

**CONTROLS ON EXPORTS OF NUCLEAR-RELATED
GOODS AND TECHNOLOGY**

HEARING
BEFORE THE
SUBCOMMITTEES ON
INTERNATIONAL SECURITY AND SCIENTIFIC
AFFAIRS
AND ON
INTERNATIONAL ECONOMIC POLICY AND TRADE
OF THE
COMMITTEE ON FOREIGN AFFAIRS
HOUSE OF REPRESENTATIVES
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CONTROLS ON EXPORTS OF NUCLEAR-RELATED GOODS AND TECHNOLOGY

THURSDAY, JUNE 24, 1982

HOUSE OF REPRESENTATIVES, COMMITTEE ON FOREIGN AFFAIRS,
SUBCOMMITTEES ON INTERNATIONAL SECURITY AND SCIENTIFIC AFFAIRS
AND ON INTERNATIONAL ECONOMIC POLICY AND TRADE,

Washington, D.C.

The subcommittees met at 2:12 p.m., in room 2172, Rayburn House Office Building, Hon. Jonathan B. Bingham (chairman of the Subcommittee on International Economic Policy and Trade) presiding.

Mr. BINGHAM. The Subcommittees on International Security and Scientific Affairs and on International Economic Policy and Trade will be in order.

Chairman Zablocki has indicated that he has been detained and will be along as soon as possible.

The subcommittees' hearing this afternoon is to review executive branch procedures for approving U.S. exports of nuclear-related technology, equipment, and materials. While many have noted that a country's acquisition of weapons grade material is the pacing element in its military nuclear activities, it is clear that the production of nuclear explosive devices involves much more than the procurement of plutonium or highly enriched uranium. Items incidental to the process of manufacturing nuclear explosives are important as well, and their availability can have an effect on the success of a country's efforts to develop a nuclear capability.

This hearing has been called especially to consider those nuclear exports whose licensing or authorization is the responsibility of the Department of Commerce or the Department of Energy [DOE]. Exports approved by these departments are not subject to restrictions as tough as those governing export licenses issued by the Nuclear Regulatory Commission [NRC]. As recent press accounts reveal, this inconsistency can undercut our nuclear nonproliferation policy, which aims to keep nuclear fuel and technology out of the hands of countries that seem bent on developing nuclear weapons.

With regard to Department of Commerce licensing, for example, the administration has expressed its intention to adopt a more "flexible policy with respect to approvals of exports [to South Africa] of dual-use commodities and other material and equipment which have nuclear-related uses in areas such as health and safety activities." Among the exports that Commerce is considering for South Africa is helium 3, which can be used to make tritium, a

form of hydrogen used in thermonuclear weapons. South Africa, however, does not meet standards required for NRC licenses of nuclear fuel or technology because it has not accepted full International Atomic Energy Agency [IAEA] inspection of its nuclear facilities.

Likewise, many of us in the Congress have read with great concern news stories reporting that Westinghouse hopes to sell a nuclear power reactor through a third country to Pakistan, which like South Africa is ineligible for NRC-licensed exports. Such a transaction, such as the direct sale of nuclear plant designs, management advice and training, is possible under a blanket DOE authorization. That blanket authorization is so permissive that it could cover the proposed Westinghouse sale to Pakistan even if that country detonated a nuclear device or used such a device against another country.

The Pakistan sale is prospective. However, I am informed by the Department of Energy that it has specifically authorized nuclear exports to other countries that are not eligible for NRC licenses. Unfortunately I am not able to disclose details of these transactions because the information is considered proprietary by the Department, which leads me to a second major concern about DOE authorizations.

The NRC licensing process is a relatively open one in which any member of the public can learn the broad details surrounding individual exports, including identification of the technology or fuel, its destination, and the company making the sale. However, when the Center for Development Policy recently asked for the same information provided to me concerning DOE authorizations, DOE would not even identify the countries for which the Department had given specific authorizations, let alone provide a generic description of the exports involved. By way of illustrating how little is publicly available about these authorizations, I ask unanimous consent to place the DOE response to the center in the record of this hearing.¹

Without objection, it will be so ordered.

A GAO report published last year recommended that the executive branch tighten up restrictions on DOE authorizations, publish in the Federal Register notice of any authorization, and "periodically report to the Congress the approvals it has granted." It is my hope that the hearings today will show that both Commerce and Energy are moving in the direction of these suggestions, which will result in a more coherent national nuclear export policy.

Does the gentleman have an opening statement?

Mr. LAGOMARSINO. No, Mr. Chairman.

Mr. ERDAHL. No, thank you, Mr. Chairman.

Mr. BINGHAM. We are pleased to welcome before the subcommittees Mr. Bo Denny, Deputy Assistant Secretary for Export Administration, Department of Commerce; James W. Culpepper, Deputy Assistant Secretary for Security Affairs in the Office of Defense Programs, Department of Energy; Carlton R. Stoiber, Director of the Office of Nuclear Export and Import Control, Department of State; and Archelaus Turrentine, Deputy Assistant Direc-

¹ The letter referred to appears in app. 1.

tor for Nuclear and Weapons Control at the Arms Control and Disarmament Agency.

Welcome, gentlemen.

STATEMENT OF BOHDAN DENYSYK, DEPUTY ASSISTANT SECRETARY FOR EXPORT ADMINISTRATION, DEPARTMENT OF COMMERCE

Mr. DENYSYK. Thank you, Mr. Chairman. I am indeed pleased to be here to discuss with you the Department of Commerce's role in the control of exports for nuclear nonproliferation reasons.

PRESIDENT'S NONPROLIFERATION POLICY

President Reagan in July 1981 stated that one of the U.S. fundamental national security and foreign policy objectives is to continue to take all steps necessary to prevent the spread of nuclear explosives to additional countries. The United States seeks to work more effectively with other countries to reach agreement on reducing the risks of proliferation and continues to inhibit the transfer of sensitive nuclear equipment and technology when there is a danger of nuclear proliferation. The United States also endeavors to require International Atomic Energy Agency (IAEA) safeguards on all nuclear activities in countries not possessing nuclear weapons as a condition for any significant new supply commitments.

While actively working to reduce the risks of proliferation, however, the administration is also desirous of establishing the United States as a reliable supplier of equipment for peaceful nuclear uses under appropriate and adequate safeguards. Therefore, the administration does not intend to inhibit or set back civil reprocessing and breeder reactor development abroad in nations with advanced nuclear power programs where there is not a proliferation concern.

In implementing this policy the Department of Commerce carefully reviews commodities and related technical data under its control that when used for purposes other than for which intended, could be of significance for nuclear explosive purposes, and that could be used directly or indirectly for designing, developing, fabricating, or operating sensitive nuclear facilities such as uranium enrichment, the production of heavy water, the separation of isotopes of source and special nuclear material, and the fabrication of nuclear reactor fuel containing plutonium.

In reviewing nuclear applications, as required by the implementing regulations, the Department of Commerce specifically takes into account:

First, the stated end-use of the component;

Second, the sensitivity of the particular component and its availability elsewhere;

Third, the types of assurances or guarantees given in the particular case; and

Fourth, the nonproliferation credentials of the recipient country.

The current procedures to implement section 309(c) of the Nuclear Non-Proliferation Act of 1978 [NNPA] were published in the Federal Register of June 9, 1978. These procedures provide Commerce the control for items under its jurisdiction which could be of

significance for nuclear weapons purposes if used in a manner other than the stated end-use.

The procedures also require Commerce to consult, as appropriate, with the Departments of Energy, State, Defense, the Arms Control and Disarmament Agency, and the Nuclear Regulatory Commission. The Subgroup on Nuclear Export Coordination (SNEC), which consists of these agencies—including Commerce—and is chaired by the Department of State, was set up to provide the necessary consultation for Commerce's cases as well as for nuclear exports licensed by other agencies.

COMMERCE'S REVIEW PROCEDURES

Mr. Chairman, I would like to give a quick summary of review procedures for Commerce-controlled nuclear-related exports. As we receive cases, we determine first whether nuclear controls apply. Special nuclear controls apply to:

First, commodities—and certain related technical data—on the "Nuclear Referral List," which I would like to offer as an exhibit at this time. I believe copies have been submitted to you in advance, Mr. Chairman.

Mr. BINGHAM. Without objection, the material referred to will be included.¹

Mr. DENYSYK. This list covers dual-use commodities requiring a validated license which have been identified as having potential significance for nuclear explosives purposes or for use in one or more of these sensitive nuclear processes: chemical processing of irradiated uranium or plutonium, production of heavy water, separation of isotopes of uranium, or fabrication of plutonium fuels;

Second, any item when the license application shows a nuclear end-use or end-user; and

Third, items normally exported under general license but which require a validated license because the exporter knows or has reason to know they will be used for nuclear explosives purposes or in one of the four sensitive nuclear processes.

I would like to point out that the very strictest controls are applied to exports destined for countries that are not signatories of the Nuclear Non-Proliferation Treaty, or where there are particular proliferation concerns.

The Department of Commerce solicits the review of all nuclear cases by the Department of Energy, which sends an officer weekly to review the applications. A certain number of these cases are sent to DOE for more detailed study. Such study may include referral to the weapons laboratories and other DOE facilities throughout the country. I am sure the DOE witness will provide further comments on this aspect of the review process.

Cases that raise policy or technical problems that DOE determines should not be handled unilaterally, or ones where Commerce does not agree with DOE's recommendation, are sent to the SNEC. After a consensus is achieved, the SNEC recommends action to Commerce. In instances where the SNEC cannot achieve a consen-

¹ See p. 5.

sus of its members, the case would be escalated to a higher level for resolution.

EXPORTS TO SOUTH AFRICA

Mr. Chairman, at this time I would like to assuage the congressional concern which has been raised with respect to the export of nuclear commodities to South Africa, and reassure the subcommittees that the licenses of nuclear-related items which the Department of Commerce has granted to South Africa are clearly nonsensitive from a proliferation standpoint. I would like to reiterate that approval of each case was granted only after the careful review process I have already outlined for the subcommittees, and conditioned upon the receipt of appropriate nonproliferation assurances from the Government of South Africa. It is the Department of Commerce's position that in view of the very small number of nuclear-related exports, their nonsensitive nature, and the stringent limitations placed upon such exports, they have not undermined U.S. nonproliferation objectives.

In summation, Mr. Chairman, I would like to stress that the Department of Commerce is well aware of its nuclear nonproliferation responsibilities. In fact, in acknowledgment of the vital importance of the Nuclear Non-Proliferation Act, section 17(d) of the Export Administration Act [EAA] specifically states that nothing in the EAA's national security and foreign policy sections—sections 5 and 6—shall be construed to supersede the procedures instituted on June 9, 1978, to implement the Nuclear Non-Proliferation Act. We maintain from the language of this provision that the emphasis placed by the EAA on determination of foreign availability before the institution of export controls is not an overriding factor in our nuclear controls.

Mr. Chairman, I will be pleased to answer any questions you may have when appropriate. Thank you.

[The attachment to Mr. Denysyk's statement follows:]

ITEMS ON THE NUCLEAR REFERRAL LIST

- Spin forming and flow forming machines;
- Units for numerically controlling simultaneously coordinated movements of machine tools or dimensional inspection machines in two or more axes;
- Components and specially-designed parts for control units described above;
- Mandrels and bellows forming dies;
- Equipment for production of liquid fluorine including parts and accessories therefor;
- Superconducting electromagnets including parts and accessories therefor;
- Pipe valves of special characteristics;
- Pipes, valves, fittings, heat exchangers or other collectors made of materials resistant to exposure to uranium vapor;
- Pumps designed to move molten metals by electromagnetic forces including parts and accessories therefor;
- Valves of special characteristics made or lined with aluminum, nickel or at least 60 percent nickel alloy including specially-designed parts and accessories therefor;
- Power sources other than nuclear reactors based on radioactive materials including specialized parts, components and sub-assemblies therefor;
- Electric arc devices for generating a flow of ionized gas in which the arc column is constricted including parts, accessories and control or test equipment for such devices;
- Neutron generator systems to induce a tritium-deuterium nuclear reaction including specially designed parts therefor;
- Particle accelerators of special characteristics;

Isostatic presses of certain characteristics including control equipment, accessories and parts therefor;

Plants specially designed for the production of UF₆ including specially designed parts and accessories therefor;

Compressors and blowers resistant to hydrogen sulfide of special characteristics;

Certain filament winding, tape-laying and interlacing machines;

Vibration test equipment;

Power generating and/or propulsion equipment specially designed for use with military nuclear reactors;

Electrolytic cells for the production of fluorine;

Nuclear reactor and nuclear power plant related equipment not licensed by NRC;

Turning machines for generating optical quality surfaces using a single point cutting tool, of special characteristics;

Communication, detection or tracking equipment using ultraviolet radiation, infrared radiation or ultrasonic waves;

Lasers and laser systems of special characteristics (2 entries);

Analog-to-digital transient recorders capable of sample rates in excess of 50 nanoseconds including specially designed parts and components therefor;

UF₆ mass spectrometers of special characteristics;

Precision linear and angular measuring systems and components of special characteristics;

Flatbed microdensitometers of special characteristics;

Cathode-ray tubes of special characteristics;

Triggered spark gaps of special characteristics;

Photomultiplier tubes of special characteristics;

Flash discharge type X-ray systems of special characteristics;

Electron tubes of special characteristics;

Hydrogen thyratrons of special characteristics;

Computers of special characteristics;

Synchros and resolvers of special characteristics;

Induction potentiometers of special characteristics;

Servo-motors of special characteristics;

Precision potentiometers of special characteristics;

Synchronous motors of special characteristics;

Analog-to-digital and digital-to-analog converters of special characteristics;

Inverters, converters, frequency changers and generators having a multiphase electrical power output within the range of 600-2,000 Hz;

Thermoelectric materials and devices of special characteristics;

Cathode-ray oscilloscopes of special characteristics;

Photographic equipment of certain types (3 entries);

Multispectral image processing systems or digital image display enhancement equipment of special characteristics;

Equipment for measuring pressures to 100 Torr or less, made of special materials;

Zirconium metal or alloys of special characteristics;

Nickel powder and porous nickel metal of special characteristics;

Lithium metal, hydrides, alloys or compounds of special characteristics (2 entries);

Hafnium metal, alloys and compounds containing more than 60 percent hafnium by weight;

Beryllium metal, alloys and compounds containing more than 50 percent beryllium by weight;

Pressure tube, pipe and fittings therefor of special characteristics;

Specialized packings suitable for use in separating heavy from light water;

Cylindrical tubing of aluminum alloy maraging steel or high strength titanium of special characteristics;

Cylindrical rings or single convolution bellows of special characteristics;

Cylindrical discs of special characteristics;

Corrosion-resistant sensing elements of special characteristics specially designed for use with equipment which measures pressures to 100 Torr or less;

Beryllium oxide ceramic and refractory tubes, pipes, crucibles and other shapes as specified;

Chlorine trifluoride in shipments of more than 5 kilograms;

Boron as specified;

Radioisotopes as specified;

Fibrous and filamentary materials of special characteristics.

Mr. BINGHAM. Thank you, Mr. Denysyk.

Mr. Culpepper?

**STATEMENT OF W. CULPEPPER, DEPUTY ASSISTANT
SECRETARY FOR SECURITY AFFAIRS, DEPARTMENT OF ENERGY**

Mr. CULPEPPER. Thank you, Mr. Chairman.

Gentleman, thank you for the invitation to appear today to discuss the effectiveness of controls over nuclear exports that are licensed by the Department of Energy pursuant to the Atomic Energy Act. The Secretary has asked that I represent the Department at the hearing today.

I am the Deputy Assistant Secretary for Security Affairs. In this capacity I am responsible to Mr. Herman Roser, the Assistant Secretary for Defense Programs, for directing the security affairs activities of the Department. These activities include the Department's programs of international security affairs [ISA], safeguards and security, and classification. In my testimony today, I will be discussing programmatic responsibilities associated with the ISA program.

Your letter to the Secretary identified a number of questions which will be addressed in my statement, but I believe it might be beneficial at this time to briefly comment on certain historical aspects of the Atomic Energy Act and the regulations which implement section 57.B.(2).

HISTORY OF NUCLEAR EXPORT CONTROLS

On August 1, 1946, President Truman signed the Atomic Energy Act, creating the Atomic Energy Commission and placing the subsequent development of atomic energy under comprehensive and strict controls. This act prohibited any nuclear cooperation of any consequence with other nations, including the exchange of information for the use of atomic energy for industrial purposes. At that time, all such information was held under strict secrecy as restricted data. However, with the passage of time it soon became apparent that the United States no longer had a monopoly in atomic technology for either military or peaceful purposes and that the peaceful atom had great potential. It also became clear that the United States would not be able to control the development of nuclear technology simply by withholding assistance. The United States became increasingly concerned that as nuclear energy was developed in other countries, they would establish independent nuclear programs which would lessen the effectiveness of U.S. unilateral control, and in addition they might be willing to export nuclear materials and technology with no firm assurances that such exports would be used for peaceful purposes. These considerations prompted the atoms for peace program instituted by President Eisenhower in 1953.

The atoms for peace program marked a dramatic reversal in U.S. policy, now emphasizing nuclear cooperation versus nuclear embargo. This and other factors led in 1954 to a major revision of the Atomic Energy Act of 1946. The act of 1954 established the legal basis and conditions for U.S. atomic cooperation. This included provision for agreements with other countries under which cooperation in nuclear power applications was conducted. In keeping with the spirit of the program, there was considerable declassification of data related to the development of nuclear power which would

allow U.S. companies or persons to engage internationally in commercial atomic energy programs. Section 57.B. of the act provided that it would be unlawful for any person to engage directly or indirectly in the production of special nuclear material outside the United States except pursuant to an agreement for cooperation or upon authorization by the Atomic Energy Commission.

On October 5, 1955, the Atomic Energy Commission issued a notice in the Federal Register providing U.S. companies and individuals a general authorization to engage in unclassified activities in foreign countries except for a list of countries identified in Department of Commerce export control regulations. I would like to point out that this formulation permitted U.S. persons to provide unclassified assistance to uranium isotope separation plants, chemical processing plants, and heavy water plants, as well as reactor assistance and fuel fabrication.

In addition to this broad general authorization, the U.S. Government maintained a program for the wide public dissemination of unclassified atomic energy information and encouraged others to do so through the publication of scientific articles and textbooks. In fact, section 141.B. of the act permits and encourages dissemination of such information. Also, during the 1950's, the program of progressive declassification had made public all information on the chemical processing of irradiated fuel elements. With the exception of certain information pertaining to naval nuclear reactors, U.S. reactor technology was declassified. Such unclassified information has been disseminated abroad for many years both by the U.S. Government and under commercial terms by U.S. reactor manufacturers.

On January 20, 1956, the first regulations, 10 CFR part 110 [changed in 1975 to part 810], were promulgated to implement the general authorization granted by the Commission and published in 1955. Since that time, there have been six revisions to the regulations.

The first significant change to part 110 was made in 1962 when an additional general authorization was granted for the purpose of authorizing persons within or under the jurisdiction of the United States to engage in unclassified meetings and conferences attended by nations or representatives of any country, including the Communist bloc.

Beginning in 1972, the trend of earlier years was changed and a progressive tightening of controls ensued. At that time, the regulations were revised to require a specific authorization for U.S. companies or individuals to engage directly or indirectly anywhere outside the United States in the chemical processing of irradiated special nuclear material, production of heavy water, and uranium enrichment.

In 1977, part 810 was again revised, this time to require a specific authorization for U.S. companies or individuals to participate in activities outside the United States involving the separation of isotopes of any source or special nuclear material and fuel fabrication activities involving plutonium. The revision also added Cambodia, Laos, and Southern Rhodesia to the restricted list.

Then in 1978, the Congress passed the Nuclear Non-Proliferation Act [NNPA] which further tightened U.S. nuclear export controls.

There were two provisions of the NNPA which had a direct impact on the implementation of part 810. One was the provision added to section 57.B.(2) requiring that the Secretary's determinations under part 810 be made only with the concurrence of the Department of State after consulting with the Departments of Commerce and Defense, the Nuclear Regulatory Commission and the Arms Control and Disarmament Agency. The other was the establishment of a class of information referred to as "sensitive nuclear technology." While such information was already controlled by the DOE under part 810, the NNPA established criteria that must be met before the Secretary can grant an authorization for its export.

CURRENT INTERAGENCY REVIEW OF CONTROLS

Before I address the specific questions you have asked, I would like to briefly tell you about a review which DOE has underway presently in concert with the Department of State. Some of the areas which we have under consideration are: First, withdrawal of the general authorization to certain free world countries; second, the development of representative lists of indirect activities which require a specific authorization or are generally authorized; third, retransfer of U.S. exports of nonsensitive nuclear technology to third parties; fourth, whether the identical criteria should apply to the export of reactor technology and reactor components; and fifth, development of a means for providing general notification of requests for rulings and decisions on such requests without jeopardizing the exporter's proprietary data.

As a result of this review, the withdrawal of the general authorization to certain countries has been identified as having significant merit in strengthening U.S. nonproliferation controls. The Departments of State and Energy have agreed that a change to the part 810 general authorization should be made. We are now working on a specific revision to the regulations which would accomplish this change. This revision will be reviewed by other executive branch agencies, and when these steps have been completed, we would be pleased to brief the subcommittee members.¹

Let me now turn to the questions which the committees asked in their letter of invitation.

DOE AUTHORIZATION PROCEDURES

The first question concerned the precise procedures for granting DOE authorizations under the Atomic Energy Act. These procedures were published in the Federal Register on June 1, 1978. I would propose to have these included in the record of this hearing.² Briefly, upon receipt of a request for specific authorization, DOE's Office of International Security Affairs prepares an analysis of the request and a preliminary staff recommendation, using the criteria set forth in part 810.8 of the regulations as well as any other pertinent information. The incoming request, the analysis and recommendation are provided to the specified agen-

¹ Briefing with subcommittee staff was held on Sept. 7, 1982, subsequently followed by publication of the proposed regulations in the Federal Register on Sept. 17, 1982.

² The procedures for granting DOE authorizations appear in app. 2.

cies, as well as appropriate DOE offices. All of the agencies who review part 810 requests are members of the Subgroup on Nuclear Export Coordination [SNEC], a body which satisfies the requirement in the NNPA that "an interagency coordinating authority to monitor the processing of such requests" be established. Once comments have been received an action memorandum is prepared for the Secretary of Energy which contains a recommended course of action. I have with me a flow chart which shows in detail the steps that are taken in reviewing part 810 applications and will be glad to provide copies for the record if you wish.¹

ENFORCEMENT OF CONTROLS

The second question concerned how DOE knows if U.S. companies and individuals are seeking specific authorizations in all cases where they are needed. First, there is substantial information received through U.S. Embassies, as well as information from the intelligence community concerning U.S. participants' involvement in nuclear activities outside the United States. In addition, the Office of International Security Affairs monitors the trade press and the national business publications for information concerning foreign commercial transactions. Moreover, the competitiveness within the industry among the various companies for foreign business provides an incentive for each company to insure that no one company gains a competitive edge by circumventing required U.S. approvals and/or authorizations. The rules and regulations governing nuclear exports also become known to the private sector through such organizations as the Atomic Industrial Forum and the American Nuclear Energy Council. In addition, proposed exporters often contact one of the Government agencies such as DOE, State, Commerce, or the NRC who advises them of the appropriate licensing agency. Fortunately, those technologies which are considered to be of the most concern from a proliferation standpoint are generally held by large corporations who are well aware of the provisions of the regulations. However, where information comes to our attention concerning activities for which no formal request has been made, the participant is notified by DOE as part 810 regulations and requested to provide information concerning the details and scope of the activities. In addition, section 222 of the Atomic Energy Act provides several criminal penalties for willful violations of the act and regulations issued pursuant to the act. These penalties are a fine of \$10,000 or 10 years' imprisonment or both. Moreover, if the offense is committed with intent to injure the United States, the punishment would be life imprisonment. Section 232 of the act also authorizes injunctive proceedings to enjoin violations.

EXPORTS OF REACTOR TECHNOLOGY

We believe the next question asked by the subcommittees was directed at the general authorization in part 810 which would allow a U.S. company to provide U.S.-origin reactor technology to a country to which a U.S. company could not export a reactor or components specially designed or prepared for use in a reactor because

¹ The chart referred to appears in app. 3.

there is no agreement for cooperation between the United States and the recipient country. I would like to point out that while the regulations do permit U.S. companies to provide reactor assistance to countries with which the United States does not have an agreement for cooperation, should such assistance be termed not to be in the best interest of the United States, the DOE could issue an immediate change to part 810, withdrawing the general authorization to a single country or to a group of countries. As a practical matter, this is a deterrent to U.S. companies becoming involved in a long-term contract, such as that required in constructing a reactor in a nonagreement country with which they know the United States has serious proliferation concerns. Nevertheless, as I mentioned earlier, we are examining some proposed changes in order to avoid international misunderstandings. I should point out, however, that even though we take this step, nuclear reactor technology has been in the public domain for many years and is widely available from non-U.S. sources.

LIMITATIONS ON GENERAL AUTHORIZATIONS

In order to address the next question in your letter, "What indirect activities are covered by DOE authorizations," it is necessary to summarize the general structure of the part 810 regulations. These regulations have since 1955 authorized all unclassified activities, except for activities in certain listed countries and activities listed as requiring separate specific approval. Thus, unless an activity involved one of the listed countries, or one of the sensitive areas of activity separately listed, it is generally authorized and does not require specific approval. Some generally authorized activities do require after-the-fact reporting to the DOE. In light of this structure, the Government's attention has focused on identifying the sensitive areas of technology, the transfer of which would require separate case-by-case authorization, and identifying those countries where there should be no general authorization at all.

Against this background, a number of factors are considered pertinent in determining whether an activity constitutes "indirectly engaging in the production of SNM," including (1) the significance of the activity to the actual production of special nuclear material; (2) whether the product in question is especially designed or unique to the production of special nuclear material or is a multipurpose item useful in many nonnuclear applications; and (3) the degree to which the goods or services are removed from the actual production of special nuclear material. The determination in each case has been dependent upon the facts of that case. For example, some actual cases that were considered to require a specific authorization under section 57.B because they constituted indirect assistance to the production of special nuclear material were: (1) Export of uranium mining and milling technology and equipment to the PRC; (2) allowing a PRC national to participate in a 1-year nuclear fuel-related training program at a U.S. private facility; (3) the sale of welding equipment to the Soviet Union for use in welding reactor pressure vessels; and (4) the transfer of neat transport pump manufacturing technology to Romania. The following areas of indirect assistance have been determined to be generally authorized to

the free world: (1) Waste management activities; (2) spent fuel storage; (3) reactor assistance including LWR fuel; (4) uranium mining and milling; and (5) the production of uranium hexafluoride (UF₆).

As I indicated earlier, one of the areas we have under review is the development of representative lists of activities which require a specific authorization or are generally authorized. These lists would not be all-inclusive, but would provide some guidance for U.S. companies and individuals who engage in foreign nuclear activities.

I would like to add that I agree with the views which Under Secretary of State Kennedy expressed at a recent hearing concerning brokering activities of U.S. companies. He expressed the belief that legislation either prohibiting brokering functions or requiring special authorizations to engage in such activities would not be very practical because of the very nature of brokering and the manner and expediency with which it occurs. Mr. Kennedy also stated that it would be nearly impossible to control this kind of activity without the cooperation of other countries, and it is highly unlikely that other governments would be prepared to regulate brokering. In the final analysis, I believe the Congress has to weigh any attempt to control brokering activities against the following: (1) The minimal effect controlling the activities of U.S. brokers would have on international brokering activities; (2) the delays and costs it would impose on U.S. utilities and their foreign counterparts; (3) the negative effect it could have on U.S. efforts to assure other countries that the United States is a reliable nuclear partner; and (4) the additional workload of the export control staff which would divert its attention and resources from more critical export cases.

RETRANSFERS OF RESTRICTED TECHNOLOGY

Your letter also indicated specific concern over retransfers of U.S. technology to third countries. While there is no specific language in part 810 dealing with retransfers, the U.S. company is responsible for seeking and obtaining a specific authorization or reporting the activity, whichever is appropriate. In the case of specifically authorized activities, retransfer prohibitions can be and often are a condition of approval. In the case of licensing agreements, U.S. companies are not obligated to submit their licensing agreements to DOE for review and approval but we are aware that licensing agreements generally contain language prohibiting the retransfer of licensed technology to those countries identified in part 810 without specific authorization by the licensor. One of the areas we have under review is the addition of clarifying language to assure that U.S. companies are aware of their responsibilities under part 810 where their foreign licensees are involved.

PROVISION OF INFORMATION TO CONGRESS AND THE PUBLIC

Finally, I would like to respond to the GAO recommendation that DOE make public approvals granted to a U.S. firm or individuals and to periodically report to the Congress such approvals as well as incidents of noncompliance by U.S. firms or individuals. DOE recently provided to Congressman Bingham's staff a proprietary listing of part 810 advisories and authorizations for the years

1980 and 1981. We would be pleased to provide similar lists in the future. While we would be unable to make available to the public such a list because of the proprietary nature of the information, in our review of part 810, we are considering ways to make some information available without compromising the competitive position of a U.S. company because of premature disclosure. Any classified information which may be considered in the Secretary's review would, of course, have to be withheld, along with the identity of the applicant if it will compromise their competitive negotiating position.

I would like to say in closing that the Department of Energy takes very seriously its responsibilities under 57.B of the Atomic Energy Act and we are very sensitive to the nonproliferation objectives of the Nuclear Non-Proliferation Act, the Congress and the administration.

Thank you Mr. Chairman, and I welcome the subcommittees' questions.

Mr. BINGHAM. Thank you Mr. Culpepper.

Mr. Stoiber.

STATEMENT OF CARLTON R. STOIBER, DIRECTOR, OFFICE OF NUCLEAR EXPORT AND IMPORT CONTROL, DEPARTMENT OF STATE

Mr. STOIBER. Thank you, Mr. Chairman.

I am Director of the Office of Nuclear Export and Import Control, in the Department of State, Bureau of Oceans and International Environmental and Scientific Affairs. In this capacity, I also serve as Chairman of the Interagency Subgroup on Nuclear Export Coordination. I appreciate the opportunity to appear before the subcommittees to provide the views of the Department of State on the complex subject of U.S. Government controls over nuclear export transactions which do not involve licensing action by the Nuclear Regulatory Commission.

Before responding to the specific questions raised in your letter of invitation to this hearing, I would like to discuss briefly a few matters which will provide a context for your consideration of the procedures and policies which apply to this important aspect of U.S. nuclear commerce.

DIFFICULTIES IN SUCCESSFUL CONTROL

At the outset, I would like to emphasize this administration's firm position, shared by past administrations, that a key element of a successful nuclear nonproliferation policy is implementation of an effective system for controlling transfers of items which can contribute significantly to nuclear explosives development—including those not designed or prepared solely for use in sensitive nuclear facilities—for example, enrichment, reprocessing, or heavy water plants. However, I should add that maintaining such a control regime is exceptionally difficult. There are several reasons for this difficulty.

First, there are many thousands of common industrial products that may be extremely useful or even essential for the construction of sensitive nuclear facilities or for explosives development. For ex-

ample, two essential materials for the construction of a nuclear re-processing plant are not controlled by the United States, or any other supplier nation. These are concrete and stainless steel. But no one would seriously suggest that we ought to attempt to control exports of concrete and stainless steel to forestall sensitive nuclear development by another nation. These admittedly extreme examples pose the dilemma: How to draw a reasonable line between items which it is sensible to control, and those which, though useful for sensitive facilities, are so generally available that they cannot be effectively controlled. Determining how deeply our export control efforts should reach into the trade in such dual-use items is much more complicated than defining items specifically designed and usable only for nuclear uses—the kind of items controlled under the Nuclear Regulatory Commission's licensing system.

The second dimension of the dual-use issue I would like to discuss involves our relations with other suppliers. No matter how refined and effective the U.S. control regime may be, unless other potential suppliers of such commodities apply similar restraints, our nonproliferation objectives will remain frustrated.

We have approached this problem in two ways. First, on an ad hoc basis, we routinely alert other supplier nations about specific export transactions we learn about which may raise nonproliferation concerns. We have received very good cooperation on such matters from other suppliers, but they have emphasized the need for detailed information on which to base their export control decisions, something we are not always able to provide. However, there have been some occasions when other suppliers disagree with our assessment that a particular export poses a proliferation risk. This highlights the point I am trying to make; namely, that unilateral controls are not adequate.

Second, during the past year we have conducted a series of bilateral discussions with other nations which may be in a position to supply items useful for sensitive facilities. Department of Energy and ACDA representatives have participated in these discussions. Our discussions have included all major European supplier nations, Canada, and Japan. Our purposes in these exchanges have been to explain the U.S. system of controlling dual-use items, to determine how other supplier nations implement controls in this area, and to discuss how to improve coordination between the United States and other suppliers to prevent the export of sensitive items to nations of proliferation concern. As a result of these conversations, it has become clear that the U.S. export control system for dual-use items is much more sophisticated and well developed than those of other supplier nations. Most other nations have established an inter-agency coordinating body similar to our Subgroup on Nuclear Export Coordination, which reviews potentially sensitive exports. However, they have pointed out two different types of impediments to their effective control of sensitive items, which pose less of a problem in the U.S. system.

First, some countries have told us that their legal systems make it difficult to control items unless they are defined with great specificity in their laws and regulations. For that reason they would have great legal difficulty applying the kind of end-use or end-user

concepts which enable us to restrain the export of sensitive items even though we do not list them precisely in Federal regulations. Second, some nations have indicated that because they are non-holders of a sensitive technology they sometimes have difficulty knowing whether a given item should be closely reviewed. There is little the United States can do about the first difficulty, aside from urging that additional items be listed by foreign suppliers. But, on the second problem, we have furnished other suppliers with our control lists, have explained why we control certain items, and have offered to supply additional detailed technical information to enable them to make informed export control decisions. These efforts have the best chance of success if we continue to pursue them on an informal, bilateral basis, rather than in large, formal gatherings, which have produced negative reactions in the past.

We will continue our cooperative efforts with other suppliers, both on individual export cases and on the broader issue of developing effective machinery for control of sensitive exports. In this regard I would emphasize the adjective "cooperative." Nothing would be more damaging to our efforts to secure effective supplier action on sensitive transactions than to adopt unilateral measures in this area, without consultation and prior agreement that such measures should be adopted. In this regard, congressional supporters of nonproliferation can assist our efforts with recommendations and oversight of administration efforts. Therefore, we would hope the Congress could avoid adding a new layer of regulatory procedures and requirements to a highly structured interagency process which we believe is basically functioning well and is in the process of being improved still further.

I would now like to respond to the specific questions you posed to the Department of State.

ROLE AND PROCEDURES OF THE SNEC

The subcommittees have expressed interest in how the Subgroup of Nuclear Export Coordination [SNEC] functions in identifying and stopping non-NRC-licensed nuclear-related exports that pose proliferation risks.

The SNEC was established in the summer of 1977 as a Subgroup to the National Security Council, NSC, Ad Hoc Group on Non-Proliferation to meet the perceived need for a "working level"—that is, Office Director—forum where controversial or sensitive nuclear export matters and issues could be reviewed and discussed.

Participants in the SNEC are: (1) The Department of State which chairs; (2) the Department of Energy; (3) the Department of Commerce; (4) the Department of Defense; (5) the Arms Control and Disarmament Agency; and (6) the Nuclear Regulatory Commission. If circumstances warrant, other agencies may be invited to participate. There are no restrictions on the number of participants from each agency, within reason, provided all have appropriate security clearances. There is no quorum, although the SNEC normally operates on a consensus basis with the concurrence of all participating agencies needed for export approvals. State is represented by the Office of Nuclear Exports of the Bureau of Oceans and International Environmental and Scientific Affairs [OES/NEC]; DOE by the

Office of International Security Affairs, Defense programs; Commerce by the Division of Policy Planning of the Office of Export Administration; DOD by the Office of Policy Planning [Nuclear Affairs] International Security Affairs; ACDA by the International Nuclear Affairs Division; and NRC by the Office of International programs.

The Nuclear Non-Proliferation Act of 1978 which amended the Atomic Energy Act of 1954, provided in sections 126a(1) and 57.B. a statutory basis for an interagency coordinating body to monitor nuclear exports licensed by the NRC or authorized by the Department of Energy. The role of SNEC as a body to resolve interagency differences on nuclear exports was set forth under section 5 of the "Procedures Established Pursuant to the Nuclear Non-Proliferation Act of 1978." I would like to offer for the record a copy of these procedures.¹

The SNEC acts on an advisory basis only and its recommendations are not formally binding upon any agency. Subgroup agendas, minutes, and discussions during meetings are classified and are exempt from release under section (b)(5) of the Freedom of Information Act for the protection of predecisional interagency views which are an integral and necessary part of the review process, quite apart from the specific national security classification of a matter under discussion. Final recommendations on specific applications including reasons for denials and conditions, if any, for approvals, are unclassified.

The SNEC meets at intervals of approximately 3 weeks to review proposed nuclear-related exports which could conceivably pose a proliferation risk. The SNEC, as noted, serves as a forum for review and discussion of nuclear export policy issues and specific case applications. The SNEC can review NRC license applications, DOE subsequent arrangements and 10 CFR 810 applications and Department of Commerce license applications since Commerce controls a far wider range of commodities and technology than either DOE or NRC.

The Department of Commerce publishes a Commodity Control List [CCL] of various items, equipment and materials under its regulations—15 CFR 37—which, because of their significance for national security, nonproliferation, foreign policy or short supply reasons, require a validated license for export. Of the items on the CCL, some 60 items controlled for nonproliferation reasons have been included in a "Nuclear Referral List". We note, however, that even some items on the Nuclear Referral List have other, nonnuclear uses.

All Commerce export license applications that have any actual or potential nuclear related use are reviewed by DOE. In this review process DOE follows policy guidance from the State Department, SNEC, and other sources. DOE refers most of the cases it reviews back to Commerce for licensing action because the country, end-use, end-user or the nature of the items in question make clear the lack of any proliferation significance. For some cases where it is clear that an item would present a proliferation concern or where export would be contrary to U.S. policy, denial is recom-

¹ See p. 19.

mended. The remaining cases which raise some question of proliferation significance are referred by DOE to the SNEC for consideration. DOE reviews on the order of 8500 cases a year. Of that number only about 200 to 300 are referred to the SNEC. Other agencies may also refer cases to the subgroup for review.

In reviewing Commerce license applications for exports of possible proliferation concern the SNEC takes into account a range of factors, including: (1) Past practice concerning supply of the commodity in question to the intended recipient country and end user; (2) equivalent commodities already in the recipient country and available to the end-user; (3) foreign availability; (4) available intelligence information regarding activities of proliferation concern on the part of the recipient country and the end-user; (5) technical capabilities and significance of the commodity to be exported; (6) foreign policy considerations of which the primary ones are nonproliferation; and (7) applicable statutory criteria.

If, on the basis of its review of the factors described in the preceding paragraph and any other relevant considerations, the SNEC determines that a proposed export involves significant proliferation risk, a recommendation for denial of the export will be made to the licensing agency.

If participating agencies are unable to reach agreement as to the disposition of a particular export application in the SNEC, the "Procedures Established Pursuant to the Nuclear Non-Proliferation Act of 1978" provide a series of steps which can be taken to resolve the disagreement. The matter can be referred to the successor to the NSC Ad Hoc Group on Non-Proliferation, a body comprised of Assistant and Deputy Assistant Secretaries charged with oversight of nuclear proliferation and export control responsibilities in each of the concerned agencies. If resolution of the disagreement proves impossible at that level, the matter can be referred to the Cabinet level and even to the President.

EXPORTS TO SOUTH AFRICA

With that summary, Mr. Chairman, I would like to move to some other questions you have raised. The subcommittees have asked to what extent, if any the recent decision to approve Commerce licenses for the export to South Africa of nuclear end-use items for health and safety purposes may undermine U.S. nonproliferation objectives.

In the view of the Department of State, recent selected exports of nuclear-related items to South Africa have made a positive contribution to U.S. nonproliferation objectives. First, it should be emphasized that exports of nuclear fuel or especially designed parts and components from the United States to South Africa for nuclear uses cannot be made unless and until the requirements of the Nuclear Non-Proliferation Act and U.S. policy have been met. For significant items licensed by the NRC this would require South Africa to agree to place all nuclear activities in that country under international safeguards—a step which the South African Government has declined up to now to undertake—and to adhere to the NPT. Therefore, nuclear-related commerce under NRC license with South Africa can only be conducted on a very modest scale.

Since early 1981 several Commerce licenses have been approved for the export to South Africa of items which are nonsensitive from a proliferation standpoint for use in IAEA-safeguarded nuclear facilities for purposes related to health and safety. For example, two hydrogen recombiners were approved for export to South Africa for use at the Koeberg facility. This is an item whose only possible use is for nuclear power plant safety based on post-TMI criteria. These few exports were only approved after careful case-by-case consideration in the SNEC and review by each concerned agency. Approval in each case was conditional upon the receipt of nonproliferation assurances from the Government of South Africa.

In view of the very small number of nuclear-related exports, their inherently nonsensitive nature and the stringent limitations placed upon such approvals, they have in no way undermined U.S. nonproliferation objectives.

Rather, approval of these few limited exports have helped the United States continue a dialog with the Government of South Africa on nuclear issues. We have repeatedly made clear to other nations, including South Africa, the depth of the U.S. commitment to nuclear nonproliferation goals. That policy is clearly established in U.S. law, which this administration is determined to implement effectively. Our ability to persuade other nations to act consistently with these nonproliferation objectives requires that we continue to talk to them and that when we talk they listen with some receptivity. Willingness to consider favorably a small number of nonsensitive transfers to South Africa's nuclear program can serve as an inducement to the South Africans to be more forthcoming on nonproliferation issues.

Current U.S. law properly preserves our ability to keep the door open for negotiations on these vital nonproliferation issues by permitting export of a slender range of Commerce licensed nuclear-related items, conditional on the receipt of adequate assurances. It would be a mistake to limit our negotiating ability through further restraints on international commercial relations.

The subcommittees also inquired about the assurances that State worked out for Commerce-licensed nuclear-related exports to South Africa and asked how these differ from assurances required for other countries that do not accept full-scope safeguards. In addition to the assurances given by the South African end-users for all Commerce-licensed exports, formal written assurances have been obtained by the U.S. Embassy from the South African Foreign Ministry. These assurances are tailored to the individual application but normally confirm that there will be: (1) No use other than that stated in the export license application; (2) no nuclear explosive use; and (3) no retransfer without prior U.S. consent. Right of access for inspection of the installed item has been obtained for U.S. officials when deemed appropriate. Other assurances have been obtained to meet special circumstances. The assurances obtained from the South African Government as a condition for approval of Commerce-licensed nuclear-related exports are essentially the same as those requested from other non-NPT party governments for approval of similar exports, and in some cases have been considerably stronger.

SALES THROUGH THIRD COUNTRIES

You have noted that DOE authorization procedures currently allow the sale of U.S. nuclear technology through third countries to Pakistan and other nations which have not accepted full-scope IAEA safeguards. You have asked to what extent this type of sale interferes with foreign policy objectives of keeping nuclear technology out of the hands of countries that pose serious proliferation risks. You have also requested the views of the State Department as to what steps, if any, are believed necessary to stiffen the DOE authorization procedures.

Current DOE procedures allow U.S. companies and their licensees to participate in a wide range of nonsensitive nuclear activities in most non-Communist bloc countries, without a case-by-case review. This general authorization has been in effect since the Atomic Energy Act was amended in 1954. A general authorization permits U.S. companies and their licensees to assist non-Communist bloc countries in such activities as uranium mining and milling; UF-6 conversion; fuel fabrication; reactor design, construction and operation; architect engineer services and training programs for foreign personnel conducted both within and outside the United States.

DOE regulations include a list of nations, currently consisting primarily of Cocom countries, which are excepted from this general authorization, and with which such assistance can take place only upon specific authorization.

The Departments of State and Energy have reviewed this matter and agree that revisions to the part 810 general authorization should be promptly adopted. These regulatory amendments are in the final stages of interagency consideration, which we would expect to complete in the very near future. Once this process has been completed, we would plan to provide a detailed briefing to interested Members of Congress.

For the countries on a revised list, there would be a case-by-case review for each proposal by a U.S. firm to engage in nuclear cooperation involving nonsensitive technology. This would permit us to identify proposed transactions such as transfer of light water reactor technology to Pakistan by a licensee of a U.S. firm. In instances where we identify proliferation issues, we would supplement domestic regulatory action with informal diplomatic measures to alert other suppliers to our concerns.

Mr. Chairman, this concludes my statement. I would be happy to respond to the subcommittee's questions.

[The attachment to Mr. Stoiber's statement follows:]

[From the Federal Register, June 9, 1978]

[4710-09]: DEPARTMENT OF STATE; DEPARTMENT OF ENERGY; DEPARTMENT OF COMMERCE

Procedures Established Pursuant to the Nuclear Non-Proliferation Act of 1978

The following procedures have been established pursuant to the Nuclear Non-Proliferation Act of 1978 (Pub. L. 95-242). These procedures establish requirements solely applicable to agencies of the United States rather than individuals. Accordingly, they are not rules within the meaning of the Administrative Procedure Act.

Any comments on these procedures should be directed to the appropriate responsible official listed in section 2 of Part A.

Dated: June 1, 1978.

LOUIS V. NOSENZO,
Deputy Assistant Secretary of State for Nuclear Energy and Energy Technology Affairs, Bureau of Oceans and International Environmental and Scientific Affairs.

DONALD M. KERR,
Acting Assistant Secretary of Energy for Defense Programs.

NELSON F. SIEVERING, Jr.,
Deputy Assistant Secretary of Energy for International Programs.

STANLEY J. MARCUSS,
Deputy Assistant Secretary of Commerce for Trade Regulation.

PART A. GENERAL PROVISIONS

Section 1. Authority and scope

a. The procedures herein are established by:

(i) The Department of Energy pursuant to sections 54, 57b(2), 64, 111b(1), and 131 of the Atomic Energy Act of 1954, as amended, hereinafter referred to as "the Atomic Energy Act."

(ii) The Department of State pursuant to section 126a(1) of the Atomic Energy Act;

(iii) The Department of Commerce pursuant to section 309(c) of the Nuclear Non-Proliferation Act of 1978, hereinafter referred to as "the Act", and the general policies and procedures set forth in the Export Administration Act of 1969, as amended.

b. These procedures apply to agency activities with respect to the matters dealt with by sections 54, 57b(2), 64, 109, 111b(1), 126a and 131 of the Atomic Energy Act and sections 309(c) and 402(a) of the Act, and the Export Administration Act of 1969, as amended.

c. These procedures have been agreed to by the Secretaries of State, Energy, Defense, and Commerce, the Director of the Arms Control and Disarmament Agency, and the Nuclear Regulatory Commission, or by the authorized designee acting on behalf of any of the foregoing.

Section 2. Responsible officials

a. Department of State, Washington, D.C. 20520—The Deputy Assistant Secretary for Nuclear Energy and Energy Technology Affairs in the Bureau of Oceans and International Environmental and Scientific Affairs.

b. Department of Energy, Washington, D. C. 20545—For sections 57b and 126a of the Atomic Energy Act and section 309(c) of the Act, the Assistant Secretary for Defense Programs. For sections 54, 64, 111b and 131, of the Atomic Energy Act and section 402 of the Act, the Deputy Assistant Secretary for International Programs.

c. Department of Defense, Washington D.C. 20301—The Assistant Secretary for International Security Affairs.

d. Department of Commerce, Washington, D.C. 20230—The Deputy Assistant secretary for Trade Regulation.

e. Arms Control and Disarmament Agency, Washington, D.C. 20451—The Assistant Director for Non-Proliferation.

f. The Nuclear Regulatory Commission, Washington, D.C. 20555—The Director, Office of International Programs.

Section 3. Offices for coordination

a. Department of State—The Office of Export and Import Control in the Nuclear Energy and Energy Technology Division of the Bureau of Oceans and International Environmental and Scientific Affairs.

b. Department of Energy—For Parts B, D, and F of these procedures, the Office of the Assistant Secretary for Defense Programs. For Parts C and E of these procedures, the Office of Nuclear Affairs, in the Office of International Affairs.

c. Department of Defense—The Office of the Assistant Secretary for International Security Affairs.

d. Department of Commerce—The Office of Export Administration in the Bureau of Trade Regulations.

e. Arms Control and Disarmament Agency—The Nuclear Exports Division of the Bureau of Non-Proliferation.

f. Nuclear Regulatory Commission—The Office of International Programs, Assistant Director for Export/Import and International Safeguards.

Section 4. Coordination and monitoring

The Interagency Subgroup on Nuclear Export Coordination of the National Security Council (NSC) Ad Hoc Group on Non-Proliferation shall, carry out other functions, monitor and facilitate the interagency processing of the activities referred to in section 1(b), and serve as a forum for exchanging and coordinating views. This Subgroup shall meet as frequently as necessary, normally twice a month. This Subgroup shall establish such procedures as are necessary for its effective functioning.

Section 5. Resolution of interagency disagreements

a. If, after appropriate consultation, any agency listed in section 2 does not agree with a proposed Executive branch action pursuant to sections 54, 57b(2), 64, 109, 111b(1) 126a or 131 of the Atomic Energy Act, or section 309(c) or 402(a) of the Act, the steps set forth below may be followed, normally in the order indicated, to facilitate resolution of the disagreement:

(i) Consideration in the Subgroup on Nuclear Export Coordination of the NSC Ad Hoc Group on Non-Proliferation;

(ii) Consideration in the NSC Ad Hoc Group on Non-Proliferation;

(iii) Any other procedures of the NSC that are appropriate;

(iv) Referral to the President.

b. Recourse to the steps in this section shall be taken expeditiously. An agency wishing to have recourse to any of the steps above shall so indicate immediately to the offices specified in section 3. The agency concerned shall normally give five days notice before initiating action under steps (ii), (iii), or (iv).

c. Nothing in this section shall derogate from the statutory authority of any agency. If any agency considers that all statutory requirements have been met and wishes to proceed with an action within its jurisdiction covered by these procedures notwithstanding the existence of an interagency disagreement, it shall normally provide all other concerned agencies with five working days notice.

Section 6. Content of judgments, findings and considerations under these procedures

Judgments, findings and determinations under these procedures shall address the matters required by the applicable section of the Atomic Energy Act.

Section 7. Technical provisions

a. These procedures take effect on June 7, 1978.

b. The processing of any action subject to these procedures shall not be delayed because of the entry into effect of these procedures. Clearances obtained or matters resolved under procedures previously in effect need not be reconsidered for the sole purpose of complying with new procedural requirements.

c. Nothing in these procedures shall affect the ability of any agency to protect classified or proprietary information pursuant to applicable law.

d. These procedures may be amended at any time subject to agreement among the agencies specified in section 1(c).

PART B. EXECUTIVE BRANCH JUDGMENTS UNDER SECTION 126A (1) OF THE ATOMIC ENERGY ACT

Section 1. Procedures

a. Except as provided in section 2 of this Part, the Nuclear Regulatory Commission shall promptly transmit any properly completed export license application or proposed general license or proposed exemption from licensing requirements to the offices listed in paragraphs a through e of the section 3 of Part A.

b. As promptly as possible, but in no event later than 15 days after the receipt of each license application or proposed general license or proposed exemption, the offices listed in paragraphs b through e of section 3 of Part A shall review the submission and shall advise the Office of Export and Import Control:

(i) Whether that agency believes that any additional information is required in connection with preparation of the Executive branch judgment. In the event that such information is required, the Office of Export and Import Control shall seek to obtain and provide the information as promptly as possible. If additional information required is essential to further Executive branch processing, the Office of Export and Import Control may return the application, proposed general license, or proposed exemption to the Nuclear Regulatory Commission, in which event the schedule of actions and deadlines set out herein shall recommence upon receipt by the Office of a substantively complete application, proposed general license or proposed exemption from the Nuclear Regulatory Commission;

(ii) Whether that agency believes a license application appears to raise issues which will require more extensive consideration than is normally necessary in Ex-

ecutive branch processing or similar license applications. If such issues appear to be present, the Office of Export and Import Control will normally schedule consideration of these issues at the earliest possible meeting of the Subgroup on Nuclear Export Coordination and shall as promptly as possible initiate appropriate steps, including those required to obtain any necessary policy decisions and to initiate necessary diplomatic consultations;

(iii) Of their preliminary views on the license application, if so requested by the Office of Export and Import Control.

If the Department of Energy is the license applicant pursuant to section 111 a of the Atomic Energy Act, the designee of the Secretary of Energy shall not be required to advise the Office of Export and Import Control of its views pursuant to this paragraph.

c. No later than five working days after receipt of its copy of a license application from the Nuclear Regulatory Commission, the Department of Energy shall, as appropriate, if the proposed export appears to be consistent with the applicable agreement for cooperation, request confirmation in writing from the nation or group of nations under the agreement for cooperation of which the export is to take place, that among other things:

(i) The export will be subject to the terms and conditions of the agreement for cooperation;

(ii) The consignee is authorized to receive the export; and

(iii) Physical security measures will be maintained with respect to the export that as a minimum provide protection comparable to that set forth in document INF-CIRC 225/Rev. 1 of the International Atomic Energy Agency, entitled, "The Physical Protection of Nuclear Material."

Such confirmation shall, as appropriate, be requested with respect to any intermediate destinations and the ultimate destination of the export that are identified in the license application. If any such confirmation is not received within fifty-five days after receipt of the license application by the Office of Export and Import Control in the Department of State, the Office may return the application to the Nuclear Regulatory Commission, in which event the schedule of actions and deadlines set out herein shall recommence after receipt of the confirmation and return to the Office by the Nuclear Regulatory Commission of the application.

d. Upon receipt of its copy of the license application from the Nuclear Regulatory Commission, the Department of Energy shall determine whether the proposed export involves material with respect to which the United States has agreed to consult with or obtain the approval of any other nation or group of nations prior to its export. If such an undertaking exists, the Department of Energy shall promptly inform the Department of State so that appropriate action may be taken.

e. If the license application is for an export of high enriched uranium, plutonium or uranium-233, equal to or exceeding formula quantities (as defined in 10 CFR 73.30) the Department of Energy shall prepare an analysis of the technical and economic justification for the use of such material, including whether the quantities requested are necessary for the efficient and continuous operation of the facility involved. This analysis shall be provided to the Office of Export and Import Control of the Department of State within 30 days after receipt by the Department of Energy of its copy of the export license application or as soon thereafter as possible. This analysis shall be provided to concerned agencies and shall be taken into consideration in preparing the Executive branch judgment.

f. As promptly as possible following receipt of the information in paragraph b, and no later than 30 days after its receipt of the license application, proposed general license or proposed exemption, the Office of Export and Import Control shall prepare and transmit to the offices listed in paragraphs b through e of section 3 of Part A, a proposed Executive branch judgment on the application, proposed general license or proposed exemption. If additional information has been requested from the Nuclear Regulatory Commission pursuant to paragraph b(ii), or if actions are pending pursuant to paragraphs b(ii), d or e, this shall be noted in transmitting the proposed Executive branch judgment.

g. No later than ten days after the date of receipt of a proposed Executive branch judgment, the designees of the Secretaries of Energy, Defense, and Commerce, and the Director of the Arms Control and Disarmament Agency, shall each provide the Office of Export and Import Control their written views on the proposed Executive branch judgment transmitted pursuant to paragraph f. When providing its views, the Department of Energy shall transmit a copy of any confirmation obtained pursuant to paragraph c and, if applicable, any approval or confirmation obtained pursuant to paragraph d. If a required confirmation or approval is not available at that time, the Department of Energy shall so advise the Office of Export and Import

Control. Upon receipt of the required confirmation, the Department of Energy shall forward it as expeditiously as possible to the Office of Export and Import Control and shall simultaneously advise the Nuclear Regulatory Commission so that the procedures in paragraph c above may be undertaken. In event of any disagreement which cannot be resolved between agencies, the provisions in section 5 of Part A shall be followed.

h. An Executive branch judgment shall normally address the matters required by section 126a(1) of the Atomic Energy Act with respect to both any intermediate destinations and the final destination of the export that are identified in the license application. Notice of any transfer of the export between intermediate destinations and the final destination shall be received by the Department of Energy. Any action required under Part E for approval of transfers between intermediate and final destinations specified in an application for an export license and which are expected to occur within one year of issuance of a license normally will be accomplished without unnecessary duplication of procedural steps during the review of the license application, and publication in the FEDERAL REGISTER will take place as soon as possible after issuance of the export license. If any such transfer does not occur within one year following issuance of the export license, an appropriate request for approval of the transfer shall be submitted to the Department of Energy for action pursuant to the procedures in Part E.

i. A single Executive branch judgment may address more than a single application to the extent that they involve exports of similar equipment or material to the same country, in the same general time frame, of similar significance for nuclear explosive purposes and under reasonably similar circumstances.

j. An Executive branch judgment may address the matters required by section 126a(1) of the Atomic Energy Act by expressing the view that there is no material changed circumstance associated with a new license application from those existing at the time of issuance of a previous license for an export to the same country, where the previous license was subject to full analysis by the Executive branch.

k. An Executive branch judgment may address any or all of the matters required by section 126a(1) of the Atomic Energy Act by reference to an analysis previously submitted to the Nuclear Regulatory Commission if the offices in paragraphs a through e of section 3 of Part A agree that there is no material changed circumstance with respect to such matter or matters.

l. No. later than 60 days after receipt of a license application, proposed general license or proposed exemption by the Department of State, the Department shall transmit to the Nuclear Regulatory Commission the Executive branch judgment on the license application, proposed general license or proposed exemption.

m. Any time period in this section may be extended by the Deputy Assistant Secretary of State for Nuclear Energy and Energy Technology. *Provided*, That the time period in paragraph 1 may be extended only if in the view of the Secretary of State or his designee it is in the national interest to allow additional time, in which case he shall notify the Committee on Foreign Relations of the Senate, the Committee on International Relations of the House of Representatives, and the offices listed in paragraphs b through f of section 3 of Part A, of such extension.

n. The Office of Export and Import Control shall maintain for at least five years records of steps set forth above and the dates on which they were taken.

Section 2. Small quantities

a. Pursuant to the authority in section 126a(1) of the Atomic Energy Act to determine that any export in a category would not be inimical to the common defense and security because it lacks significance for nuclear explosive purposes, the following categories of exports shall not normally require case-by-case Executive branch review under these procedures:

- (1) Byproduct material: all types and quantities, except tritium in quantities exceeding 1000 curies;
- (2) Source material: all exports for nonnuclear end uses, and exports of less than 250 kilograms for nuclear end uses;
- (3) Low-enriched uranium: one kilogram or less of contained uranium-235;
- (4) High-enriched uranium: 0.040 effective kilograms or less;
- (5) Plutonium and uranium-233: 10 grams or less;
- (6) Deuterium: 225 kilograms of heavy water or its equivalent deuterium content in any other form;
- (7) Nuclear grade graphite: 100 kilograms or less;
- (8) Nuclear equipment: all exports with a value under \$100,000.

b. This section shall not apply to exports with end uses related to isotope separation, chemical reprocessing, heavy water production, plutonium handling, such

types of advanced technology reactors as may be agreed by the agencies listed in section 1(c) of Part A, and initial exports of nuclear equipment to foreign nuclear facilities, and is subject to other limitations which the Executive branch or the Nuclear Regulatory Commission may, from time to time, deem necessary.

PART C. FOREIGN DISTRIBUTIONS UNDER SECTIONS 54 AND 64 OF THE ATOMIC ENERGY ACT

Section 1. Procedures

a. The Office of Nuclear Affairs of the Department of Energy shall prepare an analysis of proposed distributions of source and special nuclear material. The Office shall transmit the analysis to the offices listed in paragraphs a, c, e, and f of section 3 of Part A. The analysis shall include a statement of the purpose of the distribution, reference to the applicable agreements for cooperation, other pertinent information and a recommended course of action. The analysis will specify whether the proposed distribution appears to raise issues which will require more extensive consideration than is normally necessary for Executive branch processing of similar requests and the Office of Nuclear Affairs will initiate as promptly as possible appropriate steps, including those required in order to obtain any necessary policy decisions and to initiate any necessary diplomatic consultations.

b. No later than 30 days following receipt of the analysis, the designees of the Secretaries of State and Defense, the Director of the Arms Control and Disarmament Agency and the Nuclear Regulatory Commission shall provide the Office of Nuclear Affairs with their written concurrence or such other views, comments or proposed courses of action which they consider appropriate. In the event of any disagreement which cannot be resolved between agencies, the provisions in section 5 of Part A shall be followed.

c. No later than 30 days following the expiration of the time limit set forth in paragraph b, the Office of Nuclear Affairs shall determine whether to authorize the proposed distribution: *Provided*, That if recourse is made to the procedures in section 5 of Part A, this period shall be 60 days.

d. Any period in this section may be extended by the deputy Assistant Secretary for International Programs or his designee.

Section 2. Small quantities

The Department of Energy, without further interagency concurrence or consultation may, to the extent authorized in sections 54, 64 and 82 of the Atomic Energy Act, distribute such quantities of material as are specified in paragraph a of section 2 of Part B, subject to the qualifications and conditions contained in paragraph b of that section.

**PART D. DIRECT OR INDIRECT PRODUCTION OF SPECIAL NUCLEAR MATERIAL ABROAD
PURSUANT TO SECTION 57B OF THE ATOMIC ENERGY ACT**

Section 1. Procedures

a. Following receipt by the Department of Energy of any application (which is properly submitted under 10 CFR, Part 810) for specific authorization, the Office of Defense Programs of the Department of Energy shall submit the application, an analysis, and a preliminary staff recommendation to the offices listed in paragraphs a and c through f of section 3 of Part A.

b. The analysis provided for in paragraph a, shall specify whether the application appears to raise issues which will require more extensive considerations than is normally necessary for Executive branch processing of similar applications, and the Assistant Secretary for Defense Programs or his designee shall as promptly as possible initiate appropriate steps, including those required in order to obtain any necessary policy decisions and to initiate any necessary diplomatic consultations.

c. No later than 30 days after receipt of the analysis, the designees of the Secretary of State, Defense, Commerce, the Director of the Arms Control and Disarmament Agency, and the Nuclear Regulatory Commission shall provide the Office of Defense Programs of the Department of Energy with written concurrence in the preliminary staff recommendation or such other views, comments or proposed courses of action which they consider appropriate, including such analysis as may be needed to support their position. In the event of any disagreement which cannot be resolved among the agencies, the provisions in section 5 of Part A shall be followed.

d. No later than 30 days following receipt of the concurrence or views as provided in paragraph c, the Office of Defense Programs shall provide the Secretary of Energy with a recommendation, including the views of the agencies listed in para-

graph c, concerning his action on the application: *Provided*, That if recourse is made to the procedures in section 5 of Part A, this period shall be 60 days.

e. Any time period in this section may be extended by the Assistant Secretary for Defense Programs or his designees.

Section 2. Continued effect of current procedures

a. Pursuant to section 603 of the Act, 10 CFR Part 810, Unclassified Activities in Foreign Atomic Energy Programs, continues in effect.

b. Any amendment of Part 810 which involves a determination by the Secretary of Energy regarding generally authorized activities shall be made in accordance with these procedures.

PART E. SUBSEQUENT ARRANGEMENTS UNDER SECTION 131 OF THE ATOMIC ENERGY ACT

Section 1. Procedures

a. Any request from a nation or group of nations for a subsequent arrangement as defined in section 131a(2) of the Atomic Energy Act or request for an enrichment authorization under section 402(a) of the Act shall, if it appears consistent with applicable law and agreements and if submitted in appropriate form be transmitted promptly by the Office of Nuclear Affairs of the Department of Energy to the offices listed in paragraphs a, and c through f of section 3 of Part A, together with any supporting documents. All references to the term "subsequent arrangement" shall, for purposes of this Part, be deemed to include an enrichment authorization.

b. As promptly as possible, but no later than 15 days after receipt of each request, the offices listed in paragraphs a, and c through f of section 3 of Part A shall review the request and shall advise the Office of Nuclear Affairs.

(i) Whether that agency believes that any additional information is required. In the event that such information is required, the Office of Nuclear Affairs shall seek to obtain and provide the information as promptly as possible;

(ii) Whether that agency believes the request appears to raise issues which will require more extensive consideration than is normally necessary in Executive branch processing of similar requests. If such issues appear to be present, the Office of Nuclear Affairs will normally schedule consideration of these issues at the earliest possible meeting of the Subgroup on Nuclear Export Coordination and shall as promptly as possible initiate appropriate steps, including those required to obtain any necessary policy decisions and to begin any necessary diplomatic consultations; and

(iii) Of their preliminary view, if so requested by the Office of Nuclear Affairs.

c. The Office of Nuclear Affairs shall (if a request for a subsequent arrangement is involved, no later than 15 days after the expiration of the time limit set forth in paragraph b)¹ prepare and transmit to the offices listed in paragraphs a, and c through f of section 3 of Part A, a proposed subsequent arrangement, proposed denial, or other proposed course of action. In this transmittal, the Office of Nuclear Affairs shall advise the Office of Export and Import Control of the Department of State if, in the view of the Department of Energy, a proposed subsequent arrangement is likely to involve negotiations of a policy nature pertaining to arrangements for the storage or disposition of irradiated fuel elements or approvals for the transfer, for which prior approval is required under an agreement for cooperation, by a recipient of source or special nuclear material, production or utilization facilities, or nuclear technology. This transmittal shall also specify any steps deemed appropriate to expedite a proposed subsequent arrangement in the instances specified in section 131a(3) of the Atomic Energy Act. The transmittal may also include an analysis where necessary in the judgment of the Office of Nuclear Affairs to facilitate review. Upon the written request of any recipient office within 10 days after receipt of a proposed subsequent arrangement, the Office of Nuclear Affairs shall prepare and transmit an analysis of the proposed subsequent arrangement.

d. No later than 20 days after receipt of the proposed subsequent arrangement pursuant to paragraph c, the designees of the Secretary of State, the Secretary of Defense, the Secretary of Commerce, the Director of the Arms Control and Disarmament Agency, and the Nuclear Regulatory Commission shall provide the Office of Nuclear Affairs with their written concurrences or such other views, comments, or proposed courses of action which they consider appropriate. The response of the designee of the Director of the Arms Control and Disarmament Agency shall also include a declaration of any intention of the Director to prepare a Nuclear Prolifera-

¹ A subsequent arrangement may be initiated in certain circumstances by the Department of Energy, in which case paragraphs a and b are not applicable.

tion Assessment Statement pursuant to section 131a of the Atomic Energy Act. Any such statement shall be prepared within 60 days of the receipt by the Director or his designee of a copy of the proposed subsequent arrangement. In the event of any disagreement which cannot be resolved between agencies, the provisions of section 5 of Part A shall be followed.

e. No later than 20 days after the expiration of the time limit set forth in paragraph d, but, if the Director of the Arms Control and Disarmament Agency has declared his intention to prepare a Nuclear Proliferation Assessment Statement, only after receipt of the Statement or the expiration of the time authorized in section 131c of the Atomic Energy Act for the preparation of the Statement, whichever occurs first, the Secretary of Energy, or his designee, after making the determination required by section 131a(1) of the Atomic Energy Act and pursuant to any required judgment, under section 131b(2) of the Atomic Energy Act, shall decide whether to enter into the proposed subsequent arrangement: *Provided*, That if recourse is made to the provisions in section 5 of Part A, this period shall be 60 days.

f. After discharging the Department of Energy's responsibilities under these procedures, the Secretary of Energy or his designee shall cause to be published in the FEDERAL REGISTER notice of any proposed subsequent arrangement together with his written determination that the arrangement will not be inimical to the common defense and security. He shall also report to Congress with respect to any proposed subsequent arrangement of the types specified in section 131b(1) of the Atomic Energy Act. No subsequent arrangement shall take effect until the applicable time period or periods in section 131 of the Atomic Energy Act have elapsed.

g. Except for the time limits for the preparation of a Nuclear Proliferation Assessment Statement, any time period in this section may be extended by the Deputy Assistant Secretary for International Programs or his designee.

Section 2. Subsequent arrangements involving retransfers within the scope of an export license and certain small quantities

a. The Department of Energy, without further interagency concurrence or consultation and after complying with any other requirements, may approve any request for a subsequent arrangement which is limited to a retransfer where an applicable export license has authorized transfer of the material involved for the same purpose and to the same destination for which the retransfer is to be made, unless:

(i) The Department of Energy determines there has been a material change in circumstances since the issuance of the export license;

(ii) The retransfer does not occur in the same general time period as contemplated by the export license;

(iii) The retransfer is for any of the purposes set forth in paragraph b of section 2 of Part B;

(iv) The retransfer involves more than one effective kilogram of uranium-235 in uranium enriched to greater than 20 percent in the isotope 235;

(v) The retransfer involves more than 500 grams of plutonium or uranium-233.

b. The Department of Energy, without obtaining interagency concurrence or consultation and after complying with any other requirements, may enter into a proposed subsequent arrangement which is limited to such quantities of material as are specified in paragraph a of section 2 of Part B, subject to the qualifications and conditions contained in paragraph b of that section.

c. The Department of Energy shall provide the offices set forth in paragraphs a, and c through f of section 3 of Part A with a copy of the executed approval form for any subsequent arrangements approved pursuant to this section.

PART F. EXPORT ITEMS UNDER SECTION 309C OF THE ACT

Section 1. Procedures

a. A list of commodities licensed by the Department of Commerce which, if used for purposes other than those for which the export is intended, could be of significance for nuclear explosive purposes, shall be developed and maintained by the Departments of Commerce and Energy in consultation with the Departments of State and Defense, the Arms Control and Disarmament Agency, and the Nuclear Regulatory Commission.

b. Export license applications for commodities on the list referred to in paragraph 1, as well as any other applications which may involve possible nuclear uses, shall be reviewed by the Department of Commerce in consultation with the Department of Energy. When either the Department of Commerce or the Department of Energy believes that—because of the proposed destination of the export, its timing, or other relevant considerations—a particular application should be reviewed by other agen-

cies, or denied, such application shall be referred to the Subgroup on Nuclear Export Coordination. The Subgroup shall promptly consider any such application and provide its advice and recommendations to the Department of Commerce. Disagreements shall be handled in accordance with the provisions of section 5 of Part A.

c. Reviewing agencies shall promptly, but not later than 30 days after receipt from the Department of Commerce of an application, provide their views thereon to the Department of Commerce. If, however, it is not possible to provide views within this time or if, at any point during review, it appears that final action on an application will not be completed within 60 days of receipt by the Department of Commerce at the earliest possible time of the issues involved and provide an estimate of the time needed to complete its review. The Department of Commerce will then advise the exporter in writing as required by section 4(g)(1) of the Export Administration Act of 1969, as amended.

d. If the Subgroup recommends denial of an application, the reasons therefor shall be articulated for the record. If the Department of Commerce agrees with the recommendation, that Department, in accordance with section 4(g)(2)(A) of the Export Administration Act of 1969, as amended, shall notify the applicant in writing of the negative considerations raised with respect to such license application. Before final action is taken on the application, the applicant shall be afforded the opportunity to respond within 15 days to such negative considerations. If appropriate, the applicant's response will be made available to the Subgroup for further review and advice. In the event of any disagreement which cannot be resolved between agencies, the provisions in section 5 of Part A shall be followed.

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Mr. BINGHAM. Thank you, Mr. Stoiber.
Mr. Turrentine.

**STATEMENT OF ARCHELAUS TURRENTINE, DEPUTY ASSISTANT
DIRECTOR FOR NUCLEAR AND WEAPONS CONTROL, ARMS
CONTROL AND DISARMAMENT AGENCY**

Mr. TURRENTINE. Thank you, Mr. Chairman.

In July of last year President Reagan issued a statement that the further proliferation of nuclear explosives would pose a severe threat to international and regional stability, and to the security interests of the United States and other countries. In his address last week to the U.N. Second Special Session on Disarmament, he again emphasized the concern of the United States over this problem and expressed a strong commitment to nonproliferation objectives. The executive branch is keenly aware of the strong congressional interest in nonproliferation, and particularly of the involvement of these two House subcommittees over the past few years. As a representative of the Arms Control and Disarmament Agency [ACDA], I welcome the opportunity to appear before you on the important issue of nuclear export control.

This administration believes that whether the international community is ultimately successful in preventing the spread of nuclear explosives will depend on our ability to improve regional and global stability and to reduce those motivations that can drive countries toward nuclear explosives. United States and international nuclear export control efforts can help to promote these objectives by insuring that such exports do not enhance nuclear explosive capabilities in countries of proliferation concern. The question of U.S. controls over nuclear exports not licensed by the NRC is an important feature of this effort, and is a subject that has been and continues to be a major interest to ACDA.

AGENCY ROLES IN LICENSING

We believe that the Subgroup on Nuclear Export Coordination (SNEC) plays a particularly important role in preventing U.S. assistance to the nuclear programs of states of proliferation concern. Most SNEC attention focuses on so-called "dual-use" items or equipment which have legitimate nonnuclear applications, but which—to quote the Export Administration Regulations (378.2)—"could be, if used for purposes other than that for which the export is intended, of significance for nuclear explosive purposes."

It should be made clear how the responsibility for controlling these "dual-use" items differs from NRC-licensed items. Controls over virtually all NRC-licensed items are required by the Non-Proliferation Treaty [NPT] which is the foundation of the international nuclear export control regime. Article III.2 of the NPT requires all states party to the treaty not to provide "source or special fissionable material, or equipment, or material especially designed or prepared for the processing, use or production of special fissionable material" to any non-nuclear-weapon state unless they are under IAEA safeguards. In order to implement this obligation, a group of NPT party states met as the so-called Zangger Committee and agreed upon a "Trigger List" of items, the export of which would require the application of safeguards. Thus, in general, NRC licenses equipment and material which relate to the acquisition or production of fissile material. These items also have specialized nuclear uses—and thus are not "dual-use"—and the IAEA can apply safeguards to them.

The Department of Commerce, on the other hand, licenses sophisticated "dual-use" items which if misused could contribute to the actual manufacture of a nuclear explosive—in contrast to the production of the fissile material. A so-called Nuclear Referral List has been developed from the Commodity Control List of equipment and materials needed to design, test, and manufacture nuclear explosives. Examples of such equipment include computers, high-speed cameras, flash X-ray units, and high-precision metal-working lathes.

The listing of these items should make apparent their difference from NRC-licensed items. Particularly noteworthy is that NRC-licensed items all trigger the application of IAEA safeguard over any fissile material involved or processed. In practice, NRC-licensed items usually go to safeguarded facilities which have agreed upon inspection procedures. In contrast, IAEA safeguards are not relevant to dual-use items which could be used to manufacture a nuclear explosive. For example, items such as computers or metal-working machinery supplied to a railroad would not be expected ever to involve nuclear materials.

Such Commerce Department controls facilitate U.S. ability to fulfill its obligation under article I of the NPT "not in any way to assist, encourage, or induce any nonnuclear-weapon State to manufacture or otherwise acquire nuclear weapons or other nuclear explosive devices, or control over such weapons or explosive devices." NRC controls basically implement article III.2 of the NPT by requiring the application of IAEA safeguards, and thus help to insure that civil nuclear exports do not contribute to the development of

nuclear explosives. Commerce controls permit the review of other items that could assist a country in manufacturing nuclear explosives.

The application for a license to export any item on the Nuclear Referral List is subject to careful review by the Commerce Department, which coordinates with DOE to determine which of these applications pose particularly important concerns and should be referred to the SNEC.

It is the ACDA view that the SNEC functions well at reviewing exports of nuclear equipment, materials or services that could pose proliferation risks. In general, we are satisfied that cases of proliferation concern do get referred to the SNEC, and that the SNEC itself serves an extremely valuable function by focusing inter-agency attention on the proliferation issues associated with particular exports. It provides an opportunity for analysts directly involved in nonproliferation intelligence and the current thrust of U.S. nonproliferation policy to interact with individuals responsible for commercial, economic, and licensing issues.

In a comparative context, the U.S. system of nuclear export controls is one of the best national systems in terms of its effectiveness and comprehensiveness. In particular, the United States has a better legal basis for controlling dual-use nuclear exports than most other Western supplier states. In addition, the U.S. review process which includes evaluation of end-users and end-uses is the most comprehensive and has, in fact, been emulated by other states.

It should also be noted that SNEC actions have also served as the basis for international efforts to prevent sensitive nuclear exports from going to states of proliferation concern. Whenever SNEC turns down an export, it considers foreign availability and, when appropriate, will transmit export alerts to other supplier states requesting their cooperation.

ACDA'S CONTRIBUTIONS TO SNEC

ACDA contributes to the effective operation of the SNEC in two particularly noteworthy ways. First, since ACDA staff closely follow the proliferation intelligence relating to individual "problem" countries, particularly their purchasing efforts, they are able to take an active role in formulating an appropriate U.S. response. This is done in very close cooperation with State and DOE. In practice, working-level cooperation with State is so close that on many issues and projects, State and ACDA decisionmakers may in effect be working with a joint staff. In this joint effort, ACDA often provides intelligence information and a review of the past history of a problem country's programs, including any previous concerns and actions taken. Here ACDA frequently serves as a link between the intelligence community and the SNEC.

ACDA's second contribution to the SNEC is linking specific export control decisions to nonproliferation policy concerns. Each agency represented on the SNEC has its own organizational perspectives and review procedures. At ACDA, the International Nuclear Affairs Division and the Nuclear Safeguards and Technology Division work exclusively on nuclear nonproliferation. As such,

they are closely involved in formulating and implementing all aspects of United States and international nuclear nonproliferation policies. ACDA's representatives to the SNEC bring this awareness of existing and developing U.S. policy to bear on SNEC items.

The substance of the subcommittees' questions on DOE authorization procedures is being addressed in more detail by the other witnesses. ACDA understands the concern over the reexport of such U.S. technology, and we are participating actively with other executive branch agencies in reviewing the problem. We expect the review to be completed shortly, and the Congress will be fully informed.

EXPORTS TO SOUTH AFRICA

Your letter of invitation also posed a question about recent decisions on certain Commerce-licensed items to be exported to South Africa. ACDA supported such exports for nonproliferation reasons. Clearly South Africa presents significant problems for our nonproliferation policy. The most important nuclear nonproliferation policy objectives in South Africa continue to be to secure its adherence to the NPT and to have South Africa accept safeguards on all of its nuclear facilities. Until South Africa accepts such safeguards, the United States is legally prohibited from any significant nuclear cooperation with South Africa. If we are ever to secure our major nonproliferation objectives with regard to South Africa, the necessary first step is to at least talk. In particular, technical discussions are necessary on how safeguards would be implemented at South African nuclear facilities. The export of certain dual-use items with appropriate assurances can be part of a step-by-step process to secure our nuclear nonproliferation objectives. Such exports cannot contribute in any measurable way to a nuclear explosives program. However, they can constitute an indication of U.S. willingness to be cooperative if South Africa moves toward acceptance of safeguards on all of its nuclear facilities or adheres to the NPT. It also puts the burden on South Africa to indicate a similarly forthcoming attitude if it desires more significant nuclear cooperation in the future.

Because of the importance of the SNEC, ACDA has made SNEC support one of the major priorities of its staff. While no member of the staff works exclusively on the SNEC, ACDA normally sends three representatives to SNEC meetings, including the Chief of the International Nuclear Affairs Division. Prior to each SNEC meeting, the agenda is reviewed and items are sent to appropriate country analysts or technical experts for comments. If necessary, ACDA will contact the appropriate intelligence or technical services for information. The amount of staff time devoted to the SNEC varies considerably from meeting to meeting, depending on variables such as the size of the agenda, the need to do technical analysis, the need to review or find the appropriate intelligence information, and the likelihood that the export may be the source of extended SNEC consideration.

Finally, it should be repeated that the United States has an excellent system of nuclear export controls. The United States is not the weakest link through which nuclear exports flow to problem

countries. In this larger international context, while it is certainly important that the SNEC continue to function effectively, it is perhaps even more important that the United States continue its ongoing efforts to encourage other nuclear supplier states to develop equally effective and stringent export control systems. I would add that working to support and strengthen the international nuclear export control regime has been and continues to be a major focus of ACDA's nuclear nonproliferation efforts.

Thank you, Mr. Chairman.

Mr. BINGHAM. Thank you very much, Mr. Turrentine.

First I want to clarify something, Mr. Denysyk. On page 4 you refer to a "chemical process of irradiated plutonium." Is that the same as reprocessing generally?

Mr. DENYSYK. Not entirely.

[The following response was subsequently provided:]

Yes, the chemical processing of irradiated fuels is known generally as reprocessing.

OTHER COUNTRIES' REQUESTS FOR ASSURANCES

Mr. BINGHAM. Mr. Turrentine, you mentioned the importance of other countries adopting procedures similar to ours with respect to types of exports that we have been talking about. Do other nuclear suppliers, for example, require the type of assurances that the United States requires before exporting nuclear-related items to countries of proliferation concern?

Mr. TURRENTINE. Yes, Mr. Chairman. A number of other countries, major suppliers in particular, do require such assurances.

Mr. BINGHAM. What means are we and other countries using to verify that those assurances are being complied with?

Mr. TURRENTINE. This is done in a number of ways. First of all, if the facility involved is covered by international safeguards there is a strong assurance here that the material is being used for peaceful purposes and being used in a proper manner. In addition, in many cases when material or equipment is provided by the United States the assurance from the government together with the stated purpose, that is, the end-use, gives a high confidence that the material is going to be used for the purpose for which it was requested.

COMPUTER SALE TO SOUTH AFRICA

Mr. BINGHAM. It is my understanding that in 1976 the U.S. exported a computer to South Africa which is being used to operate the unsafeguarded enrichment facility in that country. For any member of the panel, could such an export occur under present procedures for approving similar exports?

Mr. DENYSYK. Mr. Chairman, I am not familiar with that particular computer, but if a case like that were presented to us now the probability is it would be denied since it would go into an unsafeguarded facility.

Mr. STOIBER. Mr. Chairman, I would point out that this case, of course, took place during an era before the existence of the Subgroup on Nuclear Export Coordination. I think we have significantly tightened up our export control regime since that period and I believe that such a transaction would be quickly identified today

and referred to the SNEC and if the conditions were the same, of course, it would have been denied under the criteria which we apply today.

MAINTAINING A DIALOG

Mr. BINGHAM. You have indicated that supplying some limited exports and technology to South Africa is a way of keeping open the dialog with the South Africans in this field. In the words of Mr. Turrentine, the limitations "put the burden on South Africa to indicate a similarly forthcoming attitude" on nuclear nonproliferation concerns. In what way has the South African Government been more forthcoming as a result of these Commerce-licensed exports?

Mr. TURRENTINE. Mr. Chairman, I would simply say that we have had visits to South Africa where we have been given access to some of their nuclear facilities. We have a continuing dialog with them. They have indicated a strong interest in safeguards, how safeguards would be applied to certain facilities which are not now under safeguards. I think this is a very positive outcome and one that we would like to continue to pursue.

Mr. STOIBER. Mr. Chairman, perhaps I could add there are primarily two areas in which we have been talking to South Africa up to now. One is, of course, the area that Mr. Turrentine mentions, the question of safeguarding primarily their enrichment facility; but also the general safeguards issues. These have been conducted largely on a technical level up to now but we hope to be able to broaden them in the future.

The second subject is the issue of perhaps persuading the South Africans to convert their research reactor at Safari to lower enriched fuels. You are quite familiar, I know, with the program of reduced enrichment fuels for our research and test reactors and we have been talking with technical people in the South African Government Atomic Energy Agency, about the desirability of moving to low enriched fuels. We feel if we were able to persuade them to engage in such a conversion that that would lessen the proliferation risk of having high enriched uranium in that facility. So those are the two main topics we have been discussing up to now but we do hope to broaden them into other areas.

COUNTRIES OF PROLIFERATION CONCERN

Mr. BINGHAM. Throughout the testimony of all four witnesses is use of the term, "countries of proliferation concern." Does use of this term imply that we make a variety of distinctions in our policies with respect to importing countries, other than the distinction between nuclear-weapons states and non-nuclear-weapons states, as in the NPT, and the NNPA's distinction between the NPT and those who do and those who do not agree to full-scope safeguards?

Are we putting ourselves in the position of discriminating between other countries that are not weapons states and that are not states that have agreed to full-scope safeguards?

Mr. DENYSYK. As a general statement, Mr. Chairman, the answer is yes. But the reason for that is because our controls are so broad, virtually anything going to a nuclear facility comes under a con-

trol; the nuclear referral list is a rather general one, and there is a varying degree of sensitivity for items on the nuclear referral list. So if we get an application for an item which falls under our control system we do look at the end-user, the end-use, the end-user's past credentials, and we make a decision based on that.

Mr. BINGHAM. Mr. Stoiber, as the representative of the State Department, does this create difficulties in countries that are denied imports that other countries are granted?

Mr. STOIBER. To be candid, of course it does. When you try to draw distinctions between countries there is always the possibility of discrimination. But I think one of the significant features of this administration's policy has been the willingness to attempt to make those kinds of distinctions. For example, you have talked about the distinction between NPT parties and non-NPT parties. In the view of this government, NPT adherence, although crucial and important for the forthcoming U.S. attitude on exports, is not the sole criteria. There are NPT parties about whose bona fide actions frankly we have some question. I don't need to name names, but most of them are in very sensitive regions of the world and, therefore, we would look very carefully about certain kinds of nuclear transactions to those countries notwithstanding their adherence to the NPT.

But those are the kinds of distinctions which we think have to be made in order to implement an effective NPT policy. It is difficult, but we are prepared to try to do that.

Mr. BINGHAM. Thank you.

Mr. Lagomarsino.

Mr. LAGOMARSINO. Thank you, Mr. Chairman.

ENFORCEMENT OF CONTROLS

Mr. Culpepper, how often does it occur that DOE has cause to notify an applicant, I should say someone, of part 810 regulations where an application for export has not been made and should have been made? In other words, how many people do you catch who are either on purpose or through inadvertence violating regulation 810?

Mr. CULPEPPER. Over the past 2 years, sir, we have had, for instance, a number of inquiries about a particular application and some of those take the formal route of asking for an advisory opinion. In that case, we might state if the applicant proceeds they do need to apply under 810 and if they should apply in all probability it would be turned down. I would say to you that there are a number of times that we have had discussions of that nature. Specifically, as to the number of times that we have found someone specifically violating, there have been very few, sir.

Mr. LAGOMARSINO. You have not found many that are?

Mr. CULPEPPER. No, sir.

EXPORTS OF TECHNICAL DATA

Mr. LAGOMARSINO. Mr. Denysyk, can you tell me why there is a distinction in some cases in allowing export of technology but not of reactors or components? That is my impression.

Mr. DENYSYK. Are you asking about nuclear technology?

Mr. LAGOMARSINO. Yes.

Mr. DENYSYK. Commerce does not license nuclear technology.

Mr. LAGOMARSINO. How about technology that—well, is there any technology on the nuclear referral list then? Not technology, but related to products on the list, perhaps?

Mr. DENYSYK. The nuclear referral list has approximately 70 entries on it. They are all commodities. Any technical data in support of those are also on the list. For example, if someone were selling a mass spectrometer, the technical data would be caught by our regulations.

ALTERNATIVE SUPPLIERS

Mr. LAGOMARSINO. Mr. Stoiber, I guess you would be the one to ask this question. As far as we know, what is the source of most of the nuclear technology going to South Africa, where is most of it coming from?

Mr. STOIBER. Well, I think, of course, the Koeberg reactors are French-supplied. I believe those reactor designs were originally based upon U.S. technology. In fact, I think if you trace it back far enough, you will find much of the world's nuclear technology can be traced to U.S. technology. The French are dominant in the South African market right now.

Mr. LAGOMARSINO. Is much of their nuclear technology indigenous?

Mr. STOIBER. Some of it is. They have an enrichment process called the nozzle process which is basically of indigenous development.

ISRAEL'S ROLE IN SUPPLYING NUCLEAR TECHNOLOGY

Mr. LAGOMARSINO. Now, has Israel been active in supplying nuclear technology or components to South Africa?

Mr. STOIBER. I am really not aware of the potential supply relationship between Israel and South Africa. I would have to look into that and get back to you for the record. I don't think there has been a major involvement.

[The following information was subsequently provided:]

While there are fairly regular exchanges between Israel and South Africa on scientific affairs, we are not aware of any transfer of nuclear technology or components from Israel to South Africa.

EXPORTS TO ISRAEL

Mr. LAGOMARSINO. Now, do we have many applications relating to the export of nuclear referral list materials to the State of Israel?

Mr. STOIBER. We have some. I wouldn't say many. Of course, our ability to conduct nuclear commerce with Israel is somewhat restricted by virtue of the provisions of section 128 of the Atomic Energy Act, the full-scope safeguards provision.

Mr. LAGOMARSINO. OK.

Mr. STOIBER. I am reminded by my faithful staff that we do have a significant number of computer export requests to Israel that are on the nuclear referral list.

Mr. LAGOMARSINO. Do we consider those under the same criteria that you were describing earlier?

Mr. STOIBER. Yes, we do.

Mr. LAGOMARSINO. Can you give us some idea—let me ask Mr. Culpepper, I guess, or Mr. Denysyk—anyone really.

Can you give me some idea of how many requests are turned down in proportion to those that are accepted?

Mr. DENYSYK. I don't have the total statistics, but I can give you some numbers for South Africa. We did compile this before the hearing.

We received 370 cases involving items which were on the nuclear referral list. I would say 85 percent of those cases were things like word processors, small computers going to nonnuclear end-users, so those were very quickly disposed of. Of the remaining, 12 were rejected; 2 were rejected for nuclear purposes and 7 were rejected for other reasons, for South Africa.

COOPERATION FROM OTHER SUPPLIERS

Mr. LAGOMARSINO. Mr. Turrentine, on page 4 of your statement you say that whenever SNEC turns down an export it considers foreign availability and when appropriate will transmit export alerts to other supplier states requesting their cooperation. What kind of cooperation have we had with other states when that procedure has been followed?

Mr. TURRENTINE. Mr. Lagomarsino, it varies. It depends on how serious the export in question is with regard to nonproliferation. If we are able to make a very strong case we have had rather good cooperation from other countries. On the other hand, if we know that it is a U.S. item that would be going to a nuclear facility and we do not want that to happen but it is a low-technology type of item, it is very difficult to get others to cooperate.

Mr. LAGOMARSINO. Even though we have turned it down?

Mr. TURRENTINE. Yes, sir. Even though we have turned it down.

Mr. LAGOMARSINO. You mentioned, and several other witnesses did, the review going on with regard to the reexport problem. You say the reviewing will be completed shortly. Can any of you describe for me what "shortly" means? How long is it we are talking about here?

Mr. CULPEPPER. Sir, we have had an exchange of correspondence with State and I should think within 30 days we will have that process completed. We do have to consult with the other agencies involved though, such as the Department of Commerce, ACDA, and NRC. We will be proceeding posthaste to do that.

Mr. LAGOMARSINO. Thank you.

Mr. BINGHAM. Thank you, Mr. Lagomarsino.

I have a few more questions but let me first call on Mrs. Fenwick.

SUPPORT FOR IAEA

Mrs. FENWICK. Thank you, Mr. Chairman. I am always particularly interested in the IAEA, the international agency, and do you all work closely with the IAEA? Do all your departments, all four

of you, do you check with them, correspond with them? Do they cooperate? Or is it just a pro forma thing?

Mr. STOIBER. The cable traffic between Vienna and Washington is extremely heavy. It is not only daily but frequently several times a day.

Mrs. FENWICK. All four of you?

Mr. TURRENTINE. I would like to add that indeed the Arms Control and Disarmament Agency puts a fair amount of effort into support of the IAEA. Not only do we provide technical experts to go and consult with them, in particular with the Safeguards Division, we also provide research on equipment that will be useful in enhancing international safeguards.

Mr. CULPEPPER. I would like to add that the program of technical assistance, which is funded under the Department of State and technically managed by the Department of Energy, has provided valuable support to the IAEA during the last 5 years.

During that 5-year period, approximately \$27 million has been expended for very specific tasks that have been identified by the IAEA and agreed to by the United States as having specific relevance to safeguard activities. Over 200 of those tasks have been completed and some 60 are underway in this fiscal year. So, yes, we are very active.

In addition, we in DOE have a safeguards and security program where the technology is directly applicable to what the IAEA is working on and concerned with and that is shared on a very regular basis.

Mrs. FENWICK. In other testimony at other times I have been distressed by the arrangements of IAEA. I don't know whether they are any better than they were or a little more vigorous in their application, wider in their application.

It seemed to me a very serious matter that countries that were to be inspected could choose the nations, the nationalities of the inspectors who were going to come and see their facility and that the inspectors were not allowed to go beyond tracing the use of the material that had been reported as having been delivered there or bought for that facility. No matter what they saw or thought they might like to inspect they couldn't move beyond that particular task. Is there anything more strict?

The difficulty described by the witnesses that came before us was that every regulation has to be adopted by consensus and that many countries were reluctant to see stricter or fuller regulations. Is that still true?

Mr. CULPEPPER. I would like to respond there. Just looking over the recent 1981 report of the IAEA, it identified that there were more than 1,400 inspections conducted with more than 800 facilities subject to safeguards around the world. It is true that the IAEA is short in the number of inspectors that it needs. The DOE, as well as State, ACDA, and others, have been involved in trying to assure a supply of qualified technical people to fill those jobs.

On the other hand, there have been improvements made over the past several years in terms of the kind of equipment that is onsite at particular locations whether it be simple things like seals that assure that no one entered a particular facility or had access to certain material; as well as closed circuit television cameras. I

think we have made improvements. However I would not want to say that we don't have a long way to go.

AMOUNT OF NUCLEAR MATERIAL TRAFFICKED

Mrs. FENWICK. Does anybody seem frightened, Jo other countries seem as concerned as this country certainly is with this movement around the world? Eight hundred facilities makes your blood run cold. I just wonder, can you tell us, for example, how much nuclear material is being delivered in the world for 1981, how much?

Mr. CULPEPPER. No, ma'am. I have read the numbers, but I don't recall them. It is a significant amount. I would be pleased to provide that for the record.

[The following information was subsequently provided:]

During 1981, fuel fabricators exported 130,708 kilograms of natural uranium. With respect to enriched uranium, 10,762 kilograms by isotope were exported. The uranium was used for reactor fuel.

Mr. CULPEPPER. I would suggest to you that the IAEA has a dual mission in that many of the lesser developed countries are interested not so much in safeguards as they are in seeing that nuclear power is developed as a source of energy to help solve their energy problems.

Mrs. FENWICK. I see.

Mr. CULPEPPER. So you have the age-old problem of the promoters and regulators if I can say that. That continues to be something that we have to grapple with. We can't overlook that. Some of the countries indicate that they are not interested in funding safeguards. I can appreciate that because their concern is they have people that need energy.

Mrs. FENWICK. Yes, and getting away from oil. Yes.

Mr. STOIBER. Perhaps I could add, Mrs. Fenwick, another dimension of this, of course, is the leadership of the agency itself, and we have recently had the appointment of a new Director General to the IAEA, Dr. Hans Blix from Sweder. He has been very aggressive on the safeguard side of issues and has demonstrated a serious interest and commitment to make the safeguards more effective. So there is a feeling here in Washington that Dr. Blix can perhaps make some progress in that regard. That is a very important point.

Mrs. FENWICK. I notice that IAEA safeguards do not apply to any dual-use items. In other words, things could be used either to make an explosive or peaceful work. Since they are dual-use, I can understand they do not come under the safeguards. Have we any knowledge of how much trafficking in those items there is?

Mr. DENYSYK. Mrs. Fenwick, if I may respond to that. We do take into account whether or not a facility is safeguarded before we make a decision on the export.

Mrs. FENWICK. But there are many countries that, if it is a dual-use, they are not required, and they have no legislation as I understand it, that requires that they be reporting that?

Mr. DENYSYK. I would agree. Other countries treat them very differently from ourselves. We are trying to work with them, however, to convince them that certain dual-use items should also be controlled for nuclear nonproliferation purposes. As Mr. Culpepper pointed out, we still have a long way to go in this area.

Mrs. FENWICK. Thank you, Mr. Chairman.

Mr. BINGHAM. Thank you very much.

REPORTING REQUIREMENTS

DOE's authorizations for nuclear activities abroad fall into two categories, the general, which are permitted without DOE review, and specific, which require DOE review.

Now, you have stated, Mr. Culpepper, that some generally authorized activities do require after the fact reporting to the DOE. Would you explain what activities do require that type of reporting and which do not?

Mr. CULPEPPER. Mr. Chairman, as I recall, there are certain activities that the regulations specify must be reported upon within 30 days. I think some of those would include things that have to do with training, and I would be glad to provide an elaboration for the record.

[The following information was subsequently provided:]

AUTHORIZED ACTIVITIES WHICH DO NOT REQUIRE AFTER-THE-FACT REPORTING TO THE DEPARTMENT OF ENERGY

Any activity consisting only of:

1. the communication of information generally available to the public in published form;
 2. financial assistance;
 3. the furnishing of component parts which are not especially designed and which are not intended for use in:
 - (a) a nuclear reactor;
 - (b) a facility for the separation of isotopes of any source or any special nuclear material;
 - (c) a facility for the production of heavy water;
 - (d) a facility for the production of zirconium (hafnium-free or low-hafnium);
 - (e) a facility for the production of reactor-grade graphite;
 - (f) a facility for the production of reactor-grade beryllium; or
 4. the comparative evaluation of types of reactors or facilities;
 5. the export of a nuclear reactor for which an export license has been granted by the Nuclear Regulatory Commission; and
 6. waste management activities not directly related to reprocessing.
- In addition, there is no reporting requirement for assistance in the following areas in countries not identified in § 810.7(a)(1):
1. uranium ore mining and milling;
 2. uranium hexafluoride (UF₆) production; and
 3. uranium oxide fuel fabrication.

Mr. BINGHAM. Would you provide a list of generally authorized activities that have been reported during the past 18 months?

Mr. CULPEPPER. Yes, sir.¹

Mr. BINGHAM. I would like to ask unanimous consent that any member be permitted to submit additional questions in writing. I presume you will be willing to answer in writing.

Mr. CULPEPPER. Yes, sir.²

BROKERAGE ACTIVITIES

Mr. BINGHAM. Mr. Culpepper, last year an American brokering firm, Edlow International, arranged for a South African purchase

¹ See app. 4.

² See app. 5.

of low enriched nuclear fuel which that country was unable to get from the United States under NRC license. In your testimony today you say that brokering activities do not currently require a specific DOE authorization. Does that mean that the brokering of low enriched fuel for South Africa was carried out under a DOE general authorization?

Mr. CULPEPPER. No, sir. It is my belief that the brokering activities are not covered under that general authorization. We do not attempt to control brokering activities.

Mr. BINGHAM. Is that something which constitutes a loophole which should perhaps be addressed through legislation?

Mr. CULPEPPER. Mr. Chairman, I believe that there are a number of things that you would want to consider. For example, if the United States did pass such a law I think it would be exceedingly difficult to carry out and see that it is enforced. I would submit that it would require a great deal of cooperation by other countries. I can't imagine their agreeing to that.

Lastly, Mr. Chairman, the resources needed in this country to do that, I think, would be enormous. I am afraid we might miss some of the more important sensitive activities going on if we tried to keep up with all the brokering activities.

Mrs. FENWICK. Will the chairman yield?

Mr. BINGHAM. Of course.

Mrs. FENWICK. Where do the brokers get the material?

Mr. CULPEPPER. In the specific case the chairman is talking about, my memory is that certain European countries were the source of the particular reactor material; and I think Edlow and SWUCO were the two brokers involved. That was the source of the material.

Mrs. FENWICK. Thank you.

DOE RESPONSE TO CENTER FOR DEVELOPMENT POLICY

Mr. BINGHAM. Now, DOE has provided me with a list of specific authorizations made in recent months. But the information included in the list is regarded by you as company proprietary. Therefore, when you respond to a request for this information under the Freedom of Information Act you eliminate all the specific information and produce something which is totally uninformative. I would like the members of the subcommittee to look at the document that was handed to the counsel that tried to get this information under the Freedom of Information Act. It seems to me that you are applying a standard of what cannot be revealed that is far tighter than the standard used by the NRC, for example. Isn't that so?

Mr. CULPEPPER. Mr. Chairman, I am not familiar enough with NRC's provisions to comment on that. I would say that there are a number of statutes which protect the proprietary information submitted by the particular applicants.

In addition, Mr. Chairman, the particular example you cited in your opening statement, the Center for Development Policy, I have read that response and this is one of the areas that we are looking into in our review to try to see if we can be more forthcoming. I would indicate to you that in the particular instance that you cited, this would involve getting the approval of the Department of Com-

merce, as well, because some of that information fell under their particular statutes.

But I do agree, Mr. Chairman, in looking over the letter, I see no reason we could not have provided the names of the countries involved, and furthermore, I would say that we would look very carefully at that list to see if there is information in there that is not proprietary that could be included in identifying what the particular application involved.

Mr. BINGHAM. I am glad to hear you say that. Really, what was produced was utterly absurd and totally uninformative.

LASER ISOTOPE SEPARATION TECHNOLOGY

Having said that, have you authorized the export of laser isotope separation technology?

Mr. CULPEPPER. Under the general authorization there may be certain activities in that field which would be generally authorized. Specifically, though, I would say no, we have not.

Mr. BINGHAM. In other words, any authorization in that field would be under a general authorization?

Mr. CULPEPPER. No, I am saying some of the activities that have gone on in the past or are ongoing now may have been under a general authorization, but as far as laser isotope separation is concerned that would be under a specific authorization, Mr. Chairman. In the sensitive nuclear areas, only information that is unclassified and available to the public in published form may be exported under the general authorization. I am assured that there have never been any specific authorizations granted for the export of laser isotope separation.

Mr. BINGHAM. I am sure you are aware that legislation is pending in both Houses that would prohibit the development of such technology in the United States.

Mr. CULPEPPER. Yes, sir.

EFFECT OF ACDA STAFF REDUCTIONS

Mr. BINGHAM. Mr. Turrentine, I understand that staff cuts have decreased the amount of time that ACDA can devote to monitoring DOE-authorized and Commerce-licensed nuclear-related exports. We have been told that one activity that is increasingly ignored is that of seeking allied cooperation in holding back exports of proliferation-prone dual-use exports. Would you tell us what cuts in staffing relating to these functions have occurred and what has been the result?

Mr. TURRENTINE. Yes, sir. There have been reductions in resources available for our work in that area. We have not had any direct cuts in staff, but basically it has been through attrition. This puts a premium on using our personnel resources more effectively. I do believe that we are carrying out our basic responsibilities adequately and that we have adequate resources to do this.

Specifically with regard to coordinating with allies, Mr. Chairman, on export controls, I would say we do devote a considerable amount of effort to this. I do not believe that this particular area, which is a high priority area, has been affected by our reduced staffing.

REVIEW OF NUCLEAR REFERRAL LIST

Mr. BINGHAM. Mr. Denysyk, how often are reviews made to update the Commerce nuclear referral list and when was the last review undertaken?

Mr. DENYSYK. There is no formal, periodic review. We do, however, add items to the list that we feel should be on the list.

As an example, we recently added hyper pure calcium and magnesium because we had information that they could be used in areas we didn't want them to be used.

So we add items to the list when necessary; when intelligence reports indicate that countries we have problems with are trying to acquire certain items.

Mr. BINGHAM. Do you also review with a view to eliminating items from the list?

Mr. DENYSYK. Again, I would say yes but it is done on an ad hoc basis right now. It might be useful to institute a periodic review, but it is not currently done.

AUTHORITY OF OTHER SUPPLIER NATIONS

Mr. BINGHAM. Finally, I would like to pursue the matter of the difficulty that some of the other nuclear supplier countries have in the legal systems, in terms of controlling exports from their countries. Mr. Stoiber, since you referred to this matter in your testimony, could you be more specific about what kinds of difficulties you have run into? What countries have given us a problem in this respect? Does it apply to exports of technology as well as to exports of goods? What is the nature of the problem and can you give us some idea of what countries have inadequate export authorities from this point of view?

Mr. STOIBER. As a defrocked lawyer I will have to put on my lawyer hat again, but during this recent series of discussions with our European allies it seemed to come down almost to a difference between what I would call code system countries, the continental systems basically using the old Napoleonic Code, and the common law systems such as those used in the United States, Canada, and Australia. The code system countries, and I suppose that would include France, Germany, Italy, and Switzerland, all have a system which basically emphasizes the role of the so-called customs agent. They all seem to feel that what they need to implement that system effectively is a very, very specific list of items, and that without such a specific list of items they will not be able to block effectively any sensitive transfer.

The Germans, for example, pointed out to us that their industry was becoming much more aggressive in terms of challenging attempts to restrain exports of nuclear sensitive items. The industry has developed a technique of coming to the Government and sending them a letter and asking whether a particular item is controlled; then they get a letter back in return saying no, it is not, in other words, a negative declaration. Then, if later on the item is determined to be sensitive and the German Government wants to jawbone the industry on it and make it more difficult to export the item, the industry produces the earlier letter and takes them to court.

I don't mean to suggest by that, to use your term, these systems are inadequate. I think perhaps in some senses they are less flexible than our system where we use the end-use and end-user controls. The British have an effective system of this as do the Canadians and Australians. But it does mean when we attempt to convince them that certain kinds of items should be controlled we have to be very precise and detailed about not only the description of the item which we want them to control but also the technical rationale that we offer up for the need to control that.

Most of them have institutions that are similar to the SNEC, interagency bodies which meet periodically to review sensitive exports, and they seem to function reasonably well within the terms of their export control regimes. But they do have this problem of specificity and a code system which makes it a little more difficult for them.

Mr. BINGHAM. Thank you.

Any further questions?

Mr. LAGOMARSINO. Mr. Chairman, I have a few questions.

Mr. BINGHAM. Mr. Lagomarsino.

USE OF INTELLIGENCE IN NUCLEAR EXPORTS

Mr. LAGOMARSINO. Mr. Turrentine, you said in the SNEC that yours is the lead agency for gathering intelligence; is that correct?

Mr. TURRENTINE. No, sir. I didn't say we were the lead agency. I said frequently we took the lead.

Mr. LAGOMARSINO. Who is the lead agency?

Mr. STOIBER. Well, the way it typically works is that the State Department has its own Bureau of Intelligence and Research as one focal point for relationships to the intelligence community which includes the Central Intelligence Agency, the National Security Agency, and the Defense Intelligence Agency as well.

What tends to happen is that the community funnels its intelligence either through the INR Bureau in the State Department or through the Arms Control Agency. So there are a couple of—or the Defense Department if it is defense related intelligence. So it comes in at a variety of points. There is no single coordinating body.

Mr. LAGOMARSINO. Is this used nationally within this country as well as internationally? In other words, are you using the resources you have to determine to the extent you can what illegal diversions might occur here? What efforts might be made to escape our licensing requirements?

Mr. STOIBER. Domestic intelligence is typically conducted by either the FBI or the Customs Service. Sometimes we obtain intelligence outside the country about activities that might occur inside the United States. Therefore we pursue that. We do have both an international and a national perspective.

Mr. LAGOMARSINO. Can you advise the subcommittees on anything you think might be done that would improve that system? What would we need to do to make it even more effective?

Mr. STOIBER. Specifically the intelligence gathering?

Mr. LAGOMARSINO. There are two things involved. One is to get the intelligence and the second is to be able to use it at the appro-

ropriate time, to have it available when decisions are being made on something that the intelligence might apply to.

Mr. STOIBER. Well, I think the former issue really is of providing enough resources to the intelligence agencies to do their job.

I am not in a very good position to give you a view on that although, in my opinion, the material we are receiving from these agencies has been quite good and seems to be adequate.

The question on use of intelligence for export control purposes is an extremely complex one. One of the interesting problems which we confront in that regard is the extent to which we can use U.S.-generated intelligence to help other countries make export control decisions on their own.

There are some restraints there, quite reasonable restraints about the use of U.S. intelligence to communicate to other governments.

We have quite a good system, I think, in getting the intelligence agencies to clear necessary intelligence that we communicate to other governments when we know they may be confronted with a potentially sensitive export. So I think the system is working reasonably well at this stage and I wouldn't suggest any legislative changes that we would need to do better.

Mr. CULPEPPER. I might add, sir, that DOE is part of the intelligence community and under Executive order we have certain responsibilities. As you can appreciate, our weapons laboratories play a very key role in analyzing and looking at some of this information to see from our standpoint what we think a particular country may be doing with nuclear materials. I think that is working very well. I think it is very supportive of the overall process.

CONTROL OF DUAL-USE EXPORTS BY COCOM

Mr. LAGOMARSINO. Let me ask you this, Mr. Stoiber. Are any of the dual-use nuclear export related issues brought up in Cocom? Is that something they look at at all?

Mr. STOIBER. There is a considerable overlap between the Cocom list and "nuclear referral list." In fact, out of the 60 or so items that are on the Commerce Department nuclear referral list, some 45 are Cocom items as well. So there is an overlap and they are considered in both contexts.

Mr. LAGOMARSINO. Does that overlap make it easier for some countries that have legal problems to participate?

Mr. STOIBER. It does, indeed. In fact, this last trip we took through Europe talking with our allies, we made a point of the Cocom relationship and that was very helpful to some of the governments who otherwise thought they might have difficulties of that character.

OPERATION EXODUS

Mr. LAGOMARSINO. Mr. Denysyk, just one last question. Has there been any campaign comparable to Operation Exodus to interdict illegal exports of nuclear technology?

Mr. DENYSYK. Well, I don't want to speak for the Customs Service, but I believe that they are looking at all aspects of our control system, not only security items but nuclear items and so on.

Let me make a comment on cases. We do have a couple of cases currently under investigation and have recently issued a denial order to a Pakistani party in this regard. We are also pursuing aggressively, with the intelligence community, investigations of violations of this part of the act.

Mr. LAGOMARSINO. Let me turn it the other way then. Has Operation Exodus itself uncovered any illegal exports of nuclear technology or nuclear referral list materials?

Mr. DENYSYK. There have been a fair number of nuclear list items, but primarily computers and semiconductor equipment and perhaps some beryllium. I don't know the actual numbers, though. I will be happy to provide them for the record if you like.

[The following information was subsequently provided:]

ILLEGAL EXPORTS OF NUCLEAR TECHNOLOGY OR NUCLEAR REFERRAL LIST MATERIALS
UNCOVERED BY OPERATION EXODUS

DOC has contacted the U.S. Customs Service on this matter. Unfortunately, the Customs Service lists their Operation Exodus seizures by port of seizure and by broad general classification, rather than by DOC's Commodity Control List (CCL) numbers which indicate the actual commodity and the type of control it falls under (e.g., foreign policy, national security, nuclear non-proliferation, etc.) We are advised that negotiations are in progress whereby the Customs Service will incorporate CCL numbers in their seizure information. Until such classification is in place, we will be unable to provide the subcommittee with this requested list.

Mr. LAGOMARSINO. In any event, the fact you had this other operation has been helpful to you?

Mr. DENYSYK. Absolutely. We have looked at the whole system, not, only the security items, but even short supply items, and so on.

Mr. LAGOMARSINO. Thank you.

Mr. BINGHAM. Mrs. Fenwick, do you have further questions?

Mrs. FENWICK. No questions, Mr. Chairman.

Mr. BINGHAM. I do have one or two more.

CONFIDENTIALITY OF INFORMATION

You did not, Mr. Denysyk, comment on the question of the degree of restraint on the release of information. Mr. Culpepper indicated that DOE was reviewing this matter to see whether it was possible to provide some information on an unclassified basis as to country destination, types of equipment, et cetera. Are you involved in this process of review and could you indicate, as Mr. Culpepper did, that the matter will be somewhat less rigid?

Mr. DENYSYK. Well, Mr. Chairman, to date we have not formally participated but we will be consulted once the Department of Energy and Department of State come up with a joint paper.

I might add, Mr. Chairman, that we do have the provisions of the act to contend with which prohibit us from providing specific details on cases. We do provide information on an aggregate basis and for the most part it does provide countries and general commodities available currently. For us to go much beyond that would require a change in the Export Administration Act.

Mr. BINGHAM. My impression is that the response made in the case I referred to did not include countries or general commodities.

Mr. DENYSYK. Mr. Chairman, we didn't participate in that response. I can't speak to that. I do know that under 12(c) we provide aggregate information relating to countries.

EXPORTS TO NONSIGNATORIES

Mr. BINGHAM. Can you give us some examples of countries that are eligible for exports of the type we are talking about that are not eligible for NRC exports and to which exports of the type we have been talking about have actually been made?

Mr. DENYSYK. I was reading something while you were asking. I apologize.

Mr. BINGHAM. You have indicated that you have indicated that while acceptance of full-scope safeguards is one of the criteria you look at, you permit exports of technology and nuclear-related items to countries that are either members of NPT nor have agreed to full scope safeguards. Is that correct?

Mr. DENYSYK. Yes.

Mr. BINGHAM. Pakistan is one of those—right?

Mr. DENYSYK. Yes, sir.

Mr. BINGHAM. South Africa is one?

Mr. DENYSYK. Yes, sir.

Mr. BINGHAM. Can you give u other examples?

Mr. DENYSYK. Brazil, Argentina.

Mr. BINGHAM. Argentina and Brazil?

Mr. DENYSYK. I can give you general examples of the types of exports.

Mr. BINGHAM. How do you give examples in a general sense?

Mr. DENYSYK. Well, Mr. Chairman, you know the provisions much better than I, but we can talk about general classes of commodities. For example, mass spectrometers. They are used primarily in the health field as well as having uses in some aspects of nuclear explosives. If we make a determination, in consultation with all appropriate agencies and the intelligence community, that the end-use will be in the health field, then we would approve that export to a country that is a nonsignatory of NPT, like South Africa. In fact, there have been several cases, and I would be glad to provide specific details, under the 12(c) provision.

[The following information was subsequently provided:]

EXPORTS OF TECHNOLOGY AND NUCLEAR-RELATED ITEMS TO COUNTRIES THAT ARE NEITHER MEMBERS OF THE NPT NOR HAVE AGREED TO SAFEGUARDS

We are currently updating our data base to distinguish between signatory and non-signatory countries, and between commercial entities and nuclear end-users. All exports to nuclear end-users, of course, have been permitted only because they are IAEA safeguarded facilities, so our data base would not contain non-safeguarded facilities.

A list of items on the NRL which have been exported over the past 12 months, however, has already been provided to the Subcommittee.¹ These exports were to all destinations since our data base does not yet distinguish between destinations which are signatory or non-signatory countries, nor between commercial entities and nuclear end-users. Once our data base is refined, we would be glad to provide the Subcommittee with the more specific list requested.

¹ The list has been retained in secure subcommittee files.

Mr. BINGHAM. Yes. I want to thank you. I think this has been a most informative hearing.

I want to compliment all of the witnesses for their forthcoming answers, as they are obviously extremely well informed. I am reassured that the administration and the agencies represented here are moving in the direction that I mentioned in my opening statement, to tighten up on some of the practices that are discussed heretofore. We are grateful to you. Thank you. The subcommittees are adjourned.

[Whereupon, at 3:58 p.m., the subcommittees adjourned, to reconvene at the call of the Chair.]

APPENDIX 1

STATEMENT OF VIRGINIA B. FOOTE, CENTER FOR DEVELOPMENT POLICY

THE CENTER FOR DEVELOPMENT POLICY WOULD LIKE TO THANK THE COMMITTEE FOR THE OPPORTUNITY TO SUBMIT ITS VIEWS ON THE EXPORT OF U.S. NUCLEAR TECHNOLOGY. FOR THE PAST FOUR YEARS, THE CENTER HAS BEEN CONCERNED ABOUT THE WEAPONS PROLIFERATION AND ENVIRONMENTAL RISKS POSED BY NUCLEAR EXPORTS. WE HAVE WORKED TO STRENGTHEN NON-PROLIFERATION POLICY AND TO END THE DOUBLE STANDARD IN THE EXPORTING OF SUB-STANDARD NUCLEAR EQUIPMENT TO SUB-STANDARD SITES OVERSEAS. BUT OUR EFFORTS WERE FOCUSED ON DIRECT EXPORTS FROM THE UNITED STATES--EXPORTS THAT ARE LICENSED BY THE NUCLEAR REGULATORY COMMISSION (NRC). IT WAS NOT UNTIL THIS YEAR THAT WE REALIZED THE AMOUNT OF NUCLEAR COMMERCE APPROVED OUTSIDE THE NRC AND ITS POTENTIAL CONSEQUENCES FOR NUCLEAR PROLIFERATION. THERE IS A SERIOUS LOOPHOLE IN U.S. NON-PROLIFERATION POLICY, THE MAGNITUDE OF WHICH CAN ONLY BE ESTIMATED.

IN JANUARY 1982, THE CENTER RECEIVED A PHONE CALL FROM A FORMER HIGH-RANKING PAKISTANI OFFICIAL. (HE REQUESTS TO REMAIN ANONYMOUS AS HE FEARS FOR THE SAFETY OF HIS FAMILY STILL IN PAKISTAN.) HE KNEW OF THE CENTER THROUGH OUR WORK RELATED TO U.S. REACTORS SITED ON VOLCANOES, IN HIGHLY SEISMIC REGIONS, AND IN DENSELY POPULATED AREAS OVERSEAS. THE OFFICIAL

TOLD US THAT THE WESTINGHOUSE ELECTRIC COMPANY WAS PLANNING TO EXPORT A 900 MW REACTOR TO PAKISTAN. OUR INITIAL REACTION WAS THAT THE REQUIRED LICENSE WOULD BE DENIED BY THE NUCLEAR REGULATORY COMMISSION (NRC) DUE TO THE REPEATED REFUSAL OF THE PAKISTANI GOVERNMENT TO SIGN THE NON-PROLIFERATION TREATY (NPT) AND ALLOW INTERNATIONAL ATOMIC ENERGY AGENCY (IAEA) INSPECTION OF ITS REPROCESSING AND ENRICHMENT FACILITIES.

BUT WE DISCOVERED THIS EXPORT WILL NOT REQUIRE A LICENSE FROM THE NRC. IT WILL NOT REQUIRE THE EXPLICIT APPROVAL OF THE U.S. DEPARTMENTS OF STATE OR ENERGY. CONGRESS HAS NO PROCEDURES FOR STOPPING THE DEAL. THE SALE COULD BE MADE BY WESTINGHOUSE THROUGH ITS SPANISH AFFILIATES.

SECTION 57G OF THE ATOMIC ENERGY ACT PROVIDES DOE WITH CONTROL OVER NUCLEAR TECHNOLOGY EXPORTS FROM U.S. COMPANIES. THE EXPORT OF REACTOR TECHNOLOGY BY A U.S. FIRM TO A FOREIGN SUBSIDIARY OR AFFILIATE AND ITS SUBSEQUENT RE-TRANSFERS ARE GENERALLY AUTHORIZED TO ALL NON-COMMUNIST COUNTRIES. THIS GENERAL AUTHORIZATION PERMITS THE EXPORT OF REACTOR TECHNOLOGY TO COUNTRIES OF SIGNIFICANT PROLIFERATION RISK, LIKE PAKISTAN.

PAKISTAN COULD NOT RECEIVE THIS REACTOR DIRECTLY FROM THE U.S., BECAUSE OF THE SERIOUS PROLIFERATION QUESTIONS. PAKISTAN HAS REPEATEDLY REFUSED TO SIGN THE NON-PROLIFERATION TREATY. IT DOES NOT HAVE AN AGREEMENT OF COOPERATION WITH THE UNITED STATES, NOR DOES IT ACCEPT IAEA SAFEGUARDS FOR ITS REPROCESSING AND ENRICHMENT FACILITIES. THE PREVIOUS PAKISTANI GOVERNMENT PLEDGED TO DEVELOP NUCLEAR WEAPONS AT ANY COST. THE IAEA RECENTLY INDICATED IT COULD NO LONGER VERIFY THAT NUCLEAR MATERIALS FROM PAKISTAN'S EXISTING NUCLEAR FACILITY HAVE NOT BEEN DIVERTED FOR THE WEAPONS PROGRAM.

EQUALLY ALARMING, THE REACTOR IS TO BE BUILT NEAR PAKISTAN'S UNSAFEGUARDED REPROCESSING PLANT AT CHASHMA. HOWEVER, THE PAKISTANI OFFICIAL TOLD THE CENTER THAT ALTHOUGH HE WAS CONCERNED ABOUT HIS GOVERNMENT'S TRUE INTENTIONS FOR THE "PEACEFUL ATOM", HE WAS MOST CONCERNED THAT THIS SITE THREATENS THE LIVES OF MILLIONS OF PAKISTANIS. THE REACTOR IS TO BE BUILT IN A HIGHLY SEISMIC REGION ON THE INDUS RIVER. AN ACCIDENT AT THE CHASHMA REACTOR COULD CONTAMINATE THE INDUS-- THE LIFE LINE OF THIS ARID COUNTRY--FOR YEARS TO COME. MILLIONS OF PAKISTANIS DEPEND ON THE INDUS AS THEIR ONLY WATER SOURCE. THE ONLY EXPLANATION FOR CHOOSING SUCH A DANGEROUS SITE IS TO LOCATE THE REACTOR NEAR THE REPROCESSING FACILITY.

FINDING OUT PRECISELY WHERE THE REACTOR WAS TO BE BUILT AND HOW WESTINGHOUSE COULD HANDLE THE CONTRACT THROUGH SPAIN REQUIRED SOME GUESS WORK AND LUCKY BREAKS. THE U.S. GOVERNMENT SAID THEY HAD NO INFORMATION ON THE POTENTIAL SALE. THE STATE DEPARTMENT INSISTED THEY KNEW NOTHING ABOUT IT. THE DEPARTMENT OF ENERGY (DOE) SAID THEY HAD NO INFORMATION. THE NUCLEAR REGULATORY COMMISSION (NRC) HAD NO INFORMATION. IN THIS CASE, U.S. LAW DOES NOT REQUIRE ANY ADVANCE NOTIFICATION OR APPLICATION FROM WESTINGHOUSE.

WESTINGHOUSE IS SITUATED OVERSEAS TO HANDLE THE TRANSACTION. WESTINGHOUSE CAN BID ON THE REACTOR THROUGH EQUIPOS NUCLEARES SA (ENSA), A REACTOR VENDOR COMMERCIALY LICENSED BY WESTINGHOUSE TO PRODUCE STEAM SUPPLY SYSTEMS. CONSTRUCTION OF THE REACTOR CAN BE HANDLED BY SENER, A SPANISH ARCHITECT-ENGINEERING FIRM THAT HAS BUILT WESTINGHOUSE REACTORS IN SPAIN. WESTINGHOUSE NUCLEAR ESPANOLA CAN DO THE NECESSARY DESIGN.

MARKETING AND SOFTWARE WORK. WESTINGHOUSE CAN HANDLE THE TRANSACTION COMPLETELY OFFSHORE.

KNOWING A DIRECT SALE REQUIRING A LICENSE FROM THE NRC WOULD BE PROHIBITED UNDER U.S. LAW, WESTINGHOUSE HAS STATED IT IS WILLING TO CIRCUMVENT CURRENT LEGISLATION BY EXPORTING TO PAKISTAN THROUGH A FOREIGN SUBSIDIARY. DIXON HOYLE, DIRECTOR FOR INTERNATIONAL AFFAIRS AT WESTINGHOUSE WAS QUOTED BY NEWSDAY (MARCH 11, 1982): "IF THERE IS AN ANOMALY HERE, THAT'S THE WAY THE LAW IS, AND THAT'S THE FACTS OF LIFE...RIGHT NOW, EXPORTS IS THE NAME OF THE GAME. KEEPING YOUR STAFF TOGETHER, EVEN AT MINIMAL PROFIT IS ESSENTIAL."

THE NUCLEAR INDUSTRY WILL TELL YOU IT IS IN SERIOUS TROUBLE. THERE HAS NOT BEEN A REACTOR ORDERED IN THIS COUNTRY FOR OVER FIVE YEARS. CANCELLATIONS HAVE SKYROCKETED. OVERSEAS SALES HAVE BECOME THE ONLY HOPE. CONGRESS HAS IMPOSED RESTRICTIONS ON NUCLEAR EXPORTS TO FURTHER OUR NON-PROLIFERATION GOALS. BUT THE NUCLEAR INDUSTRY CAN AVOID THESE RESTRICTIONS BY EXPORTING THROUGH OVERSEAS AFFILIATES AND SUBSIDIARIES--OUTSIDE THE REACH OF CONGRESS, FEDERAL AGENCIES, AND THE NUCLEAR NON-PROLIFERATION ACT AND TREATY. THESE OFFSHORE TRANSACTIONS ARE EITHER NOT REPORTED AT ALL, OR ARE PROTECTED FROM PUBLIC INQUIRY AS COMPANY PROPRIETARY INFORMATION.

* * *

THE DEPARTMENT OF ENERGY 810 REQUIRES THE SPECIFIC AUTHORIZATION BY THE SECRETARY OF ENERGY FOR THE EXPORT OF NON-SENSITIVE AND SENSITIVE NUCLEAR TECHNOLOGY TO COCOM COUNTRIES AND FOR THE EXPORT OF SENSITIVE TECHNOLOGY TO THE FREE WORLD. PUBLICALLY AVAILABLE INFORMATION AND LICENSED REACTOR TECHNOLOGY TO NON-COMMUNIST COUNTRIES ARE GENERALLY

AUTHORIZED AND DO NOT REQUIRE SPECIFIC APPROVAL.

SOME GENERALLY AUTHORIZED EXPORTS REQUIRE AFTER-THE-FACT NOTIFICATION TO DOE. THEREFORE DOE WOULD ONLY KNOW OF A NUCLEAR REACTOR SALE BY A SPANISH AFFILIATE OF WESTINGHOUSE TO PAKISTAN AFTER THE TRANSACTION TOOK PLACE AND ONLY IF THE SALE INCLUDED LICENSED REACTOR TECHNOLOGY, AND DOE WOULD NOT TELL THE PUBLIC.

INFORMATION OF SPECIFIC AUTHORIZATIONS IS EQUALLY DIFFICULT TO OBTAIN. THE CENTER FOR DEVELOPMENT POLICY FILED A FREEDOM OF INFORMATION REQUEST FOR A LIST OF DOE SPECIFIC AUTHORIZATIONS. IN THE DOE RESPONSE THE COUNTRY IMPORTING, THE COMPANY EXPORTING, AND THE EXACT TECHNOLOGY EXPORTED WERE ALL DELETED AS "COMPANY PROPRIETARY" INFORMATION. (THE DOE RESPONSE IS ATTACHED.) IN CONTRAST, WITH EXPORTS LICENSED BY THE NRC, TO BOTH COMMUNIST AND NON-COMMUNIST COUNTRIES, ANY CITIZEN CAN OBTAIN INFORMATION ON THE EXPORTING COMPANY, THE EXACT EQUIPMENT, THE IMPORTING COUNTRY, THE COMMENTS BY THE VARIOUS FEDERAL AGENCIES, AND CAN ATTEND THE NRC COMMISSIONERS' MEETINGS ON THE SPECIFIC EXPORT.

IN ADDITION, DOE HAS NO COMPLETE RECORD OF GENERAL AUTHORIZATIONS. NUCLEAR REACTOR TECHNOLOGY EXPORTS TO COUNTRIES WHO HAVE NOT SIGNED THE NPT, WITH WHOM THE U.S. DOES NOT HAVE AN AGREEMENT OF COOPERATION, WHO HAVE WEAPONS PROGRAMS, WHO DO NOT ALLOW IAEA INSPECTION OF THEIR NUCLEAR FACILITIES, EVEN WHO HAVE DETONATED A NUCLEAR BOMB, ARE AUTHORIZED UNDER CFR 810 GENERAL AUTHORIZATIONS. CONGRESS IS NOT NOTIFIED. THERE IS NO WAY OF KNOWING THE FULL EXTENT OF INDIRECT EXPORTS OF U.S. NUCLEAR TECHNOLOGY--SHORT OF SUBPOENATING THE ENTIRE NUCLEAR INDUSTRY.

EVEN DISCOVERING U.S. OVERSEAS AFFILIATES IN THE NUCLEAR BUSINESS IS

EXTREMELY DIFFICULT. DOE DOES NOT REQUIRE U.S. COMPANIES TO SUBMIT THEIR OVERSEAS LICENSING AGREEMENTS. FOREIGN SUBSIDIARIES AND LICENSEES FREQUENTLY OPERATE UNDER TOTALLY DIFFERENT NAMES THAN THE U.S. FIRM. HOW AND WITH WHOM THE U.S. INDUSTRY OPERATES IS NOT AVAILABLE TO THE PUBLIC. THE FINANCIAL AND LEGAL TIES OVERSEAS ARE NOT PUBLIC INFORMATION, EITHER THROUGH THE GOVERNMENT OR THE COMPANIES. BECAUSE OF A WESTINGHOUSE BRIEF TO THE U.S. DISTRICT COURT OF APPEALS, THE CENTER KNOWS THAT WESTINGHOUSE HAS AT LEAST EIGHT FOREIGN AFFILIATES IN THE NUCLEAR BUSINESS. THE STATE DEPARTMENT WILL CONFIRM THAT BOTH ENSA (SPAIN) AND FRAMATOME (FRANCE) OPERATE UNDER WESTINGHOUSE LICENSES BUT EITHER THEY DO NOT KNOW OR THEY WILL NOT SAY HOW THE RELATIONSHIP WORKS AND WHAT HAS BEEN EXPORTED UNDER THESE LICENSES. AND THE COMPANIES ARE EQUALLY SILENT.

* * *

UNFORTUNATELY THE POSSIBLE SALE OF A WESTINGHOUSE NUCLEAR REACTOR TO PAKISTAN THROUGH A SPANISH AFFILIATE IS NOT THE ONLY TROUBLING CASE. SINCE JANUARY, THE CENTER HAS TRIED TO COLLECT INFORMATION ON DOE AUTHORIZED EXPORTS. THE TASK HAS NOT BEEN EASY. WE HAVE PIECED TOGETHER CASES BY USING MATERIALS FROM A WIDE RANGE OF SOURCES--MUCH AS WE ASKED, NONE OF THE SOURCES HAVE BEEN THE U.S. GOVERNMENT.

AT THE HEIGHT OF THE FALKLAND CRISIS THIS SPRING, A CANADIAN PUBLIC INTEREST GROUP SENT AMERICANS FOR DEMOCRATIC ACTION A DOCUMENT ON CANADIAN INVOLVEMENT IN ARGENTINA'S NUCLEAR PROGRAM. THE DOCUMENT WAS CLASSIFIED BY THE CANADIAN GOVERNMENT AND HAD BEEN LEAKED TO THE CANADIAN PRESS. MENTIONED BRIEFLY IN THE DOCUMENT WAS SHIPMENT OF NATURAL URANIUM FUEL BUNDLES FOR THE 600 MW EMBALSE REACTOR IN ARGENTINA, SCHEDULED FOR JUNE

1982. THE COMPANY MENTIONED AS HAVING THE CONTRACT TO SUPPLY THE FUEL FROM OTTAWA IS THE CANADIAN FIRM, COMBUSTION ENGINEERING - SUPER HEATER, LIMITED (CE-SH). HOWEVER, THE U.S. FIRM COMBUSTION ENGINEERING (CE) HOLDS 100% VOTING POWER IN CE-SH, AND THE CHAIRMAN OF CE-SH, ARTHUR J. SANTRY, JR., IS ALSO THE PRESIDENT OF CE.

ARGENTINA HAS REPEATEDLY REFUSED TO SIGN THE NPT. IT HAS ANNOUNCED IT IS CONSIDERING EXPORTING PLUTONIUM. ITS REPROCESSING FACILITY WILL NOT BE OPEN FOR IAEA INSPECTION. ITS CANDU REACTOR (LIKE PAKISTAN'S KARACHI NUCLEAR REACTOR) CAN NOT BE ADEQUATELY SAFEGUARDED AGAINST DIVERSIONS.* ARGENTINA IS WIDELY SUSPECTED OF BUILDING NUCLEAR WEAPONS. YET THE EXPORT WOULD HAPPEN COMPLETELY OUTSIDE U.S. GOVERNMENT JURISDICTION.

CANADIAN LONGSHOREMEN REFUSED TO LOAD THE URANIUM ON THE ARGENTINIAN SHIP AND THE FUEL REMAINS IN CANADA. ARGENTINA AND CE-SH PLAN TO TRY TO FLY THE FUEL OUT OF CANADA, BUT FOR NOW THE SHIPMENT HAS BEEN STOPPED.

SOUTH AFRICA HAS ALSO BENEFITTED FROM THIS LOOPHOLE IN NON-PROLIFERATION POLICY. SOUTH AFRICA REFUSES TO SIGN THE NPT, IS SUSPECTED OF DETONATING A NUCLEAR BOMB OFF ITS WESTERN COAST, REFUSES TO ALLOW IAEA INSPECTION OF ITS ENRICHMENT FACILITY, AND HAS REPEATEDLY STATED IT CAN NOT RULE OUT THE NUCLEAR WEAPONS OPTION. A FUEL LICENSE HAS BEEN PENDING AT THE NRC SINCE THE MID-1970'S BECAUSE OF PROLIFERATION CONCERNS. BUT THE SOUTH AFRICA NUCLEAR PROGRAM MOVES AHEAD WITH THE HELP OF U.S. BUSINESSES.

EARLY THIS YEAR, ASSISTANT SECRETARY OF STATE JAMES MALONE WAS

* INTERIM REPORT ON NUCLEAR POWER IN ONTARIO, ONTARIO: ROYAL COMMISSION ON ELECTRIC POWER PLANNING, 1978, PP. 158, 159.

NEGOTIATING WITH SOUTH AFRICA TO BREAK THE IMPASS OVER FUEL EXPORTS FROM THE U.S. SOUTH AFRICA CONTINUED TO REFUSE TO SIGN THE NPT, WHICH MADE SECURING A LICENSE FROM THE U.S. UNLIKELY. YET THE STATE DEPARTMENT HAS RECENTLY STATED IN SENATE HEARINGS THAT IT WAS AWARE THAT TWO U.S. FIRMS-- EDLOW INTERNATIONAL AND SHUCO--WERE ACTING AS BROKERS FOR SOUTH AFRICA AND ARRANGING FOR FUEL SALES TO SOUTH AFRICA BY U.S. ALLIES. RATHER THAN EXERT LEVERAGE OVER SOUTH AFRICA BY MAKING THE TRANSACTION PUBLIC AND REPORTING IT TO CONGRESS, THE STATE DEPARTMENT AND DOE KEPT THE TRANSACTION A SECRET, AND THEN ANNOUNCED THEY WERE SHOCKED WHEN THE FUEL ARRANGEMENT FINALLY CAME TO LIGHT. THIS BLATANT UNDERCUTTING OF NON-PROLIFERATION POLICY WAS BOTH LEGAL AND SECRET.

ANOTHER CASE INVOLVES IRAQ. ACCORDING TO THE ATOMIC INDUSTRIAL FORUM, IRAQ HAS ORDERED A 900 MW NUCLEAR REACTOR FROM WESTINGHOUSE'S FRENCH AFFILIATE AND LICENSEE--FRAMATOME. AND THE TRANSACTION CAN TAKE PLACE UNDER DOE GENERAL AUTHORIZATIONS. IRAQ IS WIDELY BELIEVED TO BE BUILDING A NUCLEAR WEAPON. ISRAEL, UNSATISFIED WITH IAEA SAFEGUARDS ON THE IRAQI RESEARCH REACTOR, BOMBED AND DESTROYED THE REACTOR IN JUNE 1981.

THESE CASES MIGHT BE ONLY THE TIP OF THE ICEBERG. DOE AUTHORIZATIONS SERIOUSLY THREATEN THE NON-PROLIFERATION GOALS OF THIS COUNTRY. THE CASES ABOVE ARE CASES WE KNOW OF; WE HAVE NO WAY OF KNOWING IF THEY REPRESENT 1% OR 90% OF THE INDIRECT TRANSACTIONS THAT ARE TAKING PLACE SECRETLY. THE CENTER FOR DEVELOPMENT POLICY FEELS DOE AUTHORIZED EXPORTS CREATE A SERIOUS LOOPHOLE IN NON-PROLIFERATION POLICY. WE URGE THIS COMMITTEE TO SERIOUSLY CONSIDER ALTERNATIVES.



Department of Energy
Washington, D. C. 20585

MAY 19 1982

Ms. Virginia B. Foote
Associate Director
Center for Development Policy
418 Tenth Street, SE
Washington, DC 20003

Dear Ms. Foote:

This is in response to your Freedom of Information request dated April 19, 1982 (No. 0421d203 D). You have asked for the lists of 10 CFR Part 810 cases for 1980 and 1981 compiled for the Honorable Jonathan Bingham, and for a list of all cases approved, pending and advisory from the date when 10 CFR Part 810 went into effect, to the present.

The Department of Energy (DOE) provides herewith the lists compiled for Congressman Bingham. However, portions of these documents contain information which originated within the Office of Export Administration, U.S. Department of Commerce (DOC), and which is protected by the confidentiality provisions of Section 12(c) of the Export Administration Act of 1979. Consequently, the information deleted is exempt from disclosure under Section 552(b)(3) of the Freedom of Information Act (FOIA). This information is being denied by Vincent F. DeCain, Acting Director, Office of Export Administration.

The information withheld under 552(b)(3) is protected by the confidentiality provisions of the Export Administration Act of 1979 (the Act). Specifically, Section 12(c) of the Act provides in pertinent part as follows:

Information obtained under this Act on or before June 30, 1980, which is deemed confidential, including Shipper's Export Declarations, or with reference to which a request for confidential treatment is made by the person furnishing such information shall be exempt from disclosure under Section 552 of title 5, United States Code, and such information shall not be published or disclosed unless the Secretary determines that the withholding thereof is contrary to the national interest. Information obtained under this Act after June 30, 1980, may be withheld only to the extent permitted by statute, except that information obtained for the purpose of consideration of, or concerning, license applications under this Act shall be withheld from public disclosure unless the release of such information is determined by the Secretary to be in the national interest. (Section 12(c), 50 U.S.C. App. 241.(c) (Supp. III)).

This section does not merely authorize the Secretary of Commerce to maintain confidentiality of such information, but requires that it not be disclosed unless the Secretary determines its release is in the "national interest."

Any appeal of the decision to deny this information must be coordinated with DOJ. If an appeal is taken, please write Joseph M. Levine, Office of the Assistant General Counsel for Administration, U.S. Department of Commerce, Room 5879, Washington, DC 20230.

Furthermore, in those portions of the lists which did not originate with the DOJ, DOE has deleted proprietary and trade information protected under 5 U.S.C. § 552(b)(4). Under 5 U.S.C. § 552(b)(4), trade secrets and commercial or financial information obtained from a person and privileged or confidential are exempt from mandatory disclosure. The commercial information contained in the lists is considered to be confidential if release to the public would be likely to cause substantial harm to the competitive position of the companies involved (*National Parks and Conservation Assn. vs. Morton*, 498 F.2d 765 (D.C. Cir. 1974)). We have determined that such harm would be likely to flow from disclosure of this material.

Title 10, Code of Federal Regulations, Section 1004.1, requires the disclosure of information which the DOE is authorized to withhold under 5 U.S.C. § 522 unless such disclosure is found to be contrary to the public interest. The disclosure of the confidential proprietary data at issue, withholdable pursuant to Exemption 4, could constitute a violation of the Trade Secrets Act, 18 U.S.C. § 1905, unless its release is otherwise authorized by law (*Chrysler Corp. vs. Brown*, 441 U.S. 281 (1979)). Since there is no DOE regulation currently in effect which constitutes an "authorization by law" for the release of information falling within § 1905, release of the Exemption 4 material as being "in the public interest" is prohibited.

Regarding the other part of your request, for a "list of all cases approved, pending and advisory from the date when 10 CFR Part 810 went into effect to the present," DOE is unable to comply because such a list does not exist and FOIA does not require DOE to generate documents in response to Freedom of Information requests.

The Freedom of Information regulations provide, in Title 10, Code of Federal Regulations, Section 1004.3(a) that an appeal may be had for portions of this letter which constitute a denial to your request. Such appeal must be made in writing, within 30 days of receipt of the denial, to the Director, Office of

Hearings and Appeals, U.S. Department of Energy, 12th and Pennsylvania Ave., NW, Washington, DC 20461. Judicial review will thereafter be available within the District in which you reside or have your principal place of business or in which the department's records are situated, or in the District of Columbia.

Pursuant to the title 10 CFR Section 1004.7(b)(2), I am the individual primarily responsible for the above denial.

Sincerely,

Handwritten signature of William C. Torres in black ink, with a circled '11' to the left.

Director
Office of International
Security Affairs

[DOE's response to the Center for Development Policy under the Freedom of Information Act contained five sections: Cases approved in 1980, Advisory Opinions—1980, Cases approved in 1981, Advisory Opinions—1981, and pending cases. Due to space limitations, only the cases approved in 1980 and 1981, and those pending are reprinted here. The remainder of the information is retained in subcommittee files.]

Country Technology/Activity

The Secretary of Energy approved a request from _____ for authorization to transfer manufacturing technology for _____ heat transport pumps to _____. The _____ licensing arrangement with the _____ prohibits the export of this technology and of pumps manufactured using this technology to other _____ countries without _____ approval. The Secretary's approval applies only to _____ heat transfer pumps (nuclear centrifugal pumps) and to manufacturing technology related thereto. There is to be no export of heat transport pump design technology, computer codes, or technology related to improving heat transport pump performance, nor is there to be retransfer of technology, or of heat transport pumps manufactured using this technology, without obtaining prior approval of the Secretary. (Approved: 12/17/80)

The Secretary of Energy approved a request from _____ for authorization to provide In-Core Fuel Management Training Program for _____ nuclear power reactor operators. The approval did not provide for or imply subsequent approval of any follow-on activities, including the program of modifications of _____ computer codes to make them compatible with _____ computers, or continued support from _____ in updating codes and methods, or technical assistance to make _____ programs operational on a _____ computer. (Approved: 7/26/80)

List of Cases Approved in 1981 Pursuant to Sec. 57.b.(2) of the Atomic Energy Act of 1954, as amended as Implemented by DOE's Regulations 10 CFR Part 810

Country	Technology/Activity
	<p>The Secretary approved an arrangement which will permit to retransfer technology to countries listed in 10 CFR Part 810 without being required to seek specific DOE authorization for each retransfer so long as a governmental agreement calling for consultations on such retransfers is in effect. (Approved: 3/10/81)</p>
	<p>The Secretary approved a request by the of to export a for ultimate end-use in an to The plant is to be constructed by The Government of obtained assurances from the Government of which: (1) explicitly exclude any uses for the that would result in any nuclear explosive device; (2) ensure that adequate physical security measures are applied; and (3) ensure that IAEA safeguards will be applied to the facility and to any other facility in constructed using the same technology. (Approved: 5/21/81)</p>
	<p>The Secretary approved a request from the for authorization to export to the which could produce up to per day. This authorization was subject to the providing assurance that the material produced in the will be used for peaceful purposes only and not for any nuclear explosive device or for research on or development of any nuclear explosive device. The Department of State has the responsibility to obtain this assurance; it has not yet approached the (Approved: 6/1/81)</p>
	<p>The Secretary approved a request from the and for authorization to assist the in the same conditions as were applied to authorization were applied to this authorization. (Approved: 6/1/81)</p>
	<p>The Secretary approved a request from the for authorization to provide a nuclear reactor training program of one-year duration to a citizen of the would receive training in the development of analytical models describing the behavior of light water reactor fuel under operating and accident conditions.</p> <p>. The request was approved provided that</p>

would not have access to: (1) any naval reactor computer codes; (2) proprietary or classified activities at its (3) proprietary and classified laser enrichment technology; or (4) any production facility, except for the escorted tour of fuel fabrication facility. (Approved: 6/30/81)

The Secretary approved a request from) for authorization to export to The authorization was conditioned upon an assurance from that the would not be reexported nor replicated, and research carried out with would be protected as restricted* data and that the level of protection would be equal to the U.S. "Confidential". (Approved: 6/81)

The Secretary approved a request from the for authorization to export instrumentation to be used in the nuclear waste treatment facility of the reprocessing plant at The instrumentation included which would be used to control and monitor fuel reprocessing and associated waste treatment units. (Approved: 7/2/81)

The Secretary approved a request from for authorization to transfer to technology to manufacture 150 mw steam generators for systems. These steam generators are being provided in connection with a sale

to This authorization excluded the transfer of steam generator design technology, design computer codes or technology related to improving steam generator performance. It also restricted the retransfer of the technology or steam generators produced through the use of the technology without the prior approval of It also required a written certification from concerning the protection of technical data relating to U.S. naval nuclear propulsion plants. (Approved: 7/20/81)

The Secretary approved a request from for authorization to permit its licensees, supply nuclear components to the The components, consisting of steam generators, main coolant pumps and fuel racks, would be manufactured in using technology and installed in two pressurized water reactors to be supplied to the (Approved: 8/10/81)

Country

Technology/Activity

The Secretary approved a request from [redacted] for authorization to export [redacted]

[redacted] studies, provided they will not be reexported, and research carried out with the [redacted] will be subjected to security protection equivalent to U.S. "Confidential". (Approved: 9/25/81)

The Secretary approved a request from [redacted] for authorization to export to [redacted] of up to [redacted] for two years. The [redacted] and can produce [redacted]

[redacted] It has a somewhat smaller [redacted] than [redacted] previously exported. The authorization was conditioned upon an assurance from the [redacted] would not be reexported nor replicated, and research carried out with [redacted] would be protected as restricted* data and that the level of protection would be equal to the U.S. "Confidential". (Approved: 10/14/81)

The Secretary approved a request from [redacted] for authorization to transfer manufacturing technology for heat and ion exchangers and pressurizers to [redacted] via the [redacted]. The technology would permit [redacted] to assist in the manufacture of the equipment needed for [redacted] and eventually be able to manufacture such equipment for other [redacted] that the plan to manufacture. The authorization excluded the export of design technology, design computer codes or technology related to improving the performance of these components, and prohibited the reexport from [redacted] of technology or components produced through the use thereof without the prior approval of [redacted]. The Secretary further determined that it would not be inimical for other U.S. firms or their foreign subsidiaries to transfer comparable manufacturing technology to [redacted] under the same terms and conditions as those imposed on [redacted]. (Approved: 11/25/81)

*French term meaning restricted access; no relation to U.S. classification term "Restricted Data"

Pending cases submitted pursuant to Sec. 57.b.(2) of the Atomic Energy Act of 1954, as amended, as implemented by DOE's Regulations 10 CFR Part 810

COUNTRY	TECHNOLOGY/ACTIVITY
-	. requested authorization to provide compressors to . This request is pending receipt of additional information from
	. requested authorization for a . licensee to provide valves to . for use in nuclear power reactors. Pending determination by the Secretary.
	. proposes to transfer commercial nuclear reactor technology to trainees from . Technology to be transferred is in areas of system design, project management, safety analysis and quality control. No classified or nuclear propulsion information will be involved. Request out for comments.
	. requested authorization to provide valves to for use in . This request has now been acted on. . was advised that we were unable to recommend approval because the valves are for use in an unsafeguarded plant and it is U.S. policy not to provide assistance to such facilities.

APPENDIX 2

PROCEDURES FOR GRANTING DEPARTMENT OF ENERGY AUTHORIZATIONS UNDER THE ATOMIC ENERGY ACT

SECTION 3. OFFICES FOR COORDINATION

a. Department of State—The Office of Export and Import Control in the Nuclear Energy and Energy Technology Division of the Bureau of Oceans and International Environmental and Scientific Affairs.

b. Department of Energy—For Parts B, D, and F of these procedures, the Office of the Assistant Secretary for Defense Programs. For Parts C and E of these procedures, the Office of Nuclear Affairs, in the Office of International Affairs.

c. Department of Defense—The Office of the Assistant Secretary for International Security Affairs.

d. Department of Commerce—The Office of Export Administration in the Bureau of Trade Regulations.

e. Arms Control and Disarmament Agency—The Nuclear Exports Division of the Bureau of Non-Proliferation.

f. Nuclear Regulatory Commission—The Office of International Programs, Assistant Director for Export/Import and International Safeguards.

SECTION 4. COORDINATION AND MONITORING

The Interagency Subgroup on Nuclear Export Coordination of the National Security Council (NSC) Ad Hoc Group on Non-Proliferation shall, without prejudice to its authority to carry out other functions, monitor and facilitate the interagency processing of the activities referred to in section 1(b), and serve as a forum for exchanging and coordinating views. This Subgroup shall meet as frequently as necessary, normally twice a month. This Subgroup shall establish such procedures as are necessary for its effective functioning.

SECTION 5. RESOLUTION OF INTERAGENCY DISAGREEMENTS

a. If, after appropriate consultation, any agency listed in section 2 does not agree with a proposed Executive branch action pursuant to section 54, 57b(2), 64, 109, 111b(1), 126a or 131 of the Atomic Energy Act, or section 309(c) or 402(a) of the Act, the steps set forth below may be followed, normally in the order indicated, to facilitate resolution of the disagreement:

(i) Consideration in the Subgroup on Nuclear Export Coordination of the NSC Ad Hoc Group on Non-Proliferation;

(ii) Consideration in the NSC Ad Hoc Group on Non-Proliferation;

(iii) Any other procedures of the NSC that are appropriate;

(iv) Referral to the President.

b. Recourse to the steps in this section shall be taken expeditiously. An agency wishing to have recourse to any of the steps above shall so indicate immediately to the offices specified in section 3. The agency concerned shall normally give five days notice before initiating action under steps (ii), (iii), or (iv).

c. Nothing in this section shall derogate from the statutory authority of any agency. If any agency considers that all statutory requirements have been met and wishes to proceed with an action within its jurisdiction covered by these procedures notwithstanding

the existence of an interagency disagreement, it shall normally provide all other concerned agencies with five working days notice.

SECTION 6. CONTENT OF JUDGMENTS, FINDINGS AND CONSIDERATIONS UNDER THESE PROCEDURES

Judgments, findings and determinations under these procedures shall address the matters required by the applicable section of the Atomic Energy Act.

SECTION 7. TECHNICAL PROVISIONS

- a. These procedures take effect on June 7, 1978.
- b. The processing of any action subject to these procedures shall not be delayed because of the entry into effect of these procedures. Clearances obtained or matters resolved under procedures previously in effect need not be reconsidered for the sole purpose of complying with new procedural requirements.
- c. Nothing in these procedures shall affect the ability of any agency to protect classified or proprietary information pursuant to applicable law.
- d. These procedures may be amended at any time subject to agreement among the agencies specified in section 1(c).

PART B. EXECUTIVE BRANCH JUDGMENTS UNDER SECTION 126a(1) OF THE ATOMIC ENERGY ACT

SECTION 1. PROCEDURES

a. Except as provided in section 2 of this Part, the Nuclear Regulatory Commission shall promptly transmit any properly completed export license application or proposed general license or proposed exemption from licensing requirements to the offices listed in paragraphs a through e of the section 3 of Part A.

b. As promptly as possible, but in no event later than 15 days after the receipt of each license application or proposed general license or proposed exemption, the offices listed in paragraphs b through e of section 3 of Part A shall review the submission and shall advise the Office of Export and Import Control:

(i) Whether that agency believes that any additional information is required in connection with preparation of the Executive branch judgment. In the event that such information is required, the Office of Export and Import Control shall seek to obtain and provide the information as promptly as possible. If additional information required is essential to further Executive branch processing, the Office of Export and Import Control may return the application, proposed general license, or proposed exemption to the Nuclear Regulatory Commission, in which event the schedule of actions and deadlines set out herein shall recommence upon receipt by the Office of a substantively complete application, proposed general license or proposed exemption from the Nuclear Regulatory Commission;

(ii) Whether that agency believes a license application appears to raise issues which will require more extensive consideration than is normally necessary in Executive branch processing or similar license applications. If such issues appear to be present, the Office of

Export and Import Control will normally schedule consideration of these issues at the earliest possible meeting of the Subgroup on Nuclear Export Coordination and shall as promptly as possible initiate appropriate steps, including those required to obtain any necessary policy decisions and to initiate necessary diplomatic consultations;

(iii) Of their preliminary views on the license application, if so requested by the Office of Export and Import Control.

If the Department of Energy is the license applicant pursuant to section 111a of the Atomic Energy Act, the designee of the Secretary of Energy shall not be required to advise the Office of Export and Import Control of its views pursuant to this paragraph.

c. No later than five working days after receipt of its copy of a license application from the Nuclear Regulatory Commission, the Department of Energy shall, as appropriate, if the proposed export appears to be consistent with the applicable agreement for cooperation, request confirmation in writing from the nation or group of nations under the agreement for cooperation of which the export is to take place, that among other things:

(i) The export will be subject to the terms and conditions of the agreement for cooperation;

(ii) The consignee is authorized to receive the export; and

(iii) Physical security measures will be maintained with respect to the export that as a minimum provide protection comparable to that set forth in document INFCIRC 225/Rev. 1 of the International Atomic Energy Agency, entitled, "The Physical Protection of Nuclear Material."

Such confirmation shall, as appropriate, be requested with respect to any intermediate destinations and the ultimate destination of the export that are identified in the license application. If any such confirmation is not received within fifty-five days after receipt of the license application by the Office of Export and Import Control in the Department of State, the Office may return the application to the Nuclear Regulatory Commission, in which event the schedule of actions and deadlines set out herein shall recommence after receipt of the confirmation and return to the Office by the Nuclear Regulatory Commission of the application.

d. Upon receipt of its copy of the license application from the Nuclear Regulatory Commission, the Department of Energy shall determine whether the proposed export involves material with respect to which the United States has agreed to consult with or obtain the approval of any other nation or group of nations prior to its export. If such an undertaking exists, the Department of Energy shall promptly inform the Department of State so that appropriate action may be taken.

e. If the license application is for an export of high enriched uranium, plutonium or uranium-233, equal to or exceeding formula quantities (as defined in 10 CFR 73.30) the Department of Energy shall prepare an analysis of the technical and economic justification for the use of such material, including whether the quantities requested are necessary for the efficient and continuous operation of the facility involved. This analysis shall be provided to the Office of Export and Import Control of the Department of State within 30 days after receipt by the Department of Energy of its copy of the export license application or as soon thereafter as possible. This

analysis shall be provided to concerned agencies and shall be taken into consideration in preparing the Executive branch judgment.

f. As promptly as possible following receipt of the information in paragraph b, and no later than 30 days after its receipt of the license application, proposed general license or proposed exemption, the Office of Export and Import Control shall prepare and transmit to the offices listed in paragraphs b through e of section 3 of Part A, a proposed general license or proposed exemption. If additional information has been requested from the Nuclear Regulatory Commission pursuant to paragraph b(i), or if actions are pending pursuant to paragraphs b(ii), d or e, this shall be noted in transmitting the proposed Executive branch judgment.

g. No later than ten days after the date of receipt of a proposed Executive branch judgment, the designees of the Secretaries of Energy, Defense, and Commerce, and the Director of the Arms Control and Disarmament Agency, shall each provide the Office of Export and Import Control their written views on the proposed Executive branch judgment transmitted pursuant to paragraph f. When providing its views, the Department of Energy shall transmit a copy of any confirmation obtained pursuant to paragraph c and, if applicable, any approval or confirmation obtained pursuant to paragraph d. If a required confirmation or approval is not available at that time, the Department of Energy shall so advise the Office of Export and Import Control. Upon receipt of the required confirmation, the Department of Energy shall forward it as expeditiously as possible to the Office of Export and Import Control and shall simultaneously advise the Nuclear Regulatory Commission so that the procedures in paragraph c above may be undertaken. In the event of any disagreement which cannot be resolved between agencies, the provisions in section 5 of Part A shall be followed.

h. An Executive branch judgment shall normally address the matters required by section 126a(1) of the Atomic Energy Act with respect to both any intermediate destinations and the final destination of the export that are identified in the license application. Notice of any transfer of the export between intermediate destinations and the final destination shall be received by the Department of Energy. Any action required under Part E for approval of transfers between intermediate and final destinations specified in an application for an export license and which are expected to occur within one year of issuance of a license, normally will be accomplished without unnecessary duplication of procedural steps during the review of the license application, and publication in the Federal Register will take place as soon as possible after issuance of the export license. If any such transfer does not occur within one year following issuance of the export license, an appropriate request for approval of the transfer shall be submitted to the Department of Energy for action pursuant to the procedures in Part E.

i. A single Executive branch judgment may address more than a single application to the extent that they involve exports of similar equipment or material to the same country in the same general time frame, of similar significance for nuclear explosive purposes and under reasonably similar circumstances.

j. An Executive branch judgment may address the matters required by section 126a(1) of the Atomic Energy Act by expressing the view that there is no material changed circumstance associated

with a new license application from those existing at the time of issuance of a previous license for an export to the same country, where the previous license was subject to full analysis by the Executive branch.

k. An Executive branch judgment may address any or all of the matters required by section 126a(1) of the Atomic Energy Act by reference to an analysis previously submitted to the Nuclear Regulatory Commission if the offices in paragraphs a through e of section 3 of Part A agree that there is no material changed circumstance with respect to such matter or matters.

l. No later than 60 days after receipt of a license application, proposed general license or proposed exemption by the Department of State, the Department shall transmit to the Nuclear Regulatory Commission the Executive branch judgment on the license application, proposed general license or proposed exemption.

m. Any time period in this section may be extended by the Deputy Assistant Secretary of State for Nuclear Energy and Energy Technology: *Provided*, That the time period in paragraph 1 may be extended only if in the view of the Secretary of State or his designee it is in the national interest to allow additional time, in which case he shall notify the Committee on Foreign Relations of the Senate, the Committee on International Relations of the House of Representatives, and the offices listed in paragraphs b through f of section 3 of Part A, of such extension.

n. The Office of Export and Import Control shall maintain for at least five years records of steps set forth above and the dates on which they were taken.

SECTION 2. SMALL QUANTITIES

a. Pursuant to the authority in section 126a(1) of the Atomic Energy Act to determine that any export in a category would not be inimical to the common defense and security because it lacks significance for nuclear explosive purposes, the following categories of exports shall not normally require case-by-case Executive branch review under these procedures:

(1) Byproduct material: all types and quantities, except tritium in quantities exceeding 1,000 curies;

(2) Source material: all exports for nonnuclear end uses, and exports of less than 250 kilograms for nuclear end uses;

(3) Low-enriched uranium: one kilogram or less of contained uranium-235;

(4) High-enriched uranium: 0.040 effective kilograms or less;

(5) Plutonium and uranium 233: 10 grams or less;

(6) Deuterium: 225 kilograms of heavy water or its equivalent deuterium content in any other form;

(7) Nuclear grade graphite: 100 kilograms or less;

(8) Nuclear equipment: all exports with a value under \$100,000.

b. This section shall not apply to exports with end uses related to isotope separation, chemical reprocessing, heavy water production, plutonium handling, such types of advanced technology reactors as may be agreed by the agencies listed in section 1(c) of Part A, and initial exports of nuclear equipment to foreign nuclear facilities, and is subject to other limitations which the Executive branch or

the Nuclear Regulatory Commission may, from time to time, deem necessary.

PART C. FOREIGN DISTRIBUTIONS UNDER SECTIONS 54 AND 64 OF THE ATOMIC ENERGY ACT

SECTION 1. PROCEDURES

a. The Office of Nuclear Affairs of the Department of Energy shall prepare an analysis of proposed distributions of source and special nuclear material. The Office shall transmit the analysis to the offices listed in paragraphs a, c, e, and f of section 3 of Part A. The analysis shall include a statement of the purpose of the distribution, reference to the applicable agreements for cooperation, other pertinent information and a recommended course of action. The analysis will specify whether the proposed distribution appears to raise issues which will require more extensive consideration than is normally necessary for Executive branch processing of similar requests and the Office of Nuclear Affairs will initiate as promptly as possible appropriate steps, including those required in order to obtain any necessary policy decisions and initiate any necessary diplomatic consultation.

b. No later than 30 days following receipt of the analysis, the designees of the Secretaries of State and Defense, the Director of the Arms Control and Disarmament Agency and the Nuclear Regulatory Commission shall provide the Office of Nuclear Affairs with their written concurrence or such other views, comments or proposed courses of action which they consider appropriate. In the event of any disagreement which cannot be resolved between agencies, the provisions in section 5 of Part A shall be followed.

c. No later than 30 days following the expiration of the time limit set forth in paragraph b, the Office of Nuclear Affairs shall determine whether to authorize the proposed distribution: *Provided*, That if recourse is made to the procedures in section 5 of Part A, this period shall be 60 days.

d. Any time period in this section may be extended by the Deputy Assistant Secretary for International Programs or his designee.

SECTION 2. SMALL QUANTITIES

The Department of Energy, without further interagency concurrence or consultation may, to the extent authorized in sections 54, 64 and 82 of the Atomic Energy Act, distribute such quantities of material as are specified in paragraph a of section 2 of Part B, subject to the qualifications and conditions contained in paragraph b of that section.

PART D. DIRECT OR INDIRECT PRODUCTION OF SPECIAL NUCLEAR MATERIAL ABROAD PURSUANT TO SECTION 57b OF THE ATOMIC ENERGY ACT

SECTION 1. PROCEDURES

a. Following receipt by the Department of Energy of any application (which is properly submitted under 10 CFR, Part S10) for spe-

cific authorization, the Office of Defense Programs of the Department of Energy shall submit the application, an analysis, and a preliminary staff recommendation to the offices listed in paragraphs a and c through f of section 3 of Part A.

b. The analysis provided for in paragraph a, shall specify whether the application appears to raise issues which will require more extensive considerations than is normally necessary for Executive branch processing of similar applications, and the Assistant Secretary for Defense Programs or his designee shall as promptly as possible initiate appropriate steps, including those required in order to obtain any necessary policy decisions and to initiate any necessary diplomatic consultations.

c. No later than 30 days after receipt of the analysis, the designees of the Secretary of State, Defense, Commerce, the Director of the Arms Control and Disarmament Agency, and the Nuclear Regulatory Commission shall provide the Office of Defense Programs of the Department of Energy with written concurrence in the preliminary staff recommendation such other views, comments or proposed courses of action which they consider appropriate, including such analysis as may be needed to support their position. In the event of any disagreement which cannot be resolved among the agencies, the provisions in section 5 of Part A shall be followed.

d. No later than 30 days following receipt of the concurrence or views as provided in paragraph c, the Office of Defense Programs shall provide the Secretary of Energy with a recommendation, including the views of the agencies listed in paragraph c, concerning his action on the application: *Provided*, That if recourse is made to the procedures in section 5 of Part A, this period shall be 60 days.

e. Any time period in this section may be extended by the Assistant Secretary for Defense Programs or his designees.

SECTION 2. CONTINUED EFFECT OF CURRENT PROCEDURES

a. Pursuant to section 603 of the Act, 10 CFR Part 810, Unclassified Activities in Foreign Atomic Energy Programs continues in effect.

b. Any amendment of Part 810 which involves a determination by the Secretary of Energy regarding generally authorized activities shall be made in accordance with these procedures.

PART E. SUBSEQUENT ARRANGEMENTS UNDER SECTION 131 OF THE ATOMIC ENERGY ACT

SECTION 1. PROCEDURES

a. Any request from a nation or group of nations for a subsequent arrangement as defined in section 131(2) of the Atomic Energy Act or request for an enrichment authorization under section 402(a) of the Act shall, if it appears consistent with applicable law and agreements and if submitted in appropriate form, be transmitted promptly by the Office of Nuclear Affairs of the Department of Energy to the offices listed in paragraphs a, and c through f of section 3 of Part A, together with any supporting documents. All references to the term "subsequent arrangement" shall, for

purposes of this Part, be deemed to include an enrichment authorization.

b. As promptly as possible, but no later than 15 days after receipt of each request, the offices listed in paragraphs a, and c through f of section 3 of Part A shall review the request and shall advise the Office of Nuclear Affairs.

(i) Whether that agency believes that any additional information is required. In the event that such information is required, the Office of Nuclear Affairs shall seek to obtain and provide the information as promptly as possible;

(ii) Whether that agency believes the request appears to raise issues which will require more extensive consideration than is normally necessary in Executive branch processing of similar requests. If such issues appear to be present, the Office of Nuclear Affairs will normally schedule consideration of these issues at the earliest possible meeting of the Subgroup on Nuclear Export Coordination and shall as promptly as possible initiate appropriate steps, including those required to obtain any necessary policy decisions and to begin any necessary diplomatic consultations; and

(iii) Of their preliminary view, if so requested by the Office of Nuclear Affairs.

c. The Office of Nuclear Affairs shall (if a request for a subsequent arrangement is involved, no later than 15 days after the expiration of the time limit set forth in paragraph b)¹ prepare and transmit to the offices listed in paragraphs a, and c through f of section 3 of Part A, a proposed subsequent arrangement, proposed denial, or other proposed course of action. In this transmittal, the Office of Nuclear Affairs shall advise the Office of Export and Import Control of the Department of State if, in the view of the Department of Energy, a proposed subsequent arrangement is likely to involve negotiations of a policy nature pertaining to arrangements for the storage or disposition of irradiated fuel elements or approvals for the transfer, for which prior approval is required under an agreement for cooperation, by a recipient of source or special nuclear material, production or utilization facilities, or nuclear technology. This transmittal shall also specify any steps deemed appropriate to expedite a proposed subsequent arrangement in the instances specified in section 131a(3) of the Atomic Energy Act. The transmittal may also include an analysis where necessary in the judgment of the Office of Nuclear Affairs to facilitate review. Upon the written request of any recipient office within 10 days after receipt of a proposed subsequent arrangement, the Office of Nuclear Affairs shall prepare and transmit an analysis of the proposed subsequent arrangement.

d. No later than 20 days after receipt of the proposed subsequent arrangement pursuant to paragraph c, the designees of the Secretary of State, the Secretary of Defense, the Secretary of Commerce, the Director of the Arms Control and Disarmament Agency, and the Nuclear Regulatory Commission shall provide the Office of Nuclear Affairs with their written concurrences or such other views, comments, or proposed courses of action which they consider appropriate. The response of the designee of the Director of the Arms

¹ A subsequent arrangement may be initiated in certain circumstances by the Department of Energy, in which case paragraphs a and b are not applicable.

Control and Disarmament Agency shall also include a declaration of any intention of the Director to prepare a Nuclear Proliferation Assessment Statement pursuant to section 131a of the Atomic Energy Act. Any such statement shall be prepared within 60 days of the receipt by the Director or his designee of a copy of the proposed subsequent arrangement. In the event of any disagreement which cannot be resolved between agencies, the provisions of section 5 of Part A shall be followed.

e. No later than 20 days after the expiration of the time limit set forth in paragraph d, but, if the Director of the Arms Control and Disarmament Agency has declared his intention to prepare a Nuclear Proliferation Assessment Statement, only after receipt of the Statement or the expiration of the time authorized in section 131c of the Atomic Energy Act for the preparation of the Statement, whichever occurs first, the Secretary of Energy, or his designee, after making the determination required by section 131a(1) of the Atomic Energy Act and pursuant to any required judgment, under section 131b(2) of the Atomic Energy Act, shall decide whether to enter into the proposed subsequent arrangement: *Provided*, That if recourse is made to the provisions in section 5 of Part A, this period shall be 60 days.

f. After discharging the Department of Energy's responsibilities under these procedures, the Secretary of Energy or his designee shall cause to be published in the Federal Register notice of any proposed subsequent arrangements together with his written determination that the arrangement will not be inimical to the common defense and security. He shall also report to Congress with respect to any proposed subsequent arrangement of the types specified in section 131b(1) of the Atomic Energy Act. No subsequent arrangement shall take effect until the applicable time period or periods in section 131 of the Atomic Energy Act have elapsed.

g. Except for the time limits for the preparation of a Nuclear Proliferation Assessment Statement, any time period in this section may be extended by the Deputy Assistant Secretary for International Programs or his designee.

SECTION 2. SUBSEQUENT ARRANGEMENTS INVOLVING RETRANSFERS WITHIN THE SCOPE OF AN EXPORT LICENSE AND CERTAIN SMALL QUANTITIES

a. The Department of Energy, without further interagency concurrence or consultation and after complying with any other requirements, may approve any request for a subsequent arrangement which is limited to a retransfer where an applicable export license has authorized transfer of the material involved for the same purpose and to the same destination for which the retransfer is to be made, unless:

(i) The Department of Energy determines there has been a material change in circumstances since the issuance of the export license;

(ii) The retransfer does not occur in the same general time period as contemplated by the export license;

(iii) The retransfer is for any of the purposes set forth in paragraph b of section 2 of Part B;

(iv) The retransfer involves more than one effective kilogram of uranium-235 in uranium enriched to greater than 20 percent in the isotope 235; or

(v) The retransfer involves more than 500 grams of plutonium or uranium-233.

b. The Department of Energy, without obtaining interagency concurrence or consultation and after complying with any other requirements, may enter into a proposed subsequent arrangement which is limited to such quantities of material as are specified in paragraph a of section 2 of Part B, subject to the qualifications and conditions contained in paragraph b of that section.

c. The Department of Energy shall provide the offices set forth in paragraphs a, and c through f of section 3 of Part A with a copy of the executed approval form of any subsequent arrangements approved pursuant to this section.

PART F. EXPORT ITEMS UNDER SECTION 309c OF THE ACT

SECTION 1. PROCEDURES

a. A list of commodities licensed by the Department of Commerce which, if used for purposes other than those for which the export is intended, could be of significance for nuclear explosive purposes, shall be developed and maintained by the Departments of Commerce and Energy in consultation with the Departments of State and Defense, the Arms Control and Disarmament Agency, and the Nuclear Regulatory Commission.

b. Export license applications for commodities on the list referred to in paragraph 1, as well as any other applications which may involve possible nuclear uses, shall be reviewed by the Department of Commerce in consultation with the Department of Energy. When either the Department of Commerce or the Department of Energy believes that—because of the proposed destination of the export, its timing, or other relevant considerations—a particular application should be reviewed by other agencies, or denied, such application shall be referred to the Subgroup on Nuclear Export Coordination. The Subgroup shall promptly consider any such application and provide its advice and recommendations to the Department of Commerce. Disagreements shall be handled in accordance with the provisions of section 5 of Part A.

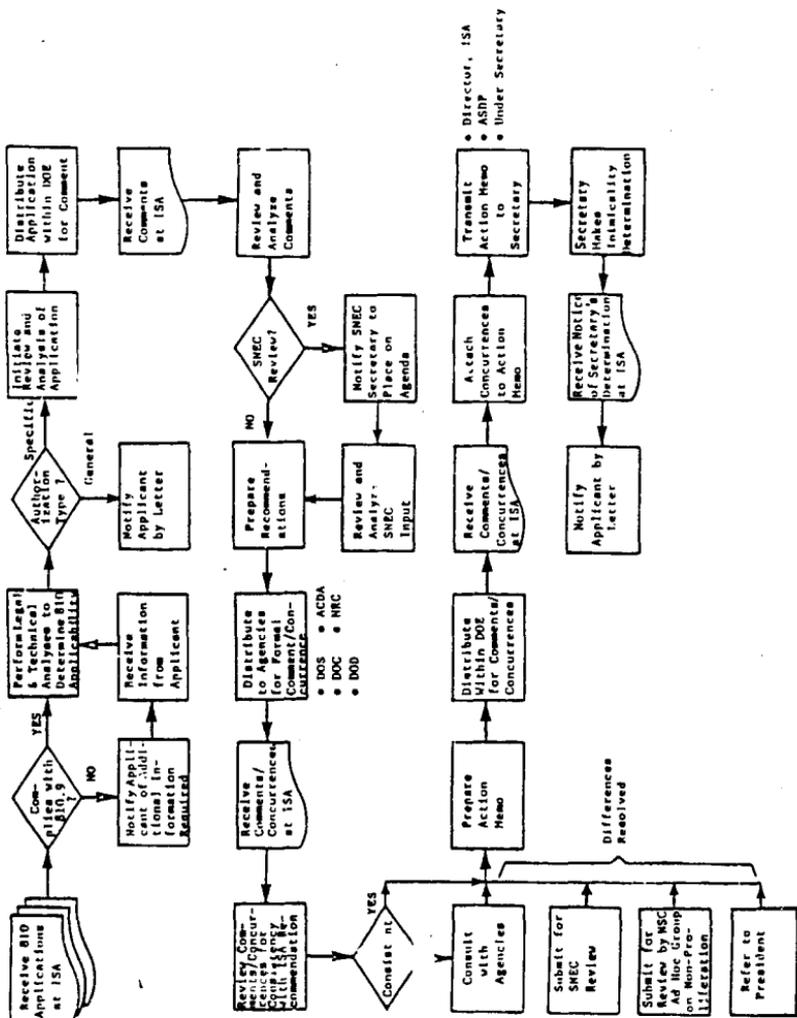
c. Reviewing agencies shall promptly, but not later than 30 days after receipt from the Department of Commerce of an application, provide their views thereon to the Department of Commerce. If, however, it is not possible to provide views within this time or if, at any point during review it appears that final action on an application will not be completed within 60 days of receipt by the Department of Commerce, any agency which requires additional time shall inform the Department of Commerce at the earliest possible time of the issues involved and provide an estimate of the time needed to complete its review. The Department of Commerce will then advise the exporter in writing as required by section 4(g)(1) of the Export Administration Act of 1969, as amended.

d. If the Subgroup recommends denial of an application, the reasons therefor shall be articulated for the record. If the Department of Commerce agrees with the recommendation, that Department,

in accordance with section 4(g)(2)(A) of the Export Administration Act of 1969, as amended, shall notify the applicant in writing of the negative considerations raised with respect to such license application. Before final action is taken on the application, the applicant shall be afforded the opportunity to respond within 15 days to such negative considerations. If appropriate, the applicant's response will be made available to the Subgroup for further review and advice. In the event of any disagreement which cannot be resolved between agencies, the provisions in section 5 of Part A shall be followed.

APPENDIX 3

810 CASE PROCESSING STEPS



APPENDIX 4

LIST OF GENERALLY AUTHORIZED ACTIVITIES REPORTED DURING THE LAST 18 MONTHS

ACTIVITY	DATE OF REPORT
1. Presentation of general description of BWR to N.E.D, University of Pakistan.	6/23/82
2. Study of radionuclides likely to be released into environment by LMFBR's, types and effectiveness of equipment to reduce releases, for a Japanese organization.	1/6/82
3. Survey of PWR reactor pressure surveillance capsule test data to be performed based on public domain information for a Japanese organization.	1/6/82
4. Survey of U.S. thermal-hydraulic test loop facilities for fuel bundle proof testing based on information in the public domain, for a Japanese organization.	1/6/82
5. NRC sponsored visit to a U.S. BWR facility by a PRC State Science and Technology Commission team.	2/8/82
6. Department of Commerce sponsored visit to a U.S. BWR facility by a PRC State Science and Technology Commission team.	3/5/82
7. Request by a Finnish utility to join Core Performance Assessment Group that monitors and assesses nuclear fuel performance in various reactor types.	9/29/81
8. Transfer of proprietary manufacturing information related to manufacture of pressurizers and steam generators for use in nuclear power plants to a Korean company.	4/27/81
9. Training an Israeli engineer in BWR engineering disciplines.	3/25/82
10. List of sales by licensees of a U.S. corporation of nuclear steam supply systems and components.	4/7/82
11. Technical information exchange agreement between a U.S. corporation and a corporation in the United Kingdom concerning information exchange on the development of fast breeder reactor technology.	4/19/82
12. Literature study on uranium enrichment explicitly limited to open technical literature for a Japanese corporation.	5/28/82
13. Survey of U.S. radwaste technology for a Japanese corporation.	6/3/82

Note: All the activities with the PRC involve only publicly available information

ACTIVITY	DATE OF REPORT
14. Survey of nuclear fuel data of U.S. utilities, including financing arrangements, for a Japanese corporation.	6/3/82
15. Survey of seismic risk assessment in nuclear power plants for a Japanese corporation.	6/3/82
16. Report summarizing methods for storage tank and containment analysis aimed at designing a rational buckling design procedure, prepared for a Japanese corporation.	6/3/82
17. Report for a Japanese corporation on Kemitem Rad-waste Processing Plant operational experience.	6/3/82
18. Report for a Japanese corporation, reviewing analysis and design considerations related to the U.S. BWR Mark I program.	6/3/82
19. Seismic consultation to a Japanese corporation concerning evaluation of structures, improvement of techniques.	6/3/82
20. Seismic engineering practice survey report for a Japanese corporation.	6/3/82
21. Program for transfer of U.S. pressure vessel technology to a Korean corporation.	6/3/82
22. Classroom and on the job training for two Korean engineers in piping analysis and thermal hydraulic analysis.	6/3/82
23. Radwaste solidification systems review for a Taiwan corporation.	6/3/82
24. Development of alternate methods for piping stress analyses for nuclear power plant piping for a Japanese corporation.	4/28/82
25. Provide technical assistance with piping layout for a nuclear power plant in Japan.	4/28/82
26. Provide technical assistance with analysis of flow-induced vibrations for a Japanese corporation.	4/28/82
27. Prepare emergency facility response study for a Swiss nuclear plant operator.	4/23/82

ACTIVITY	DATE OF REPORT
28. Provide analysis and consultative services to a Swedish nuclear power plant operator to improve its safety assessment system.	4/23/82
29. Review existing computer system of a Swiss nuclear power plant and advise the operator on ways to enhance the system.	4/23/82
30. Supply a Japanese corporation with an analysis of its BWR recirculation system.	4/23/82
31. Technical cooperation between a U.S. and a West German corporation to license and manufacture under a reciprocal arrangement BWR steam supply systems, PWR fuel and core components, and PWR steam supply system services.	2/9/82
32. Provide a seminar to two Japanese corporations on decontamination and decommissioning of power plants and parts.	2/2/82
33. Conduct a survey and prepare a report for a Japanese corporation concerning the experience of U.S. power plants with automatic frequency control systems.	2/2/82
34. Supply minicomputer system hardware to a Taiwanese nuclear power plant.	2/2/82
35. Supply dry cleaning machine, spare parts, manuals, radiation detection package and training on operation to the Korean Government.	2/2/82
36. Assist a Japanese corporation in reviewing the current methods of nuclear power plant seismic design.	2/18/82
37. Assess needs of a Taiwanese utility for spent nuclear fuel storage and prepare a feasibility study which will address these needs.	2/4/82
38. Collect information for a Japanese corporation on regulations and implementing procedures dealing with disposal of extremely low level radioactive solid waste.	2/4/82
39. Provide technical assistance in planning, construction, and start-up of a BWR nuclear fuel manufacturing facility in Spain.	1/28/82
40. Discussions with representatives of French, Dutch, Belgian and West German organizations regarding exchange on LMFBRs.	1/27/82

ACTIVITY	DATE OF REPORT
41. Prepare a report for a Japanese corporation on post-accident sampling capabilities and status. The report is oriented toward BWR technology.	1/11/82
42. Prepare an analysis of auxiliary feedwater system reliability for a Brazilian nuclear power plant in various emergency conditions.	8/17/81
43. Provide assistance in the evaluation of seismic factors affecting the design, construction, fabrication and operation of a nuclear power plant in the U.K.	7/13/81
44. Provide publicly available documents on radiological emergency planning in the U.S. for a Japanese corporation.	8/20/81
45. Summarize for a Japanese corporation the system design objectives in a U.S. nuclear power plant, focusing on the steam generator blowdown and recovery steam.	8/20/81/
46. Prepare for a Swiss and a British utility two surveys of the nuclear regulatory activities of the U.S. commercial nuclear power plants.	8/19/81 4/16/81
47. Prepare and transmit to a Japanese corporation status reports and related information concerning the development of safety goals for nuclear power plants in the U.S.	8/25/81
48. A week of discussions with Japanese companies of current LMFBR development in the U.S. (information available in open literature).	8/24/81
49. Prepare for a Japanese corporation a survey of users of small scale nuclear simulators to determine goals and results of their use and to contact suppliers of simulators for technical information.	8/24/81
50. Provide to a Taiwanese utility the access to a clearinghouse for exchange of operations, maintenance, technical and management problems and their solution.	2/3/81
51. Prepare for a West German corporation a survey of U.S. R&D, regulations and plant status regarding vessel cracking caused by thermal shock.	2/3/81
52. Prepare for a Japanese corporation a survey of daily and monthly news reports of U.S. activities related to TMI-2 accident.	2/3/81

ACTIVITY	DATE OF REPORT
53. Prepare a report for a Japanese corporation describing C-14 generation, release to environment, control measures and research being undertaken.	2/4/81
54. Provide fifty-three units of reactor general and mechanical maintenance video-tape training program to the South African Electricity Supply Commission.	2/4/81
55. Provide topic 1 (Basic Power Plant Operation) of the 20-topic Power Principles Program to the Israel Electric Corporation.	2/4/81
56. Perform a survey for a Japanese corporation of the U.S. nuclear power policy/strategy and the R&D status of nuclear fuel cycle processes/systems.	1/21/81
57. Prepare for a French national a survey of non-proprietary literature on upgrading of nuclear power plant control rooms.	1/21/81
58. Prepare for a West German corporation a survey of the non-proprietary literature on BWR Core Spray Systems.	1/21/81
59. Provide information and negotiation support services for a Taiwanese utility on various aspects of the fuel cycle <u>excluding</u> enrichment and reprocessing.	4/7/81
60. Prepare a report for a Japanese corporation on the U.S. utility emergency planning status.	2/3/81
61. Prepare for a Japanese corporation a report describing and evaluating U.S. PWR implementation of certain specific TMI-related issues.	1/27/81
✓ 62. Collect for a Japanese corporation open literature data on the probabilities of LMFBR accidents.	1/27/81
63. Evaluate for a Spanish utility the safety of one of its power plants.	1/21/81
64. Conduct a study for a West German corporation of relevant safety issues regarding underground siting of nuclear power plants.	1/27/81
65. Conduct a survey for a Japanese corporation of computer programs used in the U.S. for the management and scheduling of outages in nuclear generating stations.	1/26/81
66. Perform a study for a Japanese corporation of capital costs and other economic indices related to U.S. LWRs.	1/26/81

ACTIVITY	DATE OF REPORT
67. Reviewed with a West German affiliate a list of questions concerning the design of fuel handling equipment and facilities for a PWR of West German design.	1/27/81
68. Perform a survey for a Japanese corporation of waste packaging technology and disposal criteria for low and intermediate level wastes in the U.S., Canada, France, Switzerland and West Germany.	1/27/81
69. Perform a survey for a Japanese corporation of the status of seven nuclear plant construction sites. The information will be obtained from public documents. Contact the appropriate utilities to arrange for possible site visits by the Japanese.	2/20/81
70. Perform a study for a Japanese corporation of the experience of various U.S. utilities in repairing and maintaining PWR steam generator tube integrity.	2/20/81
71. Provide to a Japanese corporation publicly available documents and information regarding several current licensing issues of concern to the U.S. commercial nuclear power plants.	6/23/81
72. Perform steam generator chemistry consulting for a Japanese utility.	7/31/81
73. Perform for a Japanese corporation a survey of quality assurance practices used for U.S. nuclear utilities. Arrange visits to three utilities' headquarters.	9/3/81
74. Prepare a report comparing the construction and startup audits performed under earlier contracts, with two Taiwanese nuclear power projects, to aid Taiwan AEC in their licensing process for a new power plant.	9/3/81
75. Perform a survey for a Japanese corporation of the development of general policy and rules on decommissioning of nuclear power plants.	9/3/81
76. Provide a Netherlands national with a training program for operators/personnel in nuclear power plants.	2/17/81
77. Review for an Italian corporation of publicly available information on the nuclear regulatory activities of U.S. commercial nuclear power plants.	7/7/81

ACTIVITY	DATE OF REPORT
78. Provide a Yugoslav nuclear power plant with various videotape training programs for its staff.	2/24/81
79. Provide a U.K. utility with access to Nuclear Operations and Maintenance Information Service, clear house for the exchange of operations, maintenance, technical and management problems and their solutions.	2/25/81
80. Provide to a Japanese, a British and a Spanish corporation a source book, which will be updated, describing the current status of each generic unresolved safety issue as described by the NRC.	4/2/81
81. Two employees will visit Taiwan for two weeks to interview clients to establish client objectives, review plant designs, recommend modifications and define scope of work for accepted modifications.	5/28/81
82. Support inservice examination of the selected components including reactor vessel in a Korean power plant.	2/10/81
83. Participate with an Italian corporation in a discussion of technical problems encountered in manufacturing high density storage racks for BWRs.	1/11/82
84. Write SAR for transportation of barrels of low level radwaste from a Taiwanese power plant to the waste storage site. Includes operating and emergency procedures and project management for radwaste transportation.	1/11/82
85. Supply a Canadian corporation with dry cleaning machines with radiation detect systems and manuals.	1/11/82
86. Provide a Japanese corporation with answers to a technical questionnaire on a U.S. power plant analysis, and escort its representatives to a meeting with the representatives of the operating utility.	1/11/82
87. Provide a Spanish utility with design services for new and spent fuel storage racks, plus defective fuel, control rod, and control rod guide tube storage racks.	4/2/81
88. Perform a study for a West German corporation to determine the feasibility and implementation of a graphics package for a power plant process computer system.	5/5/81
89. Prepare for a Japanese corporation a survey of the decontamination techniques and waste disposal method at TMI.	11/16/81

ACTIVITY	DATE OF REPORT
90. Participate with a West German corporation in a review of piping arrangement, piping stress analyses and pipe support design.	12/18/81
91. Design procurement, installation and testing of a complete advanced core simulator system for a West German nuclear power plant.	9/3/81
92. Assist a Japanese utility in a seismic upgrade study.	1/14/81
93. Transmittal of proprietary conceptual design information concerning improved design of PWR to a Japanese utility and a Belgian consortium.	4/6/81
94. Provide introductory training in LMFBR technology to a small group of employees of a Taiwanese utility.	4/15/81
95. Transmittal to a Korean corporation of proprietary information related to the manufacture of steam generators and pressurizers for nuclear power plants.	4/27/81
96. Request for technical assistance from a Japanese corporation in the development of LMFBR designs. Fuel fabrication and reprocessing information is not included in this exchange.	2/11/81
97. A British corporation exercised its option under licensing agreement with a U.S. corporation to manufacture, use and sell nuclear steam supply systems for PWR.	2/10/81
98. Technical cooperation agreement with a Japanese corporation to perform work directed at improving the reliability of PWRs.	9/10/81
99. Technical exchange agreement with a Japanese corporation to allow the Japanese to manufacture, use and sell proportional counters, fission counters and ionization chambers for nuclear power plants.	9/3/81
✓ 100. Agreement with a Japanese corporation to provide engineering services in its LMFBR program. Information concerning plutonium fuel fabrication and reprocessing is not included.	9/1/81
101. Agreement with a Korean corporation to manufacture use and sell various components for nuclear steam supply systems and PWRs under license from a U.S. corporation.	9/2/81

ACTIVITY	DATE OF REPORT
102. List of sales by a French licensee of a S corporation of PWRs and their components. Also a list of activities of other licensees of the same U.S. corporation.	1/28/81
103. Transmittal of reports and other technical information to the Government of Indonesia in connection with marketing of a nuclear power plant project.	9/25/81
104. Notice of a proposed visit to France and West Germany by representatives of a U.S. corporation for discussion of LMFBR technology and of the completion of generally authorized activities (previously reported) in Japan and the U.K.	6/1/81
105. Notice of a one year training program in construction management of nuclear power plant projects for a Venezuelan engineer in the offices of a U.S. corporation of engineers-constructors.	2/27/81
106. Plans of a U.S. corporation of engineers-constructors to participate in several Japanese nuclear power projects and in cooperative activities of Japanese utilities.	9/3/81
107. Notice of intent to provide technical services to South Africa in connection with nuclear power plant project being built by a French consortium.	3/20/81
108. Assistance to a Spanish utility in determining changes needed in its nuclear power plant to comply with licensing regulation.	7/7/81
109. Agreement between a U.S. corporation and a group of corporations from France, Belgium, Britain, West Germany and the Netherlands, to exchange information on LMFBRs.	9/15/81
110. Assist a Japanese corporation to review design experience of LMFBR facilities and apply it to a prototype FBR containment and auxiliary buildings.	4/20/81
111. Perform quality assurance audits of fuel assemblies manufactured in the U.S. for a Swiss utility.	12/15/81
112. Perform a design review of a spent nuclear fuel storage facility for a utility corporation in Finland.	12/28/81
113. A U.S. corporation organized a group of foreign and domestic utilities into a Core Performance Assessment Group, to assess nuclear fuel performance of various reactor types.	3/31/81
114. Provide training services in reactor safety and seismic considerations in reactor siting to a team of Korean engineers, and consulting services in reactor safety and reactor operator training to a Mexican research institute.	2/27/81

APPENDIX 5

RESPONSES TO ADDITIONAL QUESTIONS SUBMITTED IN WRITING FOR THE RECORD BY CONGRESSMAN BINGHAM

A. RESPONSES BY THE DEPARTMENT OF ENERGY

Question 1. The Department recounts in its testimony the considerable declassification of nuclear information which occurred during the Atoms for Peace era.

What is the current policy of the Department of Energy regarding the declassification of Restricted Data, especially concerning such new technologies as laser isotope separation?

Response. As stated in Chapter 12 of the Atomic Energy Act of 1954, it is the policy of the Department of Energy (DOE) to control the dissemination and declassification of Restricted Data in such a manner as to assure the common defense and security. Consistent with such a policy, the DOE is guided by the principle that the dissemination of scientific and technical information relating to atomic energy should be permitted and encouraged so as to provide that free interchange of ideas and criticism which is essential to scientific and industrial progress and public understanding and to enlarge the fund of technical information. However, Chapter 1, Section 1 of the Atomic Energy Act of 1954 indicates that the declassification of Restricted Data for possible peaceful applications must be secondary "to the paramount objective of making the maximum contribution to the common defense and security." In summary, Restricted Data of importance to unclassified scientific research and development shall only be declassified if such declassification will cause no undue risk to the common defense and security.

With respect to laser isotope separation, the Atomic Energy Commission (in 1967) declassified "all research and development work concerning any such other method of isotope separation (i.e., other than gaseous diffusion or centrifugation) until that method has a reasonable potential for the separation of practical quantities of special nuclear material." In July 1972, the Commission reviewed and reaffirmed its earlier determination. As a consequence of this Commission position, much basic scientific information on separation of isotopes other than uranium and plutonium has been openly developed thus fulfilling the DOE's basic policy of promoting scientific and technical progress without undue risk to the common defense and security. Current policy continues to be to keep classified any advanced isotope separation technology that would have reasonable potential to separate militarily useful quantities of special nuclear material.

Question 2. In what specific instances have companies failed to seek a specific authorization when required and has DOE sought criminal penalties in any of these cases?

Response. DOE is not aware of any intentional violations of section 57.b.(2) of the Atomic Energy Act, (and the implementing 10 CFR Part 810 regulations), and therefore no referrals have been made by DOE to the Department of Justice for prosecution. There have been a few instances where U.S. persons have initiated actions which could have resulted in a violation of 10 CFR Part 810. In these instances, the companies or individuals were notified by DOE, with the result that the company complied with the provisions by filing a request for authorization or providing the Department with additional information to show why the proposed activity was not subject to the provisions of 10 CFR Part 810.

B. RESPONSES BY THE DEPARTMENT OF STATE

Question 1. What are the conditions under which inspection rights are not considered appropriate for a nuclear-related export to a country that is not eligible for exports licensed by the NRC? In what specific instances has Commerce issued a license for a nuclear-related export to a country that does not allow full-scope IAEA safeguards without getting inspection rights?

Response. Inspection rights are not considered appropriate in cases where Nuclear Referral List (NRL) items for nuclear end use are sent to non-NPT party countries. In the few cases where NRL items for nuclear end use have been sent to non-NPT states, they are always for facilities under IAEA safeguards. Therefore, bilateral inspection rights are considered inappropriate and unnecessary.

The vast majority of Nuclear Referral List items which are exported to countries are for uses in the private sector which have nothing to do with potential nuclear end uses. The best example, which occurs frequently, is that of large computers which are destined for use in banks, airlines, and the like.

Question 2. Does the United States always exercise its inspection rights? If not, why not? Have these inspections ever revealed that an inspected country is not using the exported technology for the stated purpose?

Response. The U.S. exercises its inspection rights in those few cases where there are nuclear concerns. To date, these inspections have not revealed that any of the approved NRL exports have been used for purposes other than those for which they were originally intended. An example of a case where U.S. inspection rights were requested is the case of supply of a CDC CYBER 170/750 computer to the Council for Scientific and Industrial Research in South Africa. As this case involved supply of a large computer to the principal South African government organization for coordination of scientific research, inspection rights were deemed appropriate.

C. RESPONSES BY THE DEPARTMENT OF COMMERCE

Question 1. According to testimony regarding assurances over Commerce licensing nuclear related exports, the "right of access for inspection of the installed items has been obtained for U.S. officials when deemed necessary."

(a) What are the conditions under which inspection rights are not considered appropriate for a nuclear related export to a country that is not eligible for exports licensed by the NRC? In what specific instances has Commerce issued a license for a nuclear related export to a country that does not allow full-scope IAEA safeguards without getting inspection rights?

(b) Does the United States always exercise its inspection rights? If not, why not? Have these inspections ever revealed that an inspected country is not using the exported technology for the stated purpose?

Response. (a) It should be clarified that the U.S. exercises inspection rights primarily as a pre-licensing criteria. We believe this is a more effective use of the inspection mechanism since, if there are any concerns relating to a particular nuclear export, the export would be denied.

DOC approves nuclear related exports to nuclear end-users in non-signatory countries only if those exports are destined for IAEA safeguarded facilities where IAEA inspections are conducted on a regular basis. In addition, we always require appropriate government assurances in these cases.

DOC has also approved some Nuclear Referral List (NRL) commodities to countries which are not signatories of the Nuclear Non-Proliferation Treaty (NNPT) where the commodities were destined for non-nuclear end users. For example, computers above a certain level could have potential nuclear end-use and so are included in the NRL. It should be noted, however, that these same computers also have numerous different uses that are not nuclear related, e.g., administrative, bookkeeping, etc. Therefore, a license application for such a computer destined for a non-nuclear end users, such as a bank, in a non-signatory country would most likely be approved and no inspection rights required. U.S. inspection access is requested for only the more significant items which have a potential for nuclear use.

(b) The U.S. Government exercises its inspection rights in those cases where there are nuclear concerns. For the most part, these concerns are triggered by receipt of a license application for export of NRL items destined for nuclear end-users in non-signatory countries, in which case pre-licensing inspection rights are generally requested, and particularly if the export has direct nuclear application. Concerns may also be triggered through receipt of derogatory information received through various channels concerning possible violation of terms of licenses issued in the past. To date, however, our inspections have not revealed that any of the approved NRL exports have been used for purposes other than those for which they were originally intended.

Question 2. The Department mentions in its testimony that the question of foreign availability is not an overriding factor in the U.S. controls over its nuclear-related exports.

(a) As an example, could the Department recount for us the considerations surrounding the recent approval of the export of a computer to the Center for Scientific and Industrial Research in South Africa?

(b) What role did the issue of foreign availability of such computers have in the decision?

Response. (a) While the Department is prevented by law to publicly disclose information relating to individual licenses, we can assure you that licenses for nuclear exports are approved only after thorough review by the interagency Subgroup on Nuclear Export Coordination (SNEC) to ensure that the proposed exports are reasonable and appropriate for the stated end use, and that no proliferation risks are involved. Even then, in many cases licenses are not issued unless we receive appropriate assurances.

(b) Strict attention is given to nuclear controls. Foreign availability is, therefore, not heavily weighed in cases where we have a proliferation concern. In fact, in those cases we have, in the past, approached other foreign governments (where availability existed) and requested that they not allow the export of the commodities being sought.

If, however, after careful examination a case has been determined as posing no proliferation risk, then we do consider foreign availability in our licensing decisions so as not to deprive U.S. suppliers of such exports.

Question 3. Besides South Africa, what countries that are not eligible for NRC licensed exports have in the past eighteen months received Commerce licensed exports on the Nuclear Referral List or otherwise identified as having a nuclear end-use?

Response. Non-signatory countries to whom we have allowed exports of Nuclear Referral List (NRL) items include Argentina, Brazil, India, Chili, and the People's Republic of China.

As previously answered under Question No. 1, however, DOC licenses very few NRL items to nuclear end-users in non-signatory countries. In those few instances where we have approved licenses for NRL items, it was either because the exports were destined for IAEA safeguarded facilities, or they were destined for non-nuclear end users such as banks or other commercial entities, and therefore pose no proliferation concerns. Appropriate government assurances are always obtained for the more significant commodities which have a potential for nuclear use.

D. RESPONSES BY THE ARMS CONTROL AND DISARMAMENT AGENCY

Question 1. The position of Chief of the International Nuclear Affairs Division at ACDA was vacant for an extended period of time. Has this position been filled?

(a) What effect has this vacancy had on the ability of ACDA to monitor U.S. nuclear exports such as those we discussed during the June 24th hearing?

(b) The Agency mentioned in its testimony that there is no full-time staff person working exclusively on issues which arise in the Subgroup on Nuclear Export Coordination. Do these issues warrant more extensive staff treatment than currently exists?

Response. The position of Chief of the International Nuclear Affairs Division has not yet been filled. However, ACDA is moving to fill the position and expects the selection process to be completed in the very near future.

(a) This vacancy has not affected ACDA's ability to monitor US nuclear exports. Experienced personnel have served effectively in an "Acting" capacity and have ensured continuity in our active participation in SNEC.

(b) As Mr. Turrentine indicated in his testimony, ACDA gives a high priority to the work of the SNEC, and all the resources of the International Nuclear Affairs Division are available to deal with SNEC-related issues. Normally, the Division Chief (or Acting Division Chief) and two staff members attend SNEC meetings. SNEC items are discussed with appropriate members of the staff having technical and regional country expertise. A full-time staff person working only on SNEC issues would not be effective, because the work required for SNEC varies significantly, depending on the agenda.