

UNITED STATES GENERAL ACCOUNTING OFFICE  
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STATEMENT OF  
FRANK C. CONAHAN  
DIRECTOR, INTERNATIONAL DIVISION  
U.S. GENERAL ACCOUNTING OFFICE  
BEFORE THE  
SUBCOMMITTEE ON SECURITY AND SCIENTIFIC AFFAIRS  
AND THE  
SUBCOMMITTEE ON INTERNATIONAL ECONOMIC POLICY AND TRADE  
COMMITTEE ON FOREIGN AFFAIRS  
U.S. HOUSE OF REPRESENTATIVES  
ON  
THE IMPLEMENTATION AND IMPACT OF THE  
NUCLEAR NON-PROLIFERATION ACT OF 1978



Mr. Chairman and Members of the Committee:

We are pleased to discuss with you our report on the implementation and impact of the Nuclear Non-Proliferation Act of 1978 which was issued today.

In the three years since the Act came into effect, there have been positive and negative developments concerning proliferation. On the positive side,

--no additional nation has acknowledged exploding a nuclear device,

--twelve nations have become parties to the Non-Proliferation Treaty (NPT) raising the total number to 115, and another nation has

moved toward placing all of its nuclear facilities under international safeguards, and

--the foreign rush to acquire reprocessing and enrichment technologies has not been as extensive as was previously predicted.

On the other hand,

--some nations appear to be seeking a nuclear explosive capability,

--some important non-nuclear weapon nations still refuse to accept international safeguards on all nuclear facilities or to sign the NPT, and

--export sales of sensitive nuclear materials and equipment have been made by other nations despite U.S. objections.

It is difficult to determine to what degree the United States influenced or could have influenced these developments, and of course, some of these developments did not fall within the Act's scope.

Nevertheless, in our opinion, the Act's short-term impact in controlling the spread of nuclear explosive capabilities has been limited because it has not been widely accepted abroad or fully implemented by the executive branch. The Act, coupled with executive branch policies, has generated considerable negative reaction abroad. Many nations have criticized the Act and the overall U.S. non-proliferation strategy. Their reaction has been influenced by concerns involving energy, security, political, economic, and technical considerations. Although some of these concerns were anticipated, the tenacity or extent of the negative foreign reaction was not expected.

International cooperation is the key to limiting the spread of nuclear weapons. No nation can unilaterally resolve the proliferation dilemma. Therefore, we believe that certain amendments to the Act and improvements in executive branch implementation are needed to

- obtain wider international acceptance of U.S. non-proliferation objectives,
- make the Act better conform with political, technical, and economic realities, and
- preserve the framework for curbing proliferation risks associated with international nuclear cooperation.

I will briefly summarize our findings regarding the implementation and impact of each of the Act's principal titles.

#### NUCLEAR FUEL CYCLE ASSURANCES

Title I states that the United States should take the necessary steps to assure that an adequate supply of nuclear fuel is available to nations with effective non-proliferation policies. The purpose of such assurances is to persuade other nations not to acquire their own uranium enrichment or reprocessing capabilities prematurely, and to make more palatable the non-proliferation measures called for elsewhere in the Act. We found that Title I has offered little incentive to other nations to agree to these additional non-proliferation measures.

To assure other countries that the United States will have sufficient supplies of fuel, the Department of Energy (DOE) is constructing additional enrichment capacity, including a \$6.4 billion centrifuge facility. However, it is not apparent that such additional capacity is needed to meet foreign demand

or further U.S. non-proliferation objectives because a worldwide surplus of enrichment capacity now exists and is expected to continue.

Although DOE believes that the additional enrichment capacity can be justified, we believe, for the following reasons, that the need for the centrifuge facility has diminished since the Congress originally authorized it in 1975.

- The demand projections made in 1975 have not materialized.
- DOE is operating existing enrichment plants at much less than full capacity.
- There is a worldwide excess of enrichment capacity.
- Foreigners seem more concerned about U.S. policies than with U.S. enrichment capability.
- The near-term prospects for a significant increase in the number of customers appear limited.
- Executive branch studies indicate a new improved enrichment technology (Advanced Isotope Separation) may be available in the 1990s.

When reviewing DOE's budget request for completing this facility, we believe the Congress should determine whether DOE has adequately considered alternative actions which would permit a deferral or termination of the current centrifuge construction program and possibly allow the use of the more efficient and cost-effective advanced enrichment technologies at a later date.

With regard to the international initiatives called for in the Act, such as the International Nuclear Fuel Authority, GAO found that limited progress has been made in this area. Although the International Atomic Energy Agency's Committee on Assurance of Supply is addressing

the concept of multinational nuclear fuel supply assurances, the United States has not fully supported this effort.

The Act also states that the executive branch should explore the establishment of international spent fuel repositories. While some discussions have taken place concerning an international facility, much more complicated and time-consuming negotiations must take place before the concept is approved by the international community--much less construction of a facility started.

A closely related issue concerns proposed international controls over plutonium. To reduce the proliferation risks created by scattered plutonium stockpiles, an international control system over excess plutonium is needed. However, the United States has not given active support to the proposed international plutonium management and storage regime.

We believe that the United States should actively participate and support the IAEA committees addressing concerns over fuel supply assurances, international spent fuel management, and international plutonium storage.

To provide certain nations with a credible alternative to reprocessing, the United States offered to accept limited quantities of foreign spent fuel for storage. The Act provides a mechanism to carry out this offer. However, the lack of follow-through over the last three years has demonstrated that the offer does not provide other nations a

credible alternative. We believe the executive branch should make a current assessment of the offer to accept foreign spent fuel.

#### IAEA SAFEGUARDS

Title II calls for U.S. contributions of financial, technical, and other resources to assist IAEA in the effective implementation of safeguards. In our opinion, Title II represents a strong commitment to the international non-proliferation regime and no change to it appears necessary. We found that intensified U.S. efforts to upgrade IAEA safeguards have had some positive results but they have not yet had as significant an impact as had been hoped and that IAEA safeguards need further improvement.

In our recent classified report to the House Foreign Affairs and Senate Foreign Relations Committees, we discuss in detail several factors hindering IAEA's application of safeguards. These factors include

- a limited number of inspectors,
- a lack of reliable or suitable techniques and equipment for measuring some forms of nuclear material,
- inadequate nuclear material accounting practices in some nations, and
- political constraints.

Moreover, there are financial constraints on IAEA's increasing safeguards responsibilities. The United States and a few nations have provided special assistance for safeguards. Other nations support safeguards in theory but are less supportive financially. Many member nations maintain that IAEA's financial resources should be used primarily for technical assistance to less developed nations and to promote peaceful uses of nuclear energy.

Under a complex formula developed in 1971, more than two-thirds of IAEA's members have been insulated from an increased financial burden resulting from growing safeguards responsibilities. Of IAEA's 110 members, 76 contribute less than 2 percent of the funding for safeguards. In 1980, 32 members were assessed about \$750 for safeguards--the same as the lowest assessment made in 1971.

We believe that a political and financial commitment by all member nations is needed if IAEA is to fulfill its increasing safeguards responsibilities. We recommend that the Secretary of State work together with other world leaders and IAEA officials, to develop a multinational plan to overcome the technical, political, and financial problems impeding effective application of international safeguards.

#### NUCLEAR CONTROLS AND EXPORT LICENSING

Title III establishes new export licensing criteria for U.S. nuclear exports. It also directs the Nuclear Regulatory Commission (NRC) and other Federal agencies to adopt procedures for the timely processing of export license requests and other export authorizations.

Operation of the present licensing system has improved since 1978. However, further changes are still needed to make the system function better. Accordingly, we are proposing a number of changes and clarifications.

Several of our recommended changes should help meet the legitimate needs of U.S. nuclear trading partners for supply assurances and the U.S. nuclear industry's need for timely and predictable Government decisions. They are essentially

aimed at establishing a more focused system in which the non-proliferation credentials of a recipient and the potential weapon sensitivity of an export would dictate whether a license application is reviewed on a streamlined basis. This would increase executive branch flexibility to facilitate nuclear trade with our allies and major trading partners, and help center U.S. non-proliferation efforts on nations posing greater risks.

For example, we call for

- procedures to allow acceptance of generic foreign government assurances for repetitive exports,
- a U.S. policy providing expedited review procedures for exports under new or renegotiated agreements for cooperation, and
- a process to require the Nuclear Regulatory Commission to refer to the President those export license applications for which the Commission has had a favorable executive branch recommendation under review for 120 days, if the applicant requests such a referral.

Because of their number and specificity, I will not outline all of our recommendations for improving the export authorization process. They are fully detailed in our report.

#### Role of NRC

The role of NRC in Title III's nuclear export licensing process has been a matter of considerable debate. Arguments for its removal from the process have been advanced by the U.S. nuclear industry, the non-proliferation transition team, and certain NRC Commissioners. We did not find sufficient justification to recommend NRC's removal, given past indications of congressional intent and NRC's recent performance. NRC's



presence provides an independent check of an executive branch judgment. If NRC decides not to issue a license, this could trigger presidential and congressional involvement. Because the continued role of NRC in the export licensing process may represent a legitimate national policy issue that the Congress may wish to reexamine, our report discusses some alternative arrangements.

### Long-Term Reprocessing Policy

I would like to turn now to the matter of U.S. approval rights over foreign reprocessing and plutonium use. In April 1977 President Carter changed the direction of the U.S. nuclear program by deferring U.S. commercial reprocessing and the use of plutonium. The executive branch urged other nations to adopt similar policies.

The U.S. reprocessing policy causes some foreign countries real concern because the United States generally has prior approval rights over the reprocessing of spent U.S.-supplied nuclear fuel and the resulting plutonium and is seeking to expand these rights. The manner in which the United States exercises these rights is very important to many U.S. trading partners who believe that reprocessing is vitally needed. These nations do not share the view that deferral of reprocessing is needed to control proliferation.

Title III of the law, which establishes standards for approving foreign reprocessing requests, states that nothing in that section was intended to prohibit, permanently or unconditionally, the reprocessing of U.S.-supplied fuel by a foreign nation. It also recognized that a 66-nation International Nuclear Fuel Cycle

Evaluation (INFCE) was underway to study the proliferation risks of reprocessing and other alternatives.

The INFCE study, which was completed in February 1980, generally repudiated the U.S. policy on prior approval for foreign reprocessing. Nevertheless, the executive branch has not yet reconsidered its policy. We think it should. In the meantime, we believe the executive branch should, in considering foreign reprocessing requests, follow the criteria set forth in the Act and drop the additional executive branch requirement that the requestor show an actual physical need to reprocess the spent fuel.

#### AGREEMENTS FOR COOPERATION

The next title--Title IV--expands U.S. criteria for future agreements for peaceful nuclear cooperation and directs the President to attempt to change existing agreements to comply with the new criteria. Although the executive branch has made an extensive attempt to renegotiate existing agreements, much of this task has not been completed. There has been a general foreign reluctance to renegotiate.

Since the Act was passed, previous agreements with Australia, Canada, Indonesia, and IAEA have been revised or replaced. New agreements have been completed with Peru, Morocco, and Colombia; and agreements with Egypt and Bangladesh have been initialed. However, previous agreements with 17 nations and EURATOM have yet to be revised.

Nations have been reluctant to renegotiate for various reasons, including concern over U.S. prior approval rights and

perceived U.S. "unilateralism" in revising the groundrules for cooperation. Some nations deferred renegotiation until after INFCE was completed or until the United States had revised other agreements. Others were unwilling to accept international safeguards on all nuclear facilities.

Despite limited progress, deletion of Title IV's renegotiation provision does not appear to be necessary or desirable. The following factors are worth noting.

- (1) Foreigners generally do not differentiate between this law and executive branch policy.
- (2) The Act does not require most U.S. partners to renegotiate in order to continue to receive U.S. nuclear exports.
- (3) There is no deadline for the completion of renegotiation effort.
- (4) Some nations have already revised their agreements or are doing so. Halting the renegotiation effort could cause awkward problems in U.S. relations with these nations.
- (5) Deletion of this provision could reinforce foreign perceptions that U.S. policy is subject to unpredictable shifts.
- (6) The enhancement of U.S. controls over U.S. nuclear cooperation is a worthy goal.

We believe that the United States should continue to explore the possibility of renegotiating existing agreements--recognizing, of course, the needs, attitudes, and sensitivities of cooperating partners.

The U.S. agreements with EURATOM require separate discussion because of certain unique circumstances. Unlike most agreements, those with EURATOM do not give the United States prior approval rights over reprocessing. Because the Act's export licensing

criteria require such rights, and because EURATOM would not immediately agree to renegotiate, U.S. nuclear exports to EURATOM were suspended for about 3 months. Nuclear export trade with EURATOM was resumed after it agreed to discuss its agreements.

At present, the Act permits such exports to EURATOM only if the President has extended a special exemption from certain of the Act's export licensing criteria. Furthermore, the Act requires that the President decide annually whether another 12-month extension is warranted. This provision of the Act appears to have been an irritant that has served no useful purpose. Therefore, we believe that it should be amended to allow the United States to freely honor its agreements with EURATOM during the renegotiation process.

#### ASSISTANCE TO DEVELOPING NATIONS

Title V calls on the United States to assist developing nations in identifying and developing alternatives to nuclear energy, with emphasis on solar and renewable energy sources. However, as a practical matter, Title V has never been implemented. No funds have been specifically appropriated for Title V programs, and it has not been used as justification for any ongoing or planned programs. Moreover, it can be viewed by foreigners as an attempt to limit their access to the benefits of nuclear power which the United States and other developed nations already have.

In our view, the need for retaining Title V is dubious because existing programs already provide such assistance. For example,

last year the United States provided over \$100 million in non-nuclear energy assistance. The Agency for International Development, the Department of Energy, the Export-Import Bank, the Overseas Private Investment Corporation and several other U.S. organizations are involved. Accordingly, we are recommending that Title V be deleted. However, we are not suggesting that providing non-nuclear energy assistance to developing nations be discontinued.

#### IMPACT ON THE U.S. NUCLEAR INDUSTRY

Having discussed each of the Act's principal titles, I would now like to focus on the U.S. nuclear export industry.

The impact of the Act, per se, on the competitiveness of U.S. nuclear exports could not be specifically determined. This is not to say that the longer-term U.S. non-proliferation strategy has had no impact on nuclear exports.

U.S. Government officials, industry representatives, and foreign buyers have indicated that the U.S. non-proliferation strategy has had an effect on some foreign decisions to purchase from a non-U.S. company. But whether the Act, executive branch policies, financial considerations, type of reactor or equipment, or some other factor was the principal reason is difficult to determine. In GAO's opinion, U.S. companies are at some disadvantage because importers perceive that implementation of certain aspects of the Act may adversely affect them.

#### LONG-TERM IMPACT

Mr. Chairman, the short-term impact of the Nuclear Non-Proliferation Act of 1978, in establishing an effective international framework for controlling the proliferation of nuclear

explosive capabilities, has been limited. However, it represents a long-term agenda requiring ambitious international initiatives which often take a long time to conclude.

The Act establishes a framework to control the potential links between civilian nuclear energy activities and nuclear weapons development. No such framework alone can provide an absolute guarantee of non-proliferation because civilian nuclear energy is but one of several routes to acquiring nuclear weapons. The technology and experience gained by many nations in conducting civilian nuclear energy programs have significantly lowered the technical barriers to weapons proliferation, so that the impact of any action by the United States, other nations, or groups of nations, can be measured only in terms of incremental assurances. Nevertheless, such assurances are still important.

Through the Act, the United States has heightened world awareness of the risks of proliferation. In the future, the United States must continue to be an effective leader in working with other nations to control the spread of nuclear explosive capabilities. We believe that our recommendations will help the United States achieve its non-proliferation objectives.

In our report you will also find specific language for suggested amendments to the Act. We would be pleased to work with you and your staff in this regard.

This completes my statement, Mr. Chairman. We will answer any questions that you may have.