and consent to ratification.

Entry into force will make it a legal requirement for the Department of Energy (DOE) and National Nuclear Security Administration (NNSA) to provide an expanded declaration of nuclear fuel cycle-related activities and provide complementary access to the IAEA to allow them to verify the completeness of these declarations. The DOE/NNSA program for implementation of the Additional Protocol has three key goals:

- 1) Prepare DOE and NNSA sites for preparing and maintaining declarations under the Additional Protocol, including submission of the initial declaration and implementation of a system for keeping the declarations accurate and current.
- 2) Utilize one or more sites managed by DOE as a test bed for qualification of the national reporting system that will be used by all U.S. nuclear facilities with responsibilities under the Additional Protocol.
- 3) Assist foreign government officials and nonproliferation specialists in understanding Additional Protocol implementation issues so they will quickly bring the agreement into force.

National Laboratories are providing technical support to facilitate coordination and implementation of the IAEA Additional Protocol at DOE and NNSA sites. Additional Protocol program activities are structured to ensure DOE readiness for effective implementation of the expanded reporting and inspection requirements in time for the United States to be in full compliance prior to the IAEA REVCON congress, to be held in May 2005.

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International Treaty Objectives

Strengthened Safeguards

Provide credible assurance about the non-diversion of nuclear material from declared nuclear facilities and the absence of undeclared nuclear material.

Additional Protocol

Increase the ability of IAEA to detect undeclared nuclear activities as well as to detect the diversion of nuclear material from declared activities.

Executive Guidance

George W. Bush – May 2002

“adhering to the Additional Protocol will bolster U.S. efforts to strengthen nuclear safeguards and promote the nonproliferation of nuclear weapons, which is a cornerstone of U.S. foreign and national security policy.”

Spencer Abraham – September 2002

“I expect all Offices to continue to cooperate closely in ensuring the effective and responsive implementation of our treaty obligations, foreign visits, training, and other activities with the International Atomic Energy Agency.”

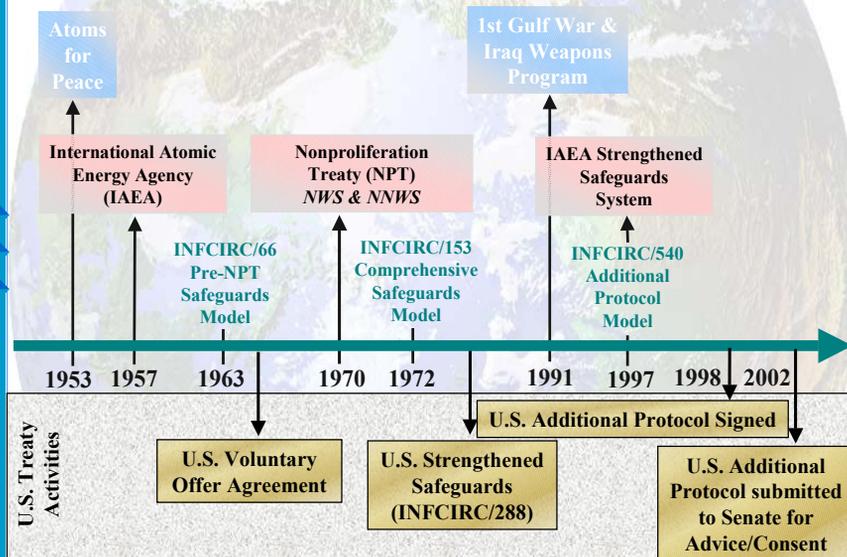
Linton F. Brooks – March 2003

“NNSA will be the role model within the U.S. government, and worldwide, for effective and productive engagement with the IAEA, and be a leader in openness and transparency in IAEA-related programs consistent with overall obligations for adequate and effective security.”

Key IAEA Documents for Treaty Implementation

- ◆ INFCIRC/66 - Pre-NPT Safeguards Model
 - Landmark international treaty whose objectives are to prevent the spread of nuclear weapons and weapons technology, foster peaceful uses of nuclear energy, further the goal of achieving general and complete disarmament
- ◆ INFCIRC/153 - Comprehensive Safeguards Model
 - Safeguards focus is on declared materials and facilities; on all source and special fissionable material (SFM) in a State allow the IAEA to provide credible assurance of the non-diversion of nuclear material from declared activities
- ◆ INFCIRC/540 - Additional Model Protocol
 - Increases the ability of the IAEA to detect undeclared activities as well as detecting diversion of declared nuclear material

International Treaties Timeline



United States Additional Protocol

- ◆ Closely follows IAEA Model Protocol for non-nuclear weapon states (INFCIRC-540)
- ◆ Requires expanded U.S. declaration of activities, principally in areas related to nuclear fuel cycle
 - Fuel cycle research and development, including ten-year plan
 - Mining, processing and stockpiling of ore, concentrate and fuel materials
 - Nuclear materials exempt from Safeguards Agreement (VOA)
 - Intermediate and high-level nuclear wastes
 - Manufacturing of specified materials and equipment
 - Import and export of specified materials and equipment
 - Applicable site and facility information
 - Agreed upon safeguards-related information
- ◆ Provides for IAEA access to declared activities
- ◆ Includes special provisions for protection of national security information in both declarations and access requests
 - National Security Exclusion
 - Managed Access Provision

Additional Protocol Implementation Status

- ◆ Treaty Status
 - June 1998 - Signed by the President
 - May 2002 - Sent to Senate for advice and consent
 - July 2003 - Ratification hearings are imminent
- ◆ External Drivers
 - Sept 2003 - NPT PrepCom for RevCon
 - May 2005 - NPT Review Congress
- ◆ Entry-Into-Force

Office of International Safeguards Additional Protocol Program

Goals

- ◆ Update the technical infrastructure
- ◆ Develop implementing directives and manuals
- ◆ Educate the DOE Complex with respect to its rights and responsibilities under the Treaty
- ◆ Submit initial declaration from DOE Complex

Additional Protocol Program Objectives

FY 2003

- ◆ Develop DOE directives and manuals for AP implementation.
- ◆ Conduct information sessions to promote AP awareness in DOE.
- ◆ Develop detailed system design for electronic AP reporting system.
- ◆ Support AP ratification hearings in US Senate.

FY 2004

- ◆ Publish DOE directives and manuals for AP implementation.
- ◆ Validate and distribute AP reporting system to DOE sites.
- ◆ Assess DOE readiness for AP complementary access provisions.
- ◆ Prepare DOE initial declaration following AP Entry-into-Force.

Additional Protocol Program Program Elements

◆ Five Key Projects

- Domestic Outreach
- Reporting System (APRS)
- Revised DOE Directives
- Inspection Field Trials
- Foreign Outreach

◆ Participants

National Laboratories

- Argonne
- Brookhaven
- Lawrence Livermore
- Los Alamos
- Oak Ridge
- Pacific Northwest
- Sandia

National Security Sites

- NNSA Savannah River Site
- Y-12 Nat'l Security Complex

Domestic Information Outreach Project

- ◆ DOE is preparing to host a series of information sessions at HQ and contractor sites.
 - Overview of International Safeguards
 - Overview of Additional Protocol
 - Implementation for DOE/NNSA facilities
- ◆ Support information is being prepared for Senate treaty ratification hearings.
 - briefing packages
 - option papers
 - Q&As, etc.

Additional Protocol Reporting System (APRS) Development Project

- ◆ Additional Protocol Reporting System is being developed to collect, manage and transmit DOE site declaration information.
 - APRS project follows a formal software development process
 - Coordination meetings held with DOC, IAEA and EURATOM regarding data systems design
 - Draft Requirements Definition and APRS Conceptual Design are completed

- ◆ Preliminary Data Call will be developed in 2004 to test APRS for DOE site declarations.

Department of Energy Revised Directives Project

- ◆ DOE Order 142.2 is nearing publication.
 - Revision of 1270.2B incorporates new DOE reorganizations and interagency procedures
 - Awaiting final concurrence from two organizations.

- ◆ DOE Order 142.2A and Manual 142.2 are being drafted.
 - Revision of 142.2 incorporates AP requirements
 - New manual accompanies 142.2A to provide details for implementation

Complementary Inspection Field Trials Project

- ◆ Initial field trial with U.S. participants is being performed to evaluate the preparedness of DOE/NNSA sites to host IAEA complementary inspection visits.
 - Evaluate DOE procedures for handling IAEA requests and for allowing or denying specific inspection activities.
 - Identify and test U.S. channels for notifications and instructions
 - Evaluate site responses to visit requests.
- ◆ Follow-on field trial will be conducted jointly with the IAEA to evaluate DOE/NNSA managed access protocols prior to Entry-Into-Force.
 - Provide first-hand knowledge of actual IAEA requests and the associated communication and notification processes.
 - Evaluate DOE procedures for inspecting IAEA-owned equipment.

Foreign Technical Assistance Outreach Project

- ◆ Provide technical information to enhance the understanding of Additional Protocol implementation issues by foreign government officials and nonproliferation specialists.
 - Technical seminar on impact of AP export/import provisions
 - Presented in conjunction with IAEA regional meeting on implementation of Additional Protocol
 - Presentation in Malaysia to ASEAN countries – April 2003
 - Performed in cooperation with Australia (ASNO)
- ◆ Provide computers, software and training to assist other countries in their efforts to achieve entry-into-force with Additional Protocol treaties.