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INTERNATIONAL SAFEGUARDS AND DOMESTIC SAFEGUARDS
UNDER THE PRESIDENT'S OFFER

Abstract

With the time approaching when the IAEA may be applying safeguards in the United States under the President's Offer, it is important to be aware of the background and status of the Offer. Although many details of how the Offer will be implemented have not been settled, several aspects appear to be firming up. These have been discussed during informal meetings with industry which have provided useful exchanges of views as to concerns and expectations about the interface between the two systems as they may be applied in the United States. For example, it is recognized that while duplication of effort should be minimized, some degree of independence of the two systems must be preserved. This and other aspects of the interface will be explored.

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Nuclear Non-Proliferation Treaty, Background and Status

The international Treaty on the Non-Proliferation of Nuclear Weapons (the NPT) is, as its name implies, concerned with preventing the spread of nuclear weapons to additional countries. It is not aimed at changing or, for that matter, maintaining the status of countries already having nuclear weapons. The NPT calls for safeguards to be applied by the International Atomic Energy Agency (IAEA) in the countries party to the Treaty which did not possess nuclear weapons prior to January 1, 1967. These are the so-called "non-nuclear weapon states." The safeguards section was perhaps the major issue in the lengthy negotiation of the Treaty. Language for this section was not agreed upon until the very last stages of negotiation. It is hoped that the safeguards applied under the Treaty will deter the diversion of nuclear materials from peaceful nuclear activities to nuclear weapons or other nuclear explosive devices. The Treaty and the safeguards under the Treaty do not cover a country's nuclear military programs (such as nuclear propulsion for warships) if those programs do not involve nuclear weapons or other nuclear explosive devices. Also, the Treaty does not call for safeguards in the countries of those parties to the Treaty which had nuclear weapons prior to January 1, 1967; that is, the United States, the United Kingdom, and Russia. Thus far the other two countries with nuclear weapons, France and Communist China, have not indicated interest in becoming parties to the Non-Proliferation Treaty.

The Treaty was opened for signature on July 1, 1968, and entered into force on March 5, 1970, after having been ratified by the United

States, United Kingdom, and Russia, plus forty non-nuclear weapon country signatories. At the present time sixty-six states, including the Vatican, have ratified the Treaty, thus becoming parties. An additional thirty-three have signed, but not yet ratified the Treaty, indicating some intent to become parties at a future time. Countries which have signed, but not ratified the Treaty, include Australia, Belgium, the Federal Republic of Germany, Italy, Japan, Switzerland, and The Netherlands. Countries which have neither signed nor ratified the Treaty include: Argentina, Brazil, India, Israel, Pakistan, Portugal, South Africa, and Spain.

Background of the President's Offer

In 1967, during the negotiation of the Treaty, several of the more industrialized non-nuclear weapon states indicated dissatisfaction with the fact that the draft Treaty called for controls to be imposed only on the non-weapon states, and not on states which already had nuclear weapons. They were concerned with the possibility that the Treaty's safeguards might place their commercial nuclear energy activities at a competitive disadvantage with similar industries in the nuclear weapons states. They were concerned about the possible risk of commercial espionage by IAEA safeguards inspectors from other and possibly competing countries going through their nuclear facilities. The possible burden of merely accommodating the externally imposed safeguards was seen as another potential form of discrimination between their plants and plants in the nuclear weapon states not subject to IAEA safeguards.

In order to overcome these concerns about the fairness of the NPT, President Johnson, in December of 1967, during a speech commemorating the 25th anniversary of the first demonstration of controlled atomic energy, made the following announcement:

"We do not believe that the safeguards we propose in [the Non-Proliferation Treaty] will interfere with the peaceful activities of any country.

And I want to make it clear to the world that we in the United States are not asking any country to accept safeguards that we are unwilling to accept ourselves.

So I am, today, announcing that when such safeguards are applied under the Treaty, the United States will permit the International Atomic Energy Agency to apply its safeguards to all nuclear activities in the United States -- excluding only those with direct national security significance.

Under this offer the Agency will be able to inspect a broad range of U.S. nuclear activities, both governmental and private, including the fuel in nuclear power reactors owned by utilities for generating electricity, and the fabrication and chemical reprocessing of such fuel."

This Offer obviously does nothing to change the basic fact that the U.S. is a nuclear weapons state. Neither the Offer nor the Non-Proliferation Treaty is intended to make such a change. The Offer makes no direct contribution to the Treaty's objective of "non-proliferation." More specifically, there was no intention to imply that the objective of non-proliferation was being served under the Offer because the IAEA safeguards might deter diversion of nuclear materials from United States programs to a weapons program in a non-nuclear weapons country. Such a possible diversion is an obvious and legitimate concern of the U.S. domestic safeguards program and, in

view of the IAEA's limited authority, the AEC is in a stronger position to effectively safeguard against such a diversion than the IAEA could possibly be.

Our objective in making this Offer to accept IAEA safeguards in the United States was simply to show other nations that we did not seek to gain commercial advantage by the Treaty and that we did not believe the safeguards would represent a serious burden on peaceful nuclear activities. It was also recognized that safeguards experience which the IAEA could gain at facilities in the U.S. could contribute to the efficiency and effectiveness of Agency safeguards in general.

On February 5, 1969, in requesting that the U.S. Senate give its consent to ratification of the NPT, President Nixon said:

"In submitting this request I wish to endorse the commitment made by the previous Administration that the United States will permit the International Atomic Energy Agency to apply its safeguards to all nuclear activities in the United States, exclusive of those activities with direct national security significance."

The Offer was made after considerable discussion within government and also after consultations with important members of the U.S. nuclear industry. Regarding the effect of the Offer, based on clear indications during the NPT negotiations, we are convinced that several key industrialized states would not have signed the NPT had the U.S. not made its Offer. It is important that the United States continue to carry through on the President's Offer in a reasonable manner so that these and other key states will continue to be encouraged to follow through on their intent to become parties to the Treaty.

Status of The President's Offer

In the spring of 1970, the IAEA Board of Governors adopted a resolution recognizing the responsibilities placed on the Agency by the NPT and the need to develop a set of principles for the safeguards which would be appropriate under the NPT. The resolution called for establishing a Safeguards Committee, open to all IAEA Member States, which would develop the scope and content of the safeguards agreements required under the Treaty. Approximately fifty countries participated in the series of meetings which were held over a period from June of 1970 until March of 1971. The Committee produced a 37-page document entitled "The Structure and Content of Agreements Between States and the Agency Required in Connection With The Treaty on the Non-Proliferation of Nuclear Weapons." This document has served as the basis, almost verbatim, of the first two safeguards agreements which the Agency has written with states under the Non-Proliferation Treaty. These agreements, approved by the Agency's Board of Governors earlier this month, are with Austria and with Finland. We expect that this document will also serve as a point of departure for the IAEA when the U.S. negotiates the safeguards agreement with the IAEA covering the President's Offer.

One of the two or three most important issues to arise during the entire meetings of the Safeguards Committee came up very early in the meetings. It was the question of how the Agency would finance the costs of safeguards under the NPT. After some preliminary studies about possible safeguards costs, it became very evident that the U.S. Offer

would have a major impact on this issue; especially in view of the large expense that would be involved if the Agency were to safeguard all eligible U.S. facilities. At one point it was estimated that the Agency safeguards costs would be roughly doubled if the U.S. Offer were fully implemented. Many countries questioned the reasonableness of the Agency spending significant amounts of money on safeguards in a nuclear weapons country; money which could otherwise be spent in applying better safeguards in countries where weapons proliferation was a real possibility. Others simply felt that the money could be put to better use in IAEA technical assistance programs in the developing countries.

The broader finance issue involved such questions as whether the safeguards costs should be financed by assessing the nuclear weapons states for the major share; assessing countries based on the amount of safeguards effort applied to them; or other formulas. After much debate and negotiation, a resolution of the problem was finally reached in March of this year. It provided that the expense to the IAEA of applying safeguards under the NPT in non-nuclear weapons countries and also in the U.S. under the President's Offer, will be paid for from the regular assessed budget of the Agency, with a slight modification in the scale of assessment to give some relief to the less developed member states.

In seeking a way to minimize the expenses arising from implementation of the U.S. Offer, and yet meet the objectives of the Offer, it was recognized by several of the countries most enthusiastic about

the Offer that it would not be necessary for the IAEA to apply its full safeguards to all of the eligible U.S. activities. For example, it would give these countries no additional feeling of a balance in competition if the IAEA were to safeguard all of the boiling water type of power reactors in the U.S. as compared with safeguarding just one or two of them. The product of such plants is not competing in a foreign market, and the information an inspector could gain from looking at one plant is about the same as though he looked at them all. So, it was reasoned that in such a case their interests and the objective of the Offer could be met by applying safeguards to only one or two of that type of reactor. Therefore, these countries proposed an approach which would place all eligible facilities, in principle, under IAEA safeguards, but would, in fact, only call for the full intensity of safeguards inspection on those activities which had greatest sensitivity from the point of view of incorporating new technology or involvement in international competition. All other eligible activities would be subject to the routine reports and records requirements but would be inspected rather infrequently, if at all. It was clearly understood that this approach would in no way be a precedent for safeguards implementation in non-nuclear weapons countries party to the Treaty. This approach did, however, appear to meet the objectives of the countries whose concerns had prompted the Offer.

Meetings With U.S. Industry

With the IAEA Safeguards Committee document on the NPT safeguards system available and with an idea of the extent to which the Agency might

choose to implement safeguards in the U.S. - the AEC felt it would be timely and desirable to hold meetings with those members of the U.S. nuclear industry which would most likely be initially affected by the Offer. In order to enable better communication we planned three small meetings with participants having three areas of common interests. On May 10 this year we met with members of the power reactor segment of U.S. nuclear industry, that is, the Utilities; on May 13 we met with operators of test, experimental and research reactors and critical and storage facilities. On May 20 we met with representatives of nuclear material processing and fabricating companies. We also plan sometime in the future to hold similar meetings with government and government contractor groups who operate nuclear facilities eligible for IAEA safeguards under the Offer. The meetings were very useful in several ways: first, in bringing the participants up-to-date on the status of the IAEA thinking on the implementation of the Offer; second, in bringing about a more thorough understanding of the purposes of the President's Offer; third, in informing industry of our current understanding of the IAEA safeguards system and its probable interreaction with U.S. domestic safeguards and, finally, in establishing more direct and formal communication with companies so that their interest and concerns may be understood.

One point which was emphasized at the meetings and which must be remembered in carrying out the Offer, is the need each system has for some degree of independence from the other. The Agency, as a group which looks out for the interests of all its member states, must be able to give credible assurance to other members that Member State X is not

diverting nuclear material. Such credibility will be largely based on the degree of independent verification the Agency can accomplish; the less independence - the less credibility. For reasons of national security and obligations under the NPT, a national government will have a strong interest in first-hand, independent, verification that nuclear material within its jurisdiction is not being diverted. The challenge then faces both organizations to reduce the duplication of burden and effort which might be caused by the existence of two systems, and yet retain the degree of independence necessary for effectively meeting their individual objectives.

Several areas of interest were discussed at some length during the meetings;

1. Possible Burden of IAEA Safeguards

As things look now, we expect that the records and reports requirements of the U.S. and the IAEA systems will not be significantly different. For example, we hope that one set of records at a facility and one single report from a reporting unit within a facility will satisfy the needs of both the AEC in its domestic safeguards and the IAEA for the safeguards which will be called for under the yet-to-be negotiated U.S./IAEA safeguards agreement. It is foreseen that the major difference from the current domestic system will probably be an increase in the number of reporting units at a plant. The possibility of a need for such an increase would be discussed in detail with the plant operator while working out the detailed

arrangements for safeguarding that plant prior to routine safeguards implementation. The current stage of development does not shed much light on the possible interrelation between U.S. and IAEA inspections. It is recognized, however, that this is a critical area, both in terms of the need each system has for independence and also with regard to the possibility of duplicating safeguards burden at a facility. Therefore, this area will have to be considered carefully as the inspection schemes evolve.

2. How Plants Will Be Chosen

It is anticipated that the AEC will review all the nuclear activities in the U.S. to determine which are eligible under the Offer. The eligible facilities will be listed for the Agency. Then, as noted above, it is expected that some further selection will be made consistent with the objective of the Offer to minimize possible competitive disadvantages of the NPT. No detailed plans for such selection have been proposed yet. However, the importance of reaching a fair and acceptable system of selection is recognized and will be taken into account as negotiations on the agreement proceed.

3. Role of AEC As Intermediary

The safeguards agreement covering the Offer will be entered into between the U.S. Government and the IAEA and not between a given facility and the IAEA. The U.S. Government, therefore, will be making the undertaking to comply with the terms of the

agreement, and not the facilities which will ultimately be safeguarded. In theory, communications between the IAEA and the facility will have to be through the U.S. Government. To fulfill its role the government (most likely the AEC) will probably have a representative at all IAEA inspections and IAEA discussions with U.S. facilities under the Offer. These representatives will be interested in assuring the compliance of the affected facilities within the terms of the Offer. They will also be concerned for the legitimate interest of the facilities as regards IAEA safeguards requirements.

4. Extent of Agency Authority In The Plant

Some meeting participants wondered about the extent to which Agency inspectors might be able to require changes at a plant. Under the terms of the system worked out by the Safeguards Committee in Vienna, the Agency safeguards inspectors have no authority to operate plant equipment, nor can they direct plant personnel to perform operations. If they feel it is important, from a safeguards point of view, that something be done, they may only request that it be done. If the plant personnel feel that it would be wrong to do so, for reasons such as concern for health and safety, or because of potential damage to plant or equipment, or because of expected prohibitive cost, they may refuse. In such a case, the Agency inspectors would have the right to discuss the request in further detail

with the U.S. Government representative or with U.S. Government officials in Washington. If a satisfactory resolution was not then forthcoming, the Agency inspectors could bring the matter up with the authorities in the IAEA Secretariat in Vienna. If no resolution were forthcoming at this level, the Secretariat could pass the problem on to the Board of Governors and ultimately, if the Board of Governors deemed that the problem remained serious enough, they could report it to the United Nations Security Council and General Assembly. It is important to note here the political nature of the sanction authority available to the Agency - it has no authority to arrest suspects, to prosecute violators, to impose fines, to withdraw or modify operating licenses, or to shut a plant down.

5. Differences Between the Safeguards Systems

It was recognized during discussions with industry that an element common to both the IAEA and the U.S. domestic systems of safeguards is the desire to deter diversion of nuclear material. Beyond this, however, there are differences which may show up in different ways in which the IAEA and the AEC may implement safeguards in the U.S. For example, in addition to accountability techniques, the U.S. safeguards authority provides for emphasis on positive techniques of prevention, such as: employing security devices, guards, vaults, alarms, etc., and also encourages development of rapid diversion detection schemes so that the authority to pursue and physically recover

diverted material may be most effectively employed. In contrast, since the Agency has no authority to physically prevent, pursue, or punish divertors, it must develop and rely on its ability to detect diversion through accountability techniques as its principle measure of deterrence, with a limited surveillance capability as a supplementary measure. From the point of view of pursuit and recovery capability, timeliness of detection is a more critical factor in a domestic system than in the Agency system since the Agency has no authority or responsibility to pursue or recovery diverted material.

Another important difference in the systems which was discussed at the meetings is the nature or level of the threat which each system must address itself to. The domestic safeguards system is primarily concerned with the possibility of a diversion organized on a sub-national and even sub-corporate level, such as a disgruntled employee, organized criminal groups, or a small group of people interested in the possibility of diversion for profit or political reasons. A considerable degree of unity in the objectives of the government and the plant management to prevent such a diversion is generally assumed in the design and application of U.S. domestic safeguards. On the other hand, the Agency must be concerned about the possibility of a diversion organized on a national level employing all the resources of a nation in accomplishing the diversion.

6. Timing

Participants at the meetings were told that we expect negotiations concerning the U.S./IAEA safeguards agreement on the President's Offer, will begin within the next few months. However, entry into force of the U.S./IAEA safeguards agreement would be related to whether or not IAEA safeguards were being applied in industrialized non-nuclear weapon states under the Treaty. We also noted that the IAEA budget makes no provision in calendar year 1972 for safeguards in the U.S. under the Offer. Therefore, we do not expect implementation to begin before 1973.

Conclusion

The President's Offer has and continues to play an important role in a major area of interest to U.S. foreign policy; the success of the Non-Proliferation Treaty. Eventually, many individuals and firms in the U.S. will have a chance to play a direct part in this plan.

As discussions and negotiations proceed, the AEC intends to maintain close contact with those in the U.S. who will be affected by the Offer. While protecting the necessary effectiveness of the U.S. and IAEA safeguards systems, the Government will try to minimize the safeguards burden on activities under the Offer.