

August 6, 1997

SECY-97-181

FOR: The Commissioners

FROM: L. Joseph Callan /s/
Executive Director for Operations

SUBJECT: IMPLEMENTATION OF NEW IAEA SAFEGUARDS MEASURES
IN THE UNITED STATES

PURPOSE:

To provide the Commission with information on: (1) commitments relating to the implementation, in the United States (U.S.), of new International Atomic Energy Agency (IAEA) safeguards measures directed to detection of clandestine nuclear activities; (2) the current plans for U.S. interagency coordinated activities to satisfy the commitments; and (3) future Commission decisions that are likely to be needed concerning associated Nuclear Regulatory Commission responsibilities and staff efforts.

DISCUSSION:

1. Background

Discovery of the clandestine Iraqi nuclear program in 1991 led to the realization that IAEA safeguards needed to be strengthened. The primary focus of IAEA safeguards had been on ensuring that all material declared by a country to exist in that country was, in fact, present and remained in peaceful nuclear activities. The primary IAEA activities were the review and evaluation of reports of transfers and inventories of material under IAEA safeguards, and the conduct of inspections to observe and verify inventories and flows of the declared material.

CONTACT: Theodore S. Sherr, NMSS/FCSS
301-415-7218/TSS However, Nuclear
Non-Proliferation Treaty (NPT) obligations go beyond IAEA safeguards on all material declared by a country. In particular, there is an obligation to declare all material that is in the country, as well as to notify the IAEA, in

advance of the construction, of facilities that would process nuclear material. Although Iraq as a party to the NPT had these obligations, it had not notified the IAEA of all its nuclear material and nuclear facilities (existing or under construction), and, of course, its intention was to conduct a clandestine program to produce nuclear weapons.

As a result of the Iraq revelations, it was recognized that the IAEA needed to broaden its program to improve its capability to detect clandestine activities. This recognition was reflected in a number of IAEA Board of Governors' decisions, beginning in December 1991. A chronology of the decisions is provided in Attachment 1. The latest decision was made at a special meeting of the IAEA Board of Governors on May 15, 1997, when the Board approved the Model Protocol contained in IAEA document GOV/2914 (Attachment 2). The Model Protocol includes provisions for increases in the information provided to the IAEA by States and other parties and for expansion of IAEA physical access to sites and other locations in a State. The White House Press Release, on May 16, 1997, included the following statement:

The strengthened safeguards system adopted by the IAEA will give international nuclear inspectors greater information and access to nuclear and related facilities worldwide. By accepting a new legally-binding protocol, states will assume new safeguards obligations that will make all their nuclear activities more transparent -- including by allowing inspections at all suspicious sites, not just at declared sites.

The next step is for the IAEA to negotiate, with individual States and other parties, an additional protocol to their current safeguards agreement, consistent with the Model Protocol.

2. U.S. Commitment

The Model Protocol was developed as a standard for additional protocols that are to be concluded with the IAEA by States and other parties to comprehensive safeguards agreements (i.e., non-nuclear-weapons States with agreements committing to place all appropriate nuclear activities under IAEA safeguards). These States and

other parties are expected to accept the Model Protocol measures in their entirety. With regard to nuclear weapons States, the foreword includes a Board request to the Director General "... to negotiate additional protocols or other legally binding agreements with nuclear-weapons States incorporating those measures provided for in the Model Protocol that each nuclear-weapon State has identified as capable of contributing to the non-proliferation and efficiency aims of the Protocol" A United States commitment to implement all possible Model Protocol measures, and not only those that are "... capable of contributing to the non-proliferation and efficiency aims of the Protocol," was considered necessary for gaining key non-nuclear-weapons States' acceptance of the inclusion of appropriate provisions in the Model Protocol. In particular, at the May 1997 special meeting of the IAEA Board of Governors, the U.S. representative read a message from President Clinton stating:

The U.S. stands ready to accept the new safeguards measures as fully as possible in our country consistent with our obligations under the NPT. The United States intends to do so by accepting the protocol in its entirety and applying all of its provisions except where they involve information or locations of direct national security significance to the United States. It is our intention to make the Protocol legally binding.

By letter dated June 6, 1997, from IAEA Director General Hans Blix to Secretary of State Albright, the IAEA requested "... the U.S. to reconfirm those specific provisions of the protocol which your government is prepared to accept." A response is in preparation which will reiterate the commitments of the President's statement, and it probably will provide a target date for initiating negotiations with the IAEA Secretariat in early 1998.

3. Plan of Actions for Interagency Coordinated Activities

The staff at the Arms Control and Disarmament Agency (ACDA), in coordination with staff from the Department of State, the Department of Energy, the Department of

Defense, and NRC, is developing a plan of actions for interagency coordinated activities to bring into force, in the U.S., a new additional protocol based on the Model Protocol. The current version of this plan is provided in Attachment 3. The overall target is to begin negotiations with the IAEA in early 1998. All the involved agency participants recognize that this target is ambitious, and many of the scheduled milestones may be overly optimistic. The plan contemplates that, in general, approvals will be conducted through the interagency coordination process, i.e., through the Subcommittee on International Safeguards and Monitoring (SISM) and the IAEA Steering Committee. NRC representatives on these groups are, respectively, Theodore S. Sherr, Office of Nuclear Material Safety and Safeguards, and Carlton Stoiber, International Programs. The current draft plan addresses the following activities:

A. Preparations for Negotiation of U.S. Additional Protocol: The preparations will require the resolution of a number of issues, including, for example, when the U.S. should target the entry-into-force; the best means for assuring that the national security exclusion applies to the U.S. Protocol; identification of any needed changes to the text of the Model Protocol; and the preparations, for approval by the Secretary of State, of a mandate (Circular 175) to negotiate an additional protocol to the US/IAEA Safeguards Agreement.

B. Implementation Responsibilities: The activities to support implementation responsibilities include: legal interpretation of Model Protocol language; identification, for each article of the Model Protocol, of the U.S. agency or agencies to be responsible for its implementation; and identification of requirements for new or modified legislation or regulations.

C. Coordination with U.S. Industry: These activities include the identification of U.S. industry points of contact and briefings to the industry at various stages of the process.

D. Negotiation, with IAEA Secretariat, of U.S. Additional Protocol: The current target is for the negotiations to start in early 1998. The current assumption is that

members of the U.S. negotiating team will be the various agency representatives on SISM.

E. Submission to the U.S. Congress: The first step will be a decision on whether the Additional Protocol is to be an Executive Agreement, submitted to both Houses of Congress, or submitted to the Senate for its advice and consent. Other steps will be the determination of a submission date; coordination with Congress; and complete preparation of the legislative package.

F. Planning for Implementation of National Security Exception: There is a need to ensure that the national security exception of the President's commitment is appropriately reflected in the U.S./IAEA negotiated Additional Protocol text. Although, the desire is to implement the national security exception in the narrowest possible way, it must be implemented in a manner broad enough to fulfill its intended role. To support these needs, an interagency agreement will be developed on the principles and process for application of the national security exception.

4. NRC Implementation Activities to Support the U.S. Government Commitments

Staff will be involved in the overall coordination process to bring into force the Additional Protocol in the U.S. Further, NRC will have operational responsibilities, once it is brought into force in the U.S. to implement certain provisions, at least to the extent that they involve NRC licensed activities. As noted above, one of the decisions that will have to be made, under the "Plan of Activities," is the determination of which agency or agencies will be responsible for the implementation of the Additional Protocol provisions. The first step in this process was a presentation and discussion of ACDA proposals at the SISM meeting on July 30, 1997. This will be followed by IAEA Steering Committee approval in August 1997, and confirmation by the responsible agencies in September 1997. Assuming this schedule holds, the Commission can anticipate proposals for

specific NRC

responsibilities in late August or early September 1997, following IAEA Steering Committee approval. (If a meeting of the IAEA Steering Committee proves to be necessary, the scheduling of such a meeting may be a problem; at this time, the Steering Committee has no designated Chairman because of the vacancy in the position of U.S. Ambassador to the IAEA.)

The most significant operational responsibilities will likely be related to Article 2 of the Model Protocol, "Provision of Information." Staff has conducted a preliminary review of the current availability of the information called for in Article 2, and provided the results of this review to the other SISM representatives. Some of the information appears to be currently available to DOE, NRC, and other agencies. Some of the needs could be satisfied by modifications to Part 75 ("Safeguards on Nuclear Material - Implementation of US/IAEA Agreement") and would not require additional legislative authority. The collection of other required information would appear to be possible only with expanded legislative authority and associated regulatory changes.

It is too early to assess the resource and information technology impacts of any new NRC responsibilities. Some additional staff effort may be needed for regulatory development activities, as well as for the routine collection, review, and transmittal of information. In addition, resources may be needed for travel, for IAEA negotiations and accompaniment of IAEA inspectors to licensee facilities, and for information system support. Staff will develop preliminary estimates of the resource impacts at the time proposals for NRC responsibilities are provided for Commission consideration.

COORDINATION:

The Office of the General Counsel has no legal objection. The Office of International Programs concurs in this paper. The Office of the Chief Financial Officer has reviewed this Commission Paper and has no objections. The Office of the Chief Information Officer has reviewed the Commission Paper for information technology and information management implications and concurs in it.

L. Joseph Callan

Executive Director

for Operations

Attachments:

1. "Chronology of Decisions for Strengthening IAEA Safeguards."
2. "Report of the Committee on Strengthening the Effectiveness and Improving the Efficiency of the Safeguards System (Committee 24), to the Board of Governors" (GOV/2914, dated 10 April 1997).
3. "Plan of Actions for Additional Protocol to the US Voluntary Offer Safeguards Agreement (INFCIRC/288)," dated July 15, 1997.
4. "Background Information on the US/IAEA Safeguards Agreement"

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* See Previous Concurrence

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CHRONOLOGY OF DECISIONS FOR STRENGTHENING IAEA

SAFEGUARDS

Discovery of the clandestine Iraqi nuclear program in 1991 led to the realization that International Atomic Energy Agency (IAEA) safeguards needed to be strengthened. Up to this point, the primary focus of IAEA safeguards had been on assuring that all material declared by a country to exist in that country, was, in fact, present and remained in peaceful nuclear activities. The primary IAEA activities were the review and evaluation of reports of transfers and inventories of material under IAEA safeguards, and the conduct of inspections to verify inventories and flows of the declared material.

However, Nuclear Non-Proliferation Treaty (NPT) obligations go beyond IAEA safeguards on all material declared by a country. In particular, there is an obligation to declare all material that is in the country, as well as to notify the IAEA, in advance, of the construction of facilities that would process nuclear material. Iraq was a party to the NPT, but notwithstanding, it had not notified the IAEA of all its nuclear material and nuclear facilities (existing or under construction), and of course, its intention was to conduct a clandestine nuclear program to produce nuclear weapons.

As a result of the Iraq revelations, it was recognized that the IAEA needed to broaden its program to improve its capability to detect clandestine activities. A chronology of IAEA decisions to this end are as follows:

December 1991 comprehensive inspections when the the State, information obtained from Agency to fulfill its	IAEA Board confirmation of IAEA authority, under safeguards agreements, to conduct special IAEA considers that information made available by including explanations from the State and routine inspections, is not adequate for the responsibilities under the Agreement.
February 1992 for construction of early as possible.	Establishment of policy that information on plans nuclear facilities be provided to the IAEA as

February 1993
a means for
information on
nuclear materials, and
material and equipment
safeguards

Establishment of a voluntary reporting scheme as
enhancing transparency through the provision of
imports, exports, production, and locations of
imports and exports of specified non-nuclear
over and above the reporting requirements of
agreements.

April 1993
Implementation
cost-effectiveness of
General's request.
initiated an in-depth review
and effectiveness of
"Programme

The Standing Advisory Group on Safeguards
provided recommendations for improving the
IAEA safeguards in response to the IAEA Director
Shortly thereafter, the IAEA Secretariat
of matters relating to improving the efficiency
IAEA Safeguards. This review was referred to as
93+2."

ATTACHMENT 1 February 1995
93+2 review, an IAEA Secretariat
Governors for the
effectiveness and
measures included: (1)
IAEA; (2) States
locations within a
sampling, which can
circumstances.

On the basis of the Programme
proposal was provided to the IAEA Board of
addition of new measures to enhance the
efficiency of IAEA safeguards. The technical
States providing additional information to the
allowing IAEA increased physical access to
country; and (3) IAEA using environmental
indicate undeclared material processing in some

March 1995
general principles related
assurance of the

IAEA Board of Governors confirmed a set of
to the need for safeguards to provide credible
absence of undeclared nuclear activities.

May 1995
specific proposed

The IAEA Secretariat provided the Board with

-- those activities sufficient authority for activities for which it implementation.

measures divided into two parts: Part 1 measures for which the Secretariat believed it had implementation; and Part 2 measures -- those believes complementary authority was required for

note of the date the measures to comprehensive Secretariat to facilitate

The Secretariat recommended that the Board take Director General's plan to implement at an early described in Part 1 and that it urge States party safeguards agreements to cooperate with the such implementation.

June 1995 recommendation for the drafts" relating to discussed at IAEA March 1996.

IAEA Board of Governors approved the implementation of Part 1 measures. "Discussion Secretariat proposals for Part 2 measures were Board of Governors' meetings in December 1995 and

May 1996 for the Part 2

IAEA Secretariat submitted its formal proposals measures.

June 1996 Board of Governors the Board "Model Protocol." The Part 2 measures in standard for with States and other The understanding with States and agreements, they will and accordingly, the information called for and

In response to the Secretariat proposals, IAEA decided to establish an open-ended committee of ("Committee 24") with the task of drafting a purpose of the Model Protocol was to reflect the appropriate agreement language, and to serve as a additional protocols that are to be concluded parties to safeguards agreements with the IAEA. was that, when additional protocols are concluded other parties with comprehensive safeguards contain all the measures in the Model Protocol, State would be obligated to provide all the provide for increased IAEA physical access to

locations within the

State.

July 1996
February 1997
details of the

Four sessions of Committee 24 were held where the
Model Protocol were negotiated.

May 1997
Governors, the Board
document

At a special meeting of the IAEA Board of
approved the Model Protocol contained in IAEA
GOV/2914.

BACKGROUND INFORMATION ON THE U.S./IAEA SAFEGUARDS AGREEMENT

1. HISTORY AND NATURE OF THE US/IAEA SAFEGUARDS AGREEMENT

The International Atomic Energy Agency (IAEA) was created as an agency of the United Nations on July 29, 1957. It is recognized as the agency responsible for international activities concerned with the peaceful uses of atomic energy. The IAEA performs its function according to the Statute, which authorizes the IAEA to perform the following safeguards functions:

ú Establish and administer safeguards designed to ensure that special fissionable and other materials, services, equipment, facilities, and information made available by the IAEA, or at its request, or under its supervision or control, are not used in such a way as to further any military purpose;

ú Apply safeguards, at the request of the parties, to any bilateral or multilateral arrangement, or at the request of a State, to any of that State's activities in the field of atomic energy, designated by the Agency after consultation with the State;
and

ú Send into the territory of the recipient State or States, inspectors who shall have access at all times to all places and data and to any person who by reason of his

occupation deals with materials, equipment, or facilities required to be safeguarded, as necessary to determine compliance with the State's undertaking.

Initially, safeguards were first agreed to on a bilateral basis. Early in the 1960s, the United States (U.S.) began transferring the administration of these bilateral safeguards to the IAEA. In July 1968, the Nuclear Non-Proliferation Treaty (NPT) was signed, and it entered into force in March 1970. Safeguards carried out by the IAEA under NPT agreements apply to all nuclear material in all peaceful nuclear activities within each non-nuclear-weapon (NNW) State. Furthermore, each State party to the NPT agrees not to provide nuclear material or equipment to any NNW State unless the material is subject to safeguards.

As a nuclear-weapons State party to the NPT, the U.S. was not obligated to accept IAEA safeguards on its peaceful nuclear activities. However, to demonstrate that acceptance of IAEA safeguards does not place a State at a commercial disadvantage, the U.S. agreed with the IAEA to permit application of IAEA safeguards to its nuclear facilities, except those with a direct national security significance.

The Senate ratified the U.S./IAEA Agreement as a treaty on July 31, 1980. This agreement (IAEA document INFCIRC/288, dated December 1981) carries the force of law and, being a vital part of U.S. non-proliferation policy, is implemented at selected facilities within the U.S., with strong emphasis on the legal and international consequences of non-compliance.

ATTACHMENT 4 The detailed provisions in the Agreement governing how safeguards will be implemented are similar to those in the safeguards agreements of NNW States described in the IAEA document INFCIRC/153 and provide that the IAEA and the U.S. shall cooperate to facilitate the implementation of safeguards provisions described therein. Most of its articles are identical to those in the NPT safeguards agreements of NNW States. To

stress the intent that IAEA safeguards in U.S. facilities be the same as in NNW States, Article 3(c) of the Agreement specifies that in applying safeguards in U.S. facilities, the IAEA will use the same procedures used in applying safeguards on similar material in similar facilities in NPT NNW States.

The U.S./IAEA Safeguards Agreement defines, in general terms, the purpose of IAEA safeguards in the U.S.; the responsibilities of the U.S. and the IAEA; and the structure of the safeguards to be applied. It consists of two documents (i.e, the "Agreement" and a "Protocol"). The U.S. is required to provide the IAEA with a list of all U.S. facilities that are not associated with direct national security activities. This list is referred to as "the eligible facilities list." The IAEA has the right to select any or all the facilities on the list. Facilities selected under the "Agreement" are required to satisfy information reporting requirements, and meet other requirements associated with IAEA inspections at these facilities. Facilities selected under the "Protocol" are only required to satisfy the reporting requirements.

Since the U.S./IAEA Safeguards Agreement was brought into force, a number of NRC licensed activities have been selected for application of IAEA safeguards. A summary of these selections is as follows:

Low-Enriched Uranium (LEU) Fuel Fabrication Plants IAEA Selection	Time Period of
ù Siemens 03/81-11/83*	
ù Combustion Engineering 06/83-08/85*	
ù Westinghouse 01/86-05/88*	
ù General Electric 12/87-12/90*	
ù Framatome Cogema Fuels 02/89-12/92*	

* All LEU fuel fabrication facilities, including CE Hematite, are currently selected per the Protocol of the US/IAEA Agreement. As such, they are required to do the same nuclear material reporting activity as when they were being inspected by the IAEA. High-Enriched Uranium Fuel Fabrication Plants

ù BWX Technologies
08/96-present
(Downblending of Project Sapphire material)

Nuclear Power Plants - NRC-Licensed

ù Trojan Nuclear Power Plant
02/81-04/84

ù Rancho Seco Nuclear Power Plant
02/81-04/84

ù Arkansas I Unit 2 Nuclear Power Plant
07/83-12/85

ù San Onofre Unit 2 Nuclear Power Plant
07/83-12/85

ù Turkey Point Unit 4 Nuclear Power Plant
11/85-01/88

ù Salem Nuclear Power Plant
11/85-01/88

2. INTERAGENCY COORDINATION AND NRC RESPONSIBILITIES

The U.S. Government has established three interagency groups to deal with implementation of the U.S./IAEA Agreement: (1) IAEA Steering Committee (ISC); (2) Subgroup on IAEA Safeguards in the U.S.; and (3) Negotiating Team.

The ISC is the interagency mechanism for coordinating policy and resolving disputes relating to the implementation of the Agreement and is concerned generally with IAEA policy matters. The ISC is composed of representatives from the Department of State (DOS); the Department of Energy (DOE); the Nuclear Regulatory Commission; the Arms Control and Disarmament Agency (ACDA); the Department of Defense; the

Office of Management and Budget; and the staff of the National Security Council and the intelligence community. The ISC is chaired by the U.S. representative to the IAEA or such other official as may be designated by the Secretary of State.

The Subgroup on IAEA Safeguards in the U.S. (SISUS) is composed of representatives from DOS, ACDA, NRC, and DOE. The NRC representative is the Chair of SISUS. SISUS monitors implementation of the Agreement; carries out responsibilities specifically prescribed in the Agreement; and undertakes such other working-level activities as the ISC may designate.

The Negotiating Team is composed of the members of SISUS or their designates. The Negotiating Team negotiates the Subsidiary Arrangements with the IAEA and undertakes such other responsibilities as the ISC may designate. For negotiations with regard to NRC-licensed or NRC-certified facilities, the NRC member is the head of the Team. For negotiations with regard to DOE facilities not licensed and subject to DOE Orders, the DOE member will be the head of the Team.

NRC is the primary U.S. Government agency involved in the process of implementing the U.S./IAEA Agreement at U.S. nuclear facilities subject to NRC regulatory authority. It has established and maintained processes for the implementation of IAEA safeguards. Regulations to implement the requirements of the U.S./IAEA Agreement at U.S. NRC licensed or NRC-certified facilities or activities subject to the Agreement have been promulgated. In addition, licensing procedures, a means of controlling compliance, and an information processing capability have been established.

IAEA safeguards requirements, applicable to nuclear facilities subject to NRC regulatory authority, are contained in the NRC regulation, 10 CFR Part 75, "Safeguards on Nuclear Material - Implementation of U.S./IAEA Agreement." These requirements are aimed at establishing facility nuclear material control and accounting requirements that satisfy the provisions of the U.S./IAEA Safeguards Agreement. Part 75 applies to:

- (1) all parties licensed by NRC or by an Agreement State to possess source or special

nuclear material

(SNM) at facilities on the U.S. eligible list; (2) certain holders of construction permits; and

(3) parties who intend to receive source or SNM.