

NUCLEAR NON-PROLIFERATION ACT

JOINT HEARING

BEFORE THE

COMMITTEE ON FOREIGN RELATIONS

AND THE

SUBCOMMITTEE ON ENERGY, NUCLEAR
PROLIFERATION AND GOVERNMENT
PROCESSES

OF THE

COMMITTEE ON
GOVERNMENTAL AFFAIRS
UNITED STATES SENATE

NINETY-EIGHTH CONGRESS

FIRST SESSION

SEPTEMBER 30, 1983

Printed for the use of the Committee on Foreign Relations



U.S. GOVERNMENT PRINTING OFFICE

WASHINGTON: 1983

28-026 O

5401-12
5381-7

COMMITTEE ON FOREIGN RELATIONS

CHARLES H. PERCY, Illinois, *Chairman*

HOWARD H. BAKER, Jr., Tennessee	CLAIBORNE PELL, Rhode Island
JESSE HELMS, North Carolina	JOSEPH R. BIDEN, Jr., Delaware
RICHARD G. LUGAR, Indiana	JOHN GLENN, Ohio
CHARLES McC. MATHIAS, Jr., Maryland	PAUL S. SARBANES, Maryland
NANCY L. KASSEBAUM, Kansas	EDWARD ZORINSKY, Nebraska
RUDY BOSCHWITZ, Minnesota	PAUL E. TSONGAS, Massachusetts
LARRY PRESSLER, South Dakota	ALAN CRANSTON, California
FRANK H. MURKOWSKI, Alaska	CHRISTOPHER J. DODD, Connecticut

SCOTT COHN, *Staff Director*

GARYL B. CHRISTIANSON, *Minority Staff Director*

COMMITTEE ON GOVERNMENTAL AFFAIRS

SUBCOMMITTEE ON ENERGY, NUCLEAR PROLIFERATION AND GOVERNMENT PROCESSES

CHARLES H. PERCY, Illinois, *Chairman*

DAVE DURENBERGER, Minnesota	JOHN GLENN, Ohio
WILLIAM S. COHEN, Maine	CARL LEVIN, Michigan
JOHN C. DANFORTH, Missouri	
DANIEL J. EVANS, Washington	

WILLIAM A. STRAUSS, *Chief Counsel and Staff Director*

DAVID NICHOLS, *Professional Staff Member*

SCOTT ULM, *Professional Staff Member*

LEONARD WEISS, *Minority Staff Director*

KATHRYN H. FROBLICH, *Chief Clerk*

CONTENTS

	Page
Hearing day : September 30, 1983-----	1
Statement of—	
Adelman, Hon. Kenneth L., Director, U.S. Arms Control and Disarmament Agency-----	6
Kennedy, Hon. Richard T., Ambassador at Large, Department of State, accompanied by James B. Devine, Deputy Assistant Secretary of State for Nuclear Energy and Energy Technology Affairs-----	35
Leventhal, Paul, president, Nuclear Control Institute, Washington, D.C.-----	57
Insertions for the record :	
Prepared statement of Hon. Claiborne Pell-----	4
Nuclear materials and equipment exported to Argentina by the Soviet Union -----	22
Training South Africans in the United States-----	23
Letter from the U.S. Nuclear Regulatory Commission to Secretary of Energy Donald P. Hodel, dated October 4, 1983, regarding U.S.-origin heavy water-----	26
Heavy water plant in Argentina-----	27
Prepared statement of Hon. Richard T. Kennedy-----	38
Prepared statement of Paul Leventhal-----	58

NUCLEAR NON-PROLIFERATION ACT

FRIDAY, SEPTEMBER 30, 1983

UNITED STATES SENATE,
COMMITTEE ON FOREIGN RELATIONS AND THE
SUBCOMMITTEE ON ENERGY, NUCLEAR PROLIFERATION
AND GOVERNMENT PROCESSES OF THE
COMMITTEE ON GOVERNMENTAL AFFAIRS,
Washington, D.C.

The committees met, pursuant to notice, at 10:05 a.m., in room SD-419, Dirksen Senate Office Building, Hon. Charles H. Percy (chairman of the Committee on Foreign Relations and chairman of the Subcommittee on Energy, Nuclear Proliferation and Government Processes of the Committee on Governmental Affairs) presiding.

Present: Senators Percy, Boschwitz, Pressler, and Cohen.

The CHAIRMAN. I think the very fact that this committee voted out an arms control resolution, the final paragraph of which states that we should work toward a goal of destruction of every single nuclear weapon on Earth, recognizes a deeply felt feeling, shared by many of my colleagues, that we have a situation that is just getting absolutely out of control. The fears that we all have had about the possibility of a miscalculation, accident, misunderstanding or just a conscious working toward the day when nuclear weapons are looked upon as a means of defense and offense is rapidly approaching.

When we consider that we have today, some 18 countries that either possess or are working toward possessing the capability of making nuclear weapons, we are living in a very dangerous period of history. I think the situation is fraught with danger and it is just a startling situation.

I, therefore, have convened this hearing not only as chairman of the Foreign Relations Committee, because of its deep involvement in these affairs and its jurisdiction over arms control in the Senate but, also as the ranking member on the Governmental Affairs Committee, and chairman of its Subcommittee on Energy, Nuclear Proliferation and Government Processes.

This is a joint hearing and, of course, I very much appreciate Senator Cohen being with us today. He has been a valued colleague in many areas working with me in committee and on the Senate floor. We have other Senators coming. I do not know whether Senator Glenn is coming. He is the only other person who is a member of both the Committee on Foreign Relations and the Committee on Governmental Affairs.

He was my principal cosponsor of the Nuclear Non-Proliferation Act which is the law of the land and to which we will give consideration today.

Today we will be holding this joint hearing on recent developments in the U.S. nuclear nonproliferation policy. In the past I have been particularly concerned about several transactions involving South Africa and other countries which have not signed the Nuclear Non-Proliferation Treaty [NPT].

In my view, we must take a very hard look at any nuclear dealings with nations which have not forsworn the option of acquiring nuclear weapons. While there have been some problems I think credit should be given where credit is due. This administration has made some very fine progress that has not been noticed, but it is very important progress in this particular area of nuclear nonproliferation. I was, of course, extremely pleased when the Secretary of State saw fit, and then Under Secretary Kennedy accepted the full-time responsibility for nuclear nonproliferation. We had to emphasize to the world how serious we were, that we intended to be working full time on nonproliferation with one of the most competent men in Government in this field.

I know it is taking quite a lot of Director Adelman's time and I do want to pay tribute where tribute is due. Having said that, let me get the knife out because overall I do not think I am satisfied and I do not know of anyone who is really satisfied including our distinguished witnesses today on where we actually stand, as a practical matter, on nuclear nonproliferation efforts.

The world's nuclear problem countries are working as hard as ever on developing the ability to make nuclear weapons. The evidence is mounting that no matter what statements are issued, we can see the work going on, and it cannot be going on unnoticed by the heads of state of a number of countries.

The threat of a world filled with nuclear armed nations is just too great for a business as usual approach to nonproliferation. But business as usual is literally what we are seeing around the world. I do not like to single out countries, particularly countries that I have had a long close association with, like India.

Four members of my family including my daughter worked in India. I have paid visits to India for over 30 years and produced a motion picture film on it long before I came here. I spent 7 weeks doing it. There was a focus on India in this sound motion picture film. I love that country. It is a great democracy, the largest on Earth. But I did immediately go to see Mrs. Gandhi in company with the foreign minister, when the so-called peaceful nuclear explosion went off. I said to Mrs. Gandhi as a dear friend of 30 years standing now, "We have seen our children grow up. We share much in common. We both share in common a love for democracy." But I said, "You will regret the day that this peaceful nuclear explosion went off because it will provide every incentive for other countries because India is a leader of the nonaligned world so-called and the Third World. It will provide incentives for other countries to go this same route, including countries that have a long history of adversarial relationships with India."

In the near-decade since it exploded a bomb, India has not signed the Non-Proliferation Treaty. Nor has it provided us with assurances that the U.S.-supplied nuclear fuel used in its reactor, and the at least 80 bombs worth of plutonium contained in it, will remain under international safeguards when our agreement for cooperation expires in 1993.

We do have a chart which illustrates the point. This is the amount of unsafeguarded plutonium in India. This is assuming maximum production, assuming that 8 kilograms are sufficient for one bomb.

The trend is an upward trend, and certainly that is disturbing to the world and to everyone. I have called not only on India a number of times but also on Pakistan. They know exactly what I am going to talk about. President Zia was fully prepared when he came here to talk about what their intentions are in this regard.

India has overwhelming military superiority, as I said to Mrs. Gandhi, on the ground and in the air, with tanks and manpower. With nuclear weapons everything is just nullified. A bomb is a bomb, and the smallest country can have the same power as a superpower if it has nuclear weapons.

The chance that emotions rather than reason will rule in that part of the world are the same as the chances in other parts of the world where so many times we see reason overcome by emotion. We have seen threats and heard implications of threats, and I will mention one of those threats that was made at one point.

South Africa is a country with unsafeguarded nuclear facilities. I have seen those facilities. I have visited and talked to the South African Government about them.

Prime Minister Vorster and I spent a great deal of time talking about this issue. This week we expanded our nuclear cooperation with South Africa's regime which is a matter of concern to many people including myself.

I am sorry that Nancy Kassebaum is not back. We jointly hosted a breakfast this morning, and I left her so that I could get here on time. But I know she shares my concern that South Africa, important a country as it is, is just 1 of 50 nations on the African Continent. The 49 other countries have their own legitimate security concerns. I hope I never see the day when South Africa explodes a nuclear weapon.

Our relationships with 49 other countries could just explode in that vital important continent. I especially do not want the United States to be viewed by the rest of Africa and the world as an accomplice if this occurred. Yet the evidence is mounting. It was just announced that we have a new relationship and that we have expanded our nuclear cooperation. It is well known. Our cooperation is for peaceful nuclear usage, but it was Mrs. Gandhi who called it a peaceful nuclear explosion. That term sticks in people's minds.

Another country I am deeply concerned about is Argentina. We have done what we can to repair the problems that we had with Argentina when we clearly had to come down as we did.

The Senate first and then the President the next day gave their support to the United Kingdom in connection with the Falkland Islands situation. More than a year ago, at my request, the Congressional Research Service [CRS], prepared a report containing the assessment that Argentina might be as close as 2 years away from acquiring the technology and materials necessary for nuclear explosives.

We all remember the Falkland Islands crisis. We all remember the concern everyone in the world had as to what might happen. Perhaps little noticed, but it came as a shock to me, that in the wake of

the Falkland Islands war the head of the Argentina nuclear program made statements about Argentina's willingness to consider "military applications" of nuclear energy.

Given the emotions of that experience, with a government about to fall, with riots in the streets and humiliation, how can we forecast what decision a person would make at a particular time in history? So many times in history reason is overcome by the emotion of the experience.

Argentina persists in refusing to give up the bomb option and now we hear that Argentina and Libya are about to engage in nuclear cooperation, just medical isotopes or so we are told. On the heels of this news comes the announcement that the administration has rushed through its consent for the transfer from Germany to Argentina of 143 tons of U.S. origin heavy water and material essential to the Argentine program and useful in some instances for manufacturing plutonium.

We were not consulted about this transfer nor have we heard anything to explain why we should provide such major assistance to a country where such serious proliferation problems persist. Perhaps in his statement this morning Ambassador Kennedy can explain and amplify on this action.

I am concerned that we as a nation and, in particular, we in the Congress, may be losing our grip on nonproliferation. The Supreme Court's recent decision in *INS v. Chadha* may have profoundly changed the effectiveness of the Nuclear Non-Proliferation Act.

I feel today as I felt when that act passed that the Congress has an important role to play in decisions about India, South Africa, Argentina, and other problem countries. We in the Congress will have to see how the administration carries out its responsibilities in the aftermath of the *Chadha* decision and evaluate whether new legislation may be necessary.

Senator Pell is unable to be here today but has requested that his statement be submitted for the record. Without objection, it will be inserted at this point.

[Senator Pell's prepared statement follows:]

PREPARED STATEMENT OF HON. CLAIBORNE PELL

Mr. Chairman, there is probably no more important aspect of arms control than efforts to prevent nuclear proliferation. The spread of nuclear weapons to other nations poses a threat of critical proportions to us and to all nations. No one can deal with nuclear proliferation issues over a period of time without developing a sense of apprehension.

On the surface, there are causes for optimism. More than 100 nations are parties in good standing to the Non-Proliferation Treaty. The International Atomic Energy Agency in Vienna is actively administering a safeguards regime. No nation has publicly declared itself a nuclear weapons possessor since the 1960's. Yet, when we look more closely, we see problems with the safeguards regime. We see nations refusing to make promises. We know our nuclear materials supply system is not perfect. Reactors throughout the world are producing nuclear wastes containing plutonium which could be used for weapons, and we remain far from any international arrangements for safe storage of those wastes.

Many fear that the Administration is not actively trying to deal with the problems of proliferation, but is instead concentrating its energies on carving a bigger share for the United States in the nuclear marketplace. I hope that

Mr. Adelman and Ambassador Kennedy can demonstrate this morning that the Administration appreciates the risks of nuclear proliferation and will return the United States to the initiative. No news would be more welcome. I would also like to welcome Paul Leventhal who has been a major contributor to the development of the current nonproliferation regime. He is a valued witness.

The CHAIRMAN. Does anyone else have any comments to make on opening? If so, we would be happy to hear from you.

Senator COHEN. If I might, Mr. Chairman, I may have to leave early to preside in the Senate.

The CHAIRMAN. Senator Cohen.

Senator COHEN. First, let me commend you for your efforts in holding this joint hearing today. Back in July 1981, President Reagan outlined seven points in his administration policy on nuclear nonproliferation.

Last Monday Senator Percy and I had occasion to travel to the United Nations to hear the President's speech before that organization. He said that we must insure that world security is not undermined by further spread of nuclear weapons.

I think the questions that have to be addressed today, as you have raised, Mr. Chairman, in light of the President's commitment to those goals, include what is the consequence of India's acquisition of spare parts for its nuclear reactor. What about the negotiations currently under way with our Secretary of Defense, for example, in China talking about participation with weapons programs? What about the participation by U.S. companies in China's civilian nuclear power program?

As you pointed out, there is the question about the sale of heavy water to Argentina and our policy in terms of cooperation with South Africa. I would like to pose just a couple of questions that I am sure our witnesses will address this morning.

Back in July of this year, I and several of my colleagues addressed a letter to the President expressing our concern over the projects that the State Department was negotiating with China and also with respect to India. We asked for a public explanation by the State Department to us as soon as possible.

On August 1 we received a letter from Ken Duberstein which said that our request was being reviewed by "the appropriate policy advisers" and that we would hear further as soon as there was any additional information. I have not yet heard from any appropriate policy advisers nor have I heard any new additional information, so I was hoping that perhaps today the appropriate policy advisers might tell the members of the committee what we are to expect with respect to those two countries.

Also, I point out, Mr. Chairman, that in December 1982, the Congressional Research Service released a study which concluded that Argentina might be able to test a nuclear explosive by the mid 1980's and to produce a nuclear arsenal, under certain circumstances, in the late 1980's. The question could be raised, "Could the sale of heavy water to Argentina assist in any way in such production?"

Mr. Leventhal, in a recent article in the New York Times, reported that he questioned whether the United States has adequate assurances that the heavy water being transferred to Argentina will not be used

in reactors to produce materials for nuclear explosives. In an article in the August 22 issue of Defense Week, it says that many analysts doubt that the heavy water from Germany will aid a nuclear weapons capability because the International Atomic Energy Agency [IAEA] safeguards will apply to the water even if it is diverted to a weapons plant. So there appears to be some disagreement on this point.

So I would like to have some of these issues addressed this morning, if I could, by the appropriate policy advisers, Mr. Chairman.

The CHAIRMAN. Thank you very much, Senator Cohen.

Senator BOSCHWITZ, do you have any questions?

Senator BOSCHWITZ. No, thank you.

The CHAIRMAN. Very well. Our first witness this morning is Kenneth Adelman, Director of the U.S. Arms Control and Disarmament Agency [ACDA], active by statute as one of the most intimately involved in preventing the spread of nuclear weapons. In years past, ACDA has played a key role within the administration to provide the intellectual leadership that resulted in a number of important initiatives.

ACDA led the U.S. delegation at the last review conference on the Non-Proliferation Treaty and is charged by statute to perform non-proliferation assessments as appropriate. I am pleased that the new Director is here today to testify on his views about nonproliferation and his role in this area.

I share Senator Cohen's expressed hope that you will cover in your statement a few issues of concern. But before you testify, I would like to refer to one other chart which simply shows a steady decline in the number of ACDA staff personnel working on nuclear nonproliferation issues. It appears to me that while global proliferation problems are worsening, ACDA's capacity to address it has diminished.

This chart shows that your projected staffing level for 1984 provides for a 20-percent increase over current levels. I had hoped your statement would address the reason why you have decided to reverse this trend. I also hope we can have your assurance that you will be able to meet this goal. Moreover, I would like to know if there is a relationship between the amount of people you have on the job and the amount of emphasis that you can give to the particular problem. I am pleased to see that trend.

Dr. Adelman, we are happy to hear from you.

STATEMENT OF HON. KENNETH L. ADELMAN, DIRECTOR, U.S. ARMS CONTROL AND DISARMAMENT AGENCY

Mr. ADELMAN. Thank you, Mr. Chairman. I am glad that on the last line of your chart you put in that number. We will get into that as the hearing proceeds.

Let me begin by telling you what an honor it is to appear before this committee. The last time I met with members of the Senate Foreign Relations Committee our discussion focused on the critical need for strategic arms control and force modernization.

Preventing the further spread of nuclear explosives is no less critical. Nonproliferation is a fundamental part of our overall arms control and national security agenda.

It is also the key to handing our children a safer world than the one we inherited. President Reagan's speech before the U.N. General Assembly this past Monday—witnessed by you and Senator Cohen—reaffirmed his commitment to reduce nuclear arms and the threat of nuclear war.

The President added, "We must insure that world security is not undermined by the further spread of nuclear weapons. Nuclear proliferation must not be the forgotten element of the world's arms control agenda."

I can assure this committee that the effort to halt the spread of nuclear weapons is at the top of my agenda and that of the Arms Control and Disarmament Agency. I need not elaborate on the importance of this goal.

The further spread of nuclear weapons would profoundly threaten international stability and global order. The possession of nuclear weapons by additional countries could only increase the possibility of local conflict, sow suspicion among neighbors, and make regional problems much more difficult to resolve.

It would threaten the security of the United States and that of our friends and allies. I personally believe that the emergence of even small nuclear arsenals in volatile regions—characterized at best by continuing crisis and at worst by periodic conflict—would present one of the greatest risks of nuclear conflict.

Building an effective nonproliferation strategy is a demanding challenge. It requires vigilance and foresight as well as commonsense.

Since the beginning of this administration President Reagan has vigorously upheld the longstanding U.S. commitment to a vigorous nonproliferation policy. The policy he outlined in his statement of July 16, 1981, referred to by Senator Cohen, reflected continuity with the past and innovation for the future.

Our policy has taken existing agreements as its foundation, the Non-Proliferation Treaty, the Treaty of Tlatelolco, the International Atomic Energy Agency, international cooperation among the principal suppliers, and our agreements for peaceful nuclear cooperation with other countries. The Reagan administration has worked strenuously not only to assure that this foundation remains solid but to strengthen it.

We have gained new adherents to the NPT and ratified protocol I of the Treaty of Tlatelolco. We have worked to upgrade the IAEA safeguards system and have defended the IAEA's integrity in the face of extraneous political activity.

We have strengthened the existing international nuclear export control regime and restored the reputation of the United States as a reliable nuclear partner. This administration has also stressed the importance of addressing the motivations which may drive states to seek nuclear explosives.

Only by understanding and eliminating these root causes can we hope over the long run to head off the further spread of nuclear weapons. We in ACDA have actively contributed to development of the President's nonproliferation policy, and we participate actively in its day-to-day implementation.

We work very closely with Ambassador Kennedy, with the Department of State and other interested agencies and we will continue to

do so. Effective implementation of nonproliferation policy draws heavily on the quality and quantity of ACDA's personnel.

In August the President advised the Congress of a number of steps being taken to strengthen ACDA across the board. I am grateful that members of this committee are supporting that effort in the Congress.

These efforts include requesting legislation to upgrade ACDA's executive positions requesting a \$2 million increase in ACDA's 1984 budget and augmenting ACDA's staff by 25 people over the next 2 years—thereby enabling us to realize that dotted line on Senator Percy's chart. As you know, when I assumed office ACDA did not have a confirmed Assistant Director in charge of the bureau dealing with nonproliferation and there had been attrition in ACDA's nonproliferation staff as in the staff of the Agency as a whole.

One of my first priorities has been to fill the position of Assistant Director for the Nuclear and Weapons Control Bureau by a highly qualified individual with extensive experience on nonproliferation issues. I look forward to having that nomination announced in the very near future and having that nominee come up before this committee.

I am also filling the Acting Division Chief positions on a permanent basis; hiring two additional professionals with extensive technical expertise; adding a new Foreign Service position; shifting one Intergovernmental Personnel Act position into this area; converting a part-time nonproliferation position to full time; and acquiring additional administrative support. The result of these actions will be a significant strengthening of the resources devoted to fulfilling ACDA's role in nonproliferation.

This goes a long way and we can discuss this in greater detail later on, Mr. Chairman, toward the question you posed on the personnel levels. We have been fortunate to have not only a healthy inflow of new individuals with new ideas but also a continuity of experienced professionals involved with nonproliferation issues on the ACDA staff.

In a relatively small group we bring foreign affairs specialists and nuclear scientists, engineers, area specialists, safeguard experts, and international lawyers to focus their collective efforts on this critical problem. ACDA is the Government's most active and important resource in the area of IAEA safeguards.

Finally, on this subject, I would repeat to the committee what I have on a number of occasions emphasized to my nonproliferation staff: If at any time they lack the resources to do the best possible job in meeting their responsibilities I will support them to the fullest in making every effort to obtain what is required.

Knowing the President's commitment in this area I have no doubt that those requests will be met. I would like now to address areas where I believe we have opportunities to make progress.

One of the most important elements of the President's nonproliferation policy is the recognition that we must strive to reduce the motivations of nonnuclear weapon states for acquiring nuclear explosives. We must continue our efforts to address the legitimate security concerns of our friends.

Maintenance of a strong alliance in Asia and Europe as well as a readiness elsewhere to support regional stability can help create a

climate of security in which pressures to acquire nuclear explosives are vastly reduced. Strengthened cooperation among nuclear suppliers to insure that our nuclear-related exports are not misused for explosive purposes is another area in which significant further progress is possible.

There has been growing recognition of the need for strict guidelines for nuclear commerce. Working with other suppliers we should be able to upgrade existing export guidelines and trigger lists and perhaps to supplement them as needed to keep pace with changing technologies and to close loopholes in the nuclear control system. Such steps can buy important time, time to reduce motivations for acquiring nuclear explosives.

I particularly hope that we can move close to agreement among the major suppliers on comprehensive safeguards as a condition for any significant new nuclear supply commitments. President Reagan has on several occasions called for support of this important objective and raised it with key heads of state.

Ambassador Kennedy has made it a major topic of his bilateral discussions over the past year. ACDA has helped to backstop this initiative, and we will continue to work hard on it.

In addition to these top priorities we are working hard in ACDA to strengthen existing treaties in this area. President Reagan in his July 1981 policy statement announced that he would seek prompt ratification of protocol I of the Treaty of Tlatelolco, and this was achieved only 4 months later in November 1981.

The treaty is still not completely in effect. Brazil and Chile have signed and ratified the treaty, but thus far have chosen not to waive it into force. Argentina has signed but not ratified the treaty. Cuba has taken no steps at all.

France, alone among the states with international responsibility for territories within the zone, has not agreed to denuclearization provisions called for under protocol I. Working with the Department of State, ACDA is continuing to seek ways to encourage other governments to take the needed actions to bring this treaty into full force.

We, of course, have a very special interest in the Nuclear Non-Proliferation Treaty. The NPT is a critical cornerstone of the nonproliferation framework. The continuing efforts over the past 15 years by the United States and other countries have made it the most widely accepted arms-control agreement with 119 adherents to date. We in ACDA are pursuing the long-term goal of universal adherence, and we are continuing an active campaign to encourage still more states to adhere to the treaty.

ACDA leads the interagency effort in preparation for the 1985 conference to review the status of the NPT. In the period preceding this NPT Review Conference, international attention will again be focused on the treaty, providing an opportunity to highlight the important contribution of the NPT to international security and to encourage additional adherence.

We know there will be difficult issues, particularly concerns over United States and Soviet nuclear arms reduction efforts. With proper consultations and preparation we hope the conference will strengthen the NPT and the nonproliferation regime.

There is also room for progress in strengthening the International Atomic Energy Agency. The ACDA staff works very closely with the Departments of State and Energy and the Nuclear Regulatory Commission [NRC] as well as with the IAEA in providing technical support and in studies to improve safeguard techniques.

We are searching for ways to improve the Agency's technical assistance program. A strong IAEA and an improved international safeguards regime are essential to effective nonproliferation policy.

We also need to insure that the IAEA concentrates on the goals of its statute—to foster the peaceful use of nuclear energy under effective safeguards. I know this is a subject that Senator Boschwitz, among many other Senators, has studied carefully and written about in his white paper.

The introduction of extraneous political activity such as occurred last year at the IAEA general conference when Israel's credentials were illegally rejected is fraught with danger and threatens the very survival of the Agency. Recent meetings of the IAEA have been businesslike. I hope this new trend will continue.

An effective IAEA is critical to U.S. security interests. An Agency distracted and hamstrung by extraneous political controversy is not. That I know first hand from my years of experience at the U.N.

Finally, by virtue of our law and policy U.S. nuclear cooperation with countries that do not now accept safeguards on all their nuclear activities already is greatly restricted. However, we believe that a continuing dialog with such countries can serve our nonproliferation interests.

It allows us to air our concerns and to help to identify shared nonproliferation interests and ways to expand and enhance them. For example, this dialog can help convince the emerging suppliers of nuclear materials and equipment of the importance of applying existing internationally accepted norms of nuclear commerce for their exports.

If they do not do this, new suppliers would furnish nuclear materials, equipment and technology without adequate controls and the carefully structured nonproliferation system could be significantly weakened. This kind of dialog can be helped by strictly limited forms of cooperation consistent with our law and with our policy.

More than ever before, nuclear nonproliferation is a matter of concern for all the world's nations and for all the world's people. International cooperation too is essential to solving proliferation problems.

We cannot dictate to others. We must rely on communication and persuasion, on sharing our concerns with many other states and urging their support. While we can never rest in our efforts, we can be encouraged by the progress made by Americans and others thus far in the nuclear age.

This gets to a point you raised, Mr. Chairman, on the tremendous concern you have about the future, which is a concern I think we all share. Those who have looked to the future in previous years have seen more of a doomsday scenario than actually has developed.

The number of countries which have opted for nuclear armaments is much smaller than many feared or predicted in the past. For example, in 1958 a special committee of the National Planning Association pre-

dicted in a monograph "1970 Without Arms Control" that "by 1970 most nations with appreciable military strength will have in their arsenals nuclear weapons, strategic, tactical or both." This prediction has not come to pass.

Similarly, President Kennedy's concern 20 years ago that there easily could be 15 or 20 nuclear powers by 1975 has also, thank God, been proven wrong. Despite the increase over the past decades of the number of states which are technically able to acquire nuclear explosives and despite the dramatic increase in military expenditures and arms transfers in the Third World, nuclear explosives are not, thank God, seen as standard military weapons.

Instead a critical norm of nonproliferation has emerged slowly but distinctly. We have seen the international institutions and practices that are the foundation of the nonproliferation framework grow.

Their roots are strong, but we must constantly care for them and foster them. We cannot afford complacency.

Nuclear nonproliferation efforts go hand-in-hand with other arms control efforts and ACDA is a central resource in our Government in all these vital efforts. Working together with other countries, I am confident that we will succeed.

Thank you very much, Mr. Chairman.

The CHAIRMAN. Thank you, Director Adelman. I am encouraged by your comment that more than ever before nuclear nonproliferation is a matter of concern for all of the world's nations and all of the world's peoples.

Your observation that international institutions and practices that are the foundation of the nonproliferation framework are growing, leads to the question: If the international organizations are growing, what are the specific countries actually doing?

That is something we will try to focus our attention on. We will proceed under a 10-minute rule without objection.

Let me ask just some general questions first about Argentina. As I said, last year at my request the Congressional Research Service published a report which projected that Argentina could have a nuclear explosive in 2 to 5 years.

With 1 year having passed, I suppose that means this time period is now down to 1 to 4 years. Would you say this assessment is generally correct?

Mr. ADELMAN. Mr. Chairman, we continue to monitor the situation in Argentina very closely and we continue a dialog with the Argentine officials. Ambassador Kennedy has been the principal representative of our Government on that dialog and could shed more light on that report and on that dialog.

The CHAIRMAN. Fine, if you could and please couple it with the thought, Ambassador Kennedy, that in my judgment Argentina has never really persuasively disavowed its intentions here. In fact, it has publicly reserved what it labels its right, I repeat, its right to build nuclear explosives.

It has consistently refused to agree to full-scope safeguards. It has not signed the Nuclear Non-Proliferation Treaty. It has not ratified the treaty in its own region. Is this correct? Would you care to expand on it as to your observations?

Ambassador KENNEDY. It is correct that Argentina has signed but not ratified or brought into force the Treaty of Tlatelolco. It has not and probably will not sign the NPT which it considers discriminatory and, of course, indeed it is.

Moreover, Argentina has a number—

Senator BOSCHWITZ. Why is it discriminatory?

Ambassador KENNEDY. It was intended to be, Senator. It discriminates in the sense that the nuclear weapons states are allowed to continue with their nuclear weapons programs but the nonnuclear weapons states, of course, foreswear that. That is the nature of the discrimination. That was intended in the first place.

Senator BOSCHWITZ. But what about offsetting aspects of that? You are making Mrs. Gandhi's case, the case she makes when she comes here.

Ambassador KENNEDY. But it happens to be a fact. You cannot defy that fact that its purpose was to do just that.

Senator BOSCHWITZ. I do not want to impose upon the chairman's time, but there are other aspects of the NPT that offset that.

Ambassador KENNEDY. Of course.

Senator COHEN. Your use of the word "discriminates" has a negative connotation when, in fact, the whole purpose of the treaty was to do precisely that in a positive way.

Ambassador KENNEDY. Exactly.

On the other side of the treaty the objective was to assure that those who indeed would foreswear the weapons production would receive the benefits of the peaceful uses of nuclear energy.

Senator BOSCHWITZ. Our objection today is that you do not have to sign the NPT to receive it and while Mr. Adelman says that he hopes every nation will sign the NPT, apparently you find it to be discriminatory and understand that they do not as in the case of Argentina.

Ambassador KENNEDY. No, Senator. You misunderstand, I am afraid. Let me just make very clear that my view and the administration's view and Mr. Adelman's view are identical that indeed we seek that every state sign the NPT, but we just simply have to recognize the facts of life and try to deal with that. Every time we have a discussion with the Argentinians and, let me just point out that until very recently we have not had any for several years, but every time we now have a discussion with the Argentinians we emphasize strongly the importance to the rest of the world and, therefore, to Argentina of Argentina's adherence either to the NPT or to the Treaty of Tlatelolco which would have essentially the same effect.

We stress this continuously with them. I am just pointing out to you that the fact that we stress this does not in any way change their view about the nature of the treaty. It is correct that that is the view which Mrs. Gandhi states. Therefore, for states which use that argument, India, Pakistan, Brazil, and Argentina, we argue strenuously against it.

Senator COHEN. But isn't the purpose of the treaty to say that if you do not abide by its terms you do not get nuclear technology from us? Why have it both ways, saying we think it is particularly discriminatory and, therefore, we do not intend to abide by it, and then saying we cannot dictate the terms to anybody?

Ambassador KENNEDY. We cannot dictate the terms, Senator, obviously, but we can do—

Senator COHEN. We can deny them access to the technology.

Ambassador KENNEDY. We do not deny it. That is exactly the problem. We have not been able to deny them entirely access to the technology.

Let me say that it seems to us that the principal objective ought to be to develop a kind of dialog and mutual respect and trust in this field which will lead them to recognize the message that we are trying to convey and the importance of that message which is in their interest, not just ours. Their interest will be best served by pursuing a clear course toward nonproliferation.

Senator COHEN. What is the penalty involved for not abiding by the provisions of the treaty? What is the incentive? Where are the sanctions?

Ambassador KENNEDY. Let me just point out to you—

Senator BOSCHWITZ. We are trying to convince them that they should join the NPT and our way of convincing them is to sell them this and create the atmosphere. Is that what you are arguing, Ambassador Kennedy?

Ambassador KENNEDY. First let me say something about the question itself—

Senator BOSCHWITZ. That you do not have to sign the treaty, that you will get everything, that we will try to create the atmosphere and if you do not sign it we will sell you more?

Ambassador KENNEDY. First of all, the reactors involved, all of the reactors in Argentina which could use this material, the heavy water to which I think we are referring at this point, are all under IAEA safeguards. The material itself, therefore, will be under IAEA safeguards subsequent to the agreement and understanding with the Federal Republic of Germany. We did not provide this material by the way. We simply authorized the Federal Republic of Germany since we had consent rights over the material, to sell the material to Argentina.

That material is under safeguards. The reactors in which it will be used are under safeguards. Subsequent to that arrangement, I learned just this morning that in fact the Argentineans voluntarily put additional material which had not been safeguarded under safeguards.

Now at least that is a recognition it seems to me on their part that they have obligations in this regard. Our objective is to try to develop that concept.

My meetings with the Argentineans which occurred this spring, and again in a brief meeting with them in Vienna at the Board of Governors meeting of the IAEA in June, were calculated to restore at least the ability to talk with them. It is our view that it is all but impossible to convince them of the wisdom of pursuing a sensible non-proliferation policy if we cannot talk with them. Indeed, that has been the situation that we have had with Argentina for several years.

The fact that we have been able to make some impression, I think, has been recognized by a couple of facts. First, they were prepared to give every assurance that any one asked for in respect to the safeguarding of this material and those assurances were all given. Every aspect of our law was fully and completely recognized in assurances given us by the Argentineans.

Second, in respect to their attitudes toward subjects such as the Committee on Assurances of Supply in Vienna, matters which under the IAEA's aegis have been having a fairly tough road, matters which were made more difficult by the attitudes of some of the representatives including the Argentineans. That attitude is changing and we are seeing a much more cooperative attitude.

Now, I do not for a second suggest that this is because of my or anyone else's persuasive powers. I am suggesting that an attitude is developing and we believe that it is that attitude which will lead us to the kind of result we seek.

The CHAIRMAN. Director Adelman, I would like to get back to my questioning of you. One of the few nuclear issues on which the United States and Argentina really agree is the importance of the Treaty of Tlatelolco.

However, Argentina has not yet ratified the treaty though it has signed the treaty. One the other hand, Cuba refuses to sign this important hemispheric pact.

Cuba is also building a nuclear plant, a powerplant provided by the Soviets. Have we put this issue on our probably already overcrowded agenda with the Cubans and have we raised it with the Soviets who are giving the Cubans their nuclear capability?

Mr. ADELMAN. We have discussed it with the Soviet Union and let me point out something that is often forgotten, especially in times like these after the KAL incident and recent statements by President Andropov. Nuclear nonproliferation is one area where we and the Soviets can and have in the past worked closely together. Both countries have a tremendous interest in halting the spread of nuclear weapons around the world.

Some say the Soviets have an even keener interest in nonproliferation given their relations with both neighbors and countries under their own domination. I would think that nonproliferation is a productive area for a United States-Soviet dialog and that we should continue a working relationship.

The CHAIRMAN. I have talked with the Soviets on a number of occasions in Geneva and in Moscow about their policies. They point out with pride that they have not given nuclear technology to many of their allies. However, they did assist China, and they point out every single one of the weapons that has been built there are trained right on the Soviet Union. So, they have been well repaid for the mistake that they made.

Mr. ADELMAN. They faltered once on this in the late 1950's and that was a burning lesson.

The CHAIRMAN. Now I understand that the Soviet Union may have provided 11 tons of heavy water to aid Argentina's nuclear energy program. Is this correct?

Mr. ADELMAN. That is not my understanding, but I would have to check on that.

The CHAIRMAN. Is there anyone in the room who has any knowledge of that from ACDA?

[No response.]

[Ambassador Kennedy nods negatively.]

Mr. ADELMAN. I have no knowledge of that.

[In September 1981, the IAEA Board of Governors approved a safeguards agreement covering the supply of heavy water from the Soviet Union to Argentina. Published sources indicate that small quantities of heavy water—that is, 5 tonnes—have been exported under that arrangement.]

The CHAIRMAN. We do understand that Argentina is engaging in nuclear cooperation with Libya. I shudder to think of what might happen if Libya ever gets its hands on just one nuclear weapon. Can you tell us about this Libyan connection?

Mr. ADELMAN. Libya is a country, Senator, that we have been watching very carefully for years. Even though Libya has ratified the Non-Proliferation Treaty, we all know that its leader is Qaddafi. We all know what kind of man he is.

To be very frank with you, Senator, we have been quite persistent with our European allies and others to caution them against providing any kind of significant nuclear facilities to Libya. I think that Senator Boschwitz' white paper says it better than anything I have read in recent years: "Imagine just such a thing as Libya getting a nuclear bomb."

This emphasizes how important it is to all of us to prevent that from happening. Implementing nonproliferation policy seldom involves taking dramatic steps, but instead requires constant management. For example, we must watch various relationships which Libya develops with other countries.

I sometimes summarize the nonproliferation part of my work at ACDA as very few home-run balls and a lot of singles and some doubles. It takes a lot of little steps to accomplish our goals.

The CHAIRMAN. Just recently the United States is reported to have approved the transfer of 143 tons of heavy water to Argentina. Is this correct?

Mr. ADELMAN. That is correct.

The CHAIRMAN. Dr. Adelman, I trust you can see the point that I am trying to make. We have a great many nations apparently engaged in nuclear commerce with a nation in our hemisphere, a nation which poses a serious proliferation risk by itself and then we see the same nation, Argentina, engaged in nuclear commerce with a nation with openly aggressive, even terrorist intentions, that is, Libya. Here comes the United States drifting into the picture offering a little help here and a little help there. It makes no sense.

How can you explain this policy? Does it make sense to you?

Mr. ADELMAN. Mr. Chairman, the heavy water that Argentina received from West Germany was, as Ambassador Kennedy said, safeguarded material for use in safeguarded facilities in Argentina. This was done under a long-term commitment that Germany had for this kind of supply to Argentina.

It is a fundamental dilemma in the nonproliferation area as in many areas of foreign policy, of how much can be accomplished by stopping a dialog, by cutting off trade, cutting off communication and relations between two countries. The situation can vary in different countries and timing can also be an important factor.

The majority of countries of the United Nations thought that we should cut off dialog with South Africa and many wanted us to cut

off dialog with Israel. We made the point that to accomplish our common goals with these countries, with the Soviet Union and with others, that there is something to be said for continuing a dialog and to working with these countries.

In different areas like nonproliferation, East-West relations, dealings with South Africa, reasonable people can have different opinions on what is more effective: A total quarantine, a total boycott, or continuing a dialog to hopefully bring these countries along toward our goals.

The CHAIRMAN. Should there be an explosion at some point? Let me just point to the problem that we see. Here [indicating] is Argentina's nuclear commerce and their imports.

We have a little something, a little help from the United States, Canada, the Netherlands, Switzerland, West Germany, the U.S.S.R., possibly, and China and they are going to spread it to Guatemala, Colombia, Peru, Libya, Uruguay, and Yugoslavia. These are publicly reported figures.

Mr. ADELMAN. Mr. Chairman, the figures are right. There might be a misperception from that chart that those imports of nuclear materials into Argentina enable Argentina to have a bomb.

That would be a wrong perception of that chart. At least for the United States, what we provide in the way of nuclear commerce to Argentina is according to the U.S. law that you helped write and helped shepherd through the Senate and through the Congress.

That means that we are not taking any steps which would further Argentina's capability and technical expertise to have a nuclear device. So in that sense that chart might be inaccurate if that were the implication.

The CHAIRMAN. I have just two questions on the same subject area and then I would like to yield to Senator Cohen.

To your knowledge is the Soviet Union engaging in nuclear commerce with Libya?

Mr. ADELMAN. I think there has been in the past, though, whether that has continued I have not seen evidence in recent months, but I know there was some kind of commerce previously.

[Pause.]

Mr. ADELMAN. Ambassador Kennedy tells me it is just not significant to our knowledge at this point.

The CHAIRMAN. I would like to follow up on the Libyan connection somewhat later in the hearing this morning. For now I would like to just finish with the Soviet Union.

Do you know of any other country in particular, any in our own hemisphere with which the Soviets may be engaging in nuclear commerce that may have proliferation implications?

Mr. ADELMAN. No; I do not.

The CHAIRMAN. We could go on quite a lot from here.

Mr. ADELMAN. Excuse me, Mr. Chairman. Aside from Cuba, you said any other countries aside from Cuba. No, I know of no other countries.

The CHAIRMAN. I hope it is as plain to you as it seems plain to me that these are areas of concern that we have pointed out. They are of

deep concern to proliferation specialists and to anyone committed to maintaining the national security interest of the United States.

I would like very much to have the staff both of the Foreign Relations Committee and the Subcommittee on Energy, Nuclear Proliferation and Government Processes of the Governmental Affairs Committee follow up with your staff on these.

Senator Cohen.

Mr. ADELMAN. Mr. Chairman, might I inject just one thought here before Senator Cohen speaks? It is not only a question of support for realizing the goals of nonproliferation between the United States and the Soviet Union and with our allies around the world. I have worked on building a consensus on arms control over the past few months, and nonproliferation is one area where a genuine consensus in large part does exist. Support for nonproliferation cuts across partisan and ideological lines.

I would imagine from your experience and Senator Helms', Senator Tsongas', Senator Biden's, Senator Mathias', Senator Boschwitz' that you all feel very intensively that this is something not identified with the right, left or the center or with any part of the spectrum, but it really cuts through all of those segments.

Let me just say that I think that is the way it should be. Hopefully we will move along on arms control so that we will get proposals that can be supported in large part across the arms control spectrum like that which exists today in nonproliferation.

Thank you.

The CHAIRMAN. Thank you very much.

Senator Cohen.

Senator COHEN. Thank you, Mr. Chairman.

I would like to come back to your expression. I believe you were quoting from Senator Boschwitz that God forbid Qaddafi should ever acquire nuclear weapons. I believe there was a novel written with the title of "The Fifth Horseman" in which two authors indeed projected what the consequences would be if Mr. Qaddafi ever acquired a nuclear weapon, and that is that we would become subject to blackmail, to nuclear terrorism.

But it seems to me that countries such as India, Argentina, China, Pakistan, and others are threatening to go elsewhere to acquire the technology and, therefore, they have been able to get this technology from us. It seems to me that while we ultimately fear a nuclear blackmail by these other countries once they acquire the bomb, they are nonetheless acquiring it through threats not to engage in commerce, to engage in negotiations on other matters with us.

They are acquiring the very means to have that bomb. So it is a sort of trickle down theory for nuclear blackmail, is it not?

Mr. ADELMAN. It depends on what materials they get and from whom. I am personally convinced they are not getting materials from the United States that would allow them to advance on their weapons capability.

Take India, for example. India has come in with a request for spare parts for the Tarapur reactor which as you know is a totally safeguarded reactor with IAEA inspection.

Spare parts would be limited to the goals of helping health and safety. It is a general question whether we would advance nonproliferation interests, to avoid the kind of blackmail that you are talking about and that this novel talks about in the future, by having nothing to do with these countries.

Senator COHEN. No, I did not say that. I did not say having nothing to do with these countries. It seems to me we have other leverage.

Why are we put into a position of being told that unless you give us nuclear technology, we are not going to do business with you on any basis? If that is the alternative, it seems to me it does not put them in a very good position.

The purpose of the Nuclear Non-Proliferation Treaty is to say, yes, there is a nuclear club and we want to keep it small. We do not want to see it expanded and, frankly, ladies and gentlemen it is discriminatory and I am going to keep it precisely that way, so do not come to us with the argument that somehow you are being discriminated against and, therefore, it is unfair.

It is unfair precisely because we do not want any more members.

Mr. ADELMAN. And that is adhered to. We give a lot more assistance to Non-Proliferation Treaty adherents and adherents to the Treaty of Tlatelolco than we do to the countries that you said.

Senator COHEN. Well, tell me this. What is the rationale for why we should be making agreements with the People's Republic of China to sell them nuclear equipment and technology? This is a country which, to my understanding, is helping to build an Islamic bomb for Pakistan.

We have already seen what the potential problem in that region of the world can be, when Iraq was developing its nuclear reactor. Why are we now discussing selling nuclear technology to the People's Republic of China?

Mr. ADELMAN. Ambassador Kennedy just got back, I think 3 days ago, from Peking.

Ambassador KENNEDY. Senator, first China is a nuclear weapons state. Thus, its relationship with the NPT is different from that of a nonweapons state. It stoutly says it will not sign the NPT. That does not make it, by the way, different from France which will not sign it either. But it is not governed by those conditions which apply to non-nuclear weapons states under the NPT.

Now what does China want? China rather clearly has for some 20 years pursued its nuclear program solely in the weapons field. The Chinese authorities understand rather clearly that their own energy needs now in their view suggests that they should have been devoting some attention to the peaceful uses of this technology, and they are interested now in pursuing a nuclear power program.

Rather clearly also, the Chinese want the best technology that exists and so they have said publicly. Now where does that leave us?

We would not undertake, and this has been made clear to the Chinese, any program of cooperation with them without a series of assurances: first, that they would not undertake any program of assistance to others which could lead to the development of an explosives capability; second, that we would have to have assurances appropriate to meeting the requirements of our law. They understand that. Only

under those conditions would we be prepared to do any kind of work and cooperation with China.

Senator COHEN. Let me ask you a general policy question. Do you think that in making exceptions as we have made in dealing with India and in dealing with Argentina and in dealing now with China that we are undermining the very basis of the Nuclear Non-Proliferation Treaty? If we keep making exceptions, what incentive do other countries who want to enter the club have if they simply remain recalcitrant saying, "If you do not give us this technology we will go to the Soviet Union or we will go elsewhere or we will not abide by internationally accepted rules of behavior?"

Are we not constantly sort of reinforcing a future absence of any meaning to this treaty?

Mr. ADELMAN. I believe that those adhering to the Non-Proliferation Treaty, and countries that are debating whether or not to adhere to the NPT, both realize that there are serious and significant benefits to signing up for the treaty. That was part of the deal that you talked about a minute ago, Senator Cohen; they can get material, expertise and technical assistance for peaceful nuclear uses in their countries if they sign the NPT and they have safeguarded facilities—assistance other countries cannot receive.

To the extent that these advantages of being an NPT member are kept strong and are perceived to be strong, then the incentive to keep the adherence high and the numbers growing is going to be there. The fact is that this administration has, I believe, witnessed seven or nine new adherents to the NPT since President Reagan came into office which is good and we should keep that number rising.

Senator COHEN. Mr. Leventhal, I think, will testify later that there has been a sharp departure by the administration from policies pursued by the Ford and Carter administrations, namely in the sale of plutonium to other countries.

Mr. ADELMAN. I think there has been a departure in the sense that, for example, reprocessing in countries in Western Europe and Japan, is not seen as a dastardly deed for nonproliferation. We must recognize these countries are going to have reprocessing, that what we have to be concerned about—

Senator COHEN. From whom do they get the reprocessing?

Mr. ADELMAN. They have it now.

Senator COHEN. Where did they get the materials for it?

Mr. ADELMAN. Well, they have the materials through supplies from the United States as well as their own materials. But the point of this is that Japan, for example, is not a proliferation risk. Japan has been good on its standards of exports of nuclear supplies.

If we thought that there was a tremendous risk involved of Japan lowering its demands on the nonproliferation front, then this kind of policy could be a disturbing kind of policy. But the fact is that we work closely with the Japanese and they are as determined as we are that the spread of nuclear weapons would be very damaging.

Let me just say, Senator Cohen, that we have not sold plutonium to any other country. The plutonium is obtained by these countries themselves through reprocessing.

Senator COHEN. Let me ask you a question about the policy. Under the Non-Proliferation Act, the President has the power either to override or waive negative findings by the Nuclear Regulatory Commission. There is also a provision for a concurrent resolution passed by Congress that would, in essence, veto a President's decision to sell the materials to a country. In view of the recent Supreme Court decision which casts some doubt as to the constitutionality of a legislative veto, does it remove in your judgment the President's waiver authority also with respect to the Nuclear Regulatory Commission?

Mr. ADELMAN. As I understand the legal ramifications of the *Chadha* decision, and let me say that I am not a lawyer, everything applies throughout the whole procedure except for the last stage of the congressional override. The President can have and does claim a waiver, there is a waiting period during which the Congress is given the opportunity to override the waiver through new legislation, but it no longer has the legislative veto on it.

I think the point of the new legal situation, at least as seen from my end of Pennsylvania Ave., is that this means that we have to work closely with the committees, with the interested people in Congress, to make sure that there is not any advantage taken of the Supreme Court's decision, that we consult very closely on nonproliferation.

Senator COHEN. Why did you not consult on the transfer of the heavy water to Argentina?

Ambassador KENNEDY. Senator, first we did not consider that to be a matter which was covered under the law, and I think that is correct. Second, we had looked at it very carefully in respect to its ramifications and concluded that given the fact that we have received all the assurances which would have been required by law and were required by law that there was no question.

Senator COHEN. It is my understanding that we are left in the position where you believe that the President has the authority to waive the negative findings by the Nuclear Regulatory Commission and that Congress has no authority to impose a legislative veto on the sale of any nuclear materials to these countries. Is that correct?

Mr. ADELMAN. That is not our opinion. That is the Supreme Court's ruling on the situation.

Ambassador KENNEDY. But, Senator, may I add and let me reinforce—

Senator COHEN. I just want to know what the role of Congress is.

Mr. ADELMAN. The role of Congress is critical in this. The role of Congress gives us our marching orders in the sense of the Non-Proliferation Act of 1978 and in the sense of any kind of—

Senator COHEN. It seems like we are being given our marching orders. We are told that the sale to Argentina really did not require advanced notice or consultation with Congress and now we have a policy. I am asking, What do we do? What is our role?

Ambassador KENNEDY. Senator, there is no question and we have stated repeatedly that the only thing that has changed is that the Congress does not any longer have the legislative veto, but in all other respects the administration I can assure you intends to act exactly as it always has done. The matter will be referred to the

Congress if in fact it is a matter which under the law would be required.

There was no negative finding on the part of the NRC. It was not a matter on which the NRC would normally make such a finding.

Had there been such a finding, and had the President been required to make some finding in respect of that finding, the question would have been put before the Congress in the normal course exactly as it always has been. I can assure you, Senator, as Mr. Adelman has put it, that we believe that the results of the *Chadha* decision requires us to work even more closely if possible with the Congress than has been the case in the past.

We believe we fully understand the Congress role. We fully understand and respect that role and I can assure you that in every case, we will respect it and consult fully.

Senator COHEN. I did not feel that closeness and that proximity on the Argentine situation.

Ambassador KENNEDY. As I said, Senator, that was a matter that in the normal course would not have come before the Congress under the law.

The CHAIRMAN. Senator Cohen, I wonder if you and Senator Boschwitz would mind. I have three additional questions and the floor is ready to take up the unemployment compensation. I have an amendment, and they are waiting for me to get over there.

I would like to acknowledge the presence in the room today of a very distinguished guest, the Foreign Minister of Bhutan, Foreign Minister Dawa Sering of Bhutan accompanied by David Guyer, president of Save the Children. Both have an interest in the future of humanity as reflected in these hearings.

My question really goes back to an article by Judith Miller of May 2, 1977. The headline is "U.S. Says Argentina Can Make a Bomb Soon." It says that on April 6 Argentina announced that the Soviet Union had agreed to enrich 4 tons of low grade Argentine uranium into 220 pounds of 20 percent enriched uranium fuel.

From the *Jornal Do Brasil*, January 10, 1982, I quote, "The Soviet Union supplied rolling machines for Argentina's zircaloy pipe factory. Argentina has also purchased 5 tons of heavy water from the U.S.S.R. to replace normal operating losses at Atucha, and the Soviet Union in early April 1982 concluded an agreement for an additional ton of heavy water for Atucha I for the service agreement of enrichment of Argentine uranium for use" et cetera, et cetera.

Would you care to comment on that purported development?

Ambassador KENNEDY. There has been cooperation between the Soviet Union and Argentina from time to time. As I indicated earlier, however, I do not believe that the record will show that this has been significant in respect to any proliferation concerns.

As to heavy water, I will have to check that to be sure. I am not sure. There has been other cooperation and it may well have included the things that Judy Miller was talking about.

If I may, I would like to insert something in the record on that.

The CHAIRMAN. We will keep the record open for that purpose.

[The information referred to follows:]

**NUCLEAR MATERIALS AND EQUIPMENT EXPORTED TO ARGENTINA BY THE
SOVIET UNION**

The Soviet Union has exported or agreed to export the following nuclear equipment and materials to Argentina:

Five metric tons of heavy water (contracted for in 1980);

One metric ton of heavy water (contracted for in 1982);

Fuel fabrication machinery (rolling and extrusion machines);

An enrichment services agreement under which the U.S.S.R. has agreed to enrich enough Argentine uranium to produce 100 kg. of uranium enriched to a U-235 content of 20 percent.

The heavy water from the Soviet Union is to be used to meet the heavy water make-up requirements of the Atucha I reactor. The enriched uranium is scheduled to be used as fuel in Argentina's RA-3 and RA-6 research reactors. Both reactors are currently using high enriched uranium supplied by the United States a number of years ago. Soviet fuel fabrication machinery is being installed at Argentina's fuel fabrication facility to Ezeiza.

The heavy water and enriched uranium supplied by the Soviet Union to Argentina is subject to IAEA safeguards. A U.S.S.R.-Argentina-IAEA safeguards agreement was concluded in 1982. The fuel fabrication machinery does not trigger IAEA safeguards.

Argentina Government officials have stated publicly that they turned to the Soviet Union as a source of enriched uranium when it became clear that the United States would no longer supply fuel to their research reactors.

Ambassador KENNEDY. Let me point out also, sir, that the Soviet Union when it does undertake such cooperation does require safeguards on the material which it provides.

The CHAIRMAN. Mr. Adelman, let me complete my questioning of you with reference again to South Africa.

When you were a consultant for SRI you did write a report on the implications of South Africa developing nuclear weapons. I am concerned about the implications of the South African program, as you well know.

Just this week, the administration through you gave U.S. companies approval to help the South Africans run their nuclear power reactor at Koeberg. While I know these reactors are under international safeguards, South Africa has other sensitive facilities that are not safeguarded.

South Africa has clearly let the world know that it is keeping open its nuclear weapons option. Suppose they do set off a bomb some day. How can we rebut the charge that we contributed to that development?

Mr. ADELMAN. We can rebut it, Mr. Chairman, by saying that none of the supplies that we have given have contributed to any South African capability of having nuclear weapons, that these are safeguarded facilities, that this kind of assistance has to be considered in terms of the health and safety of people there, and was approved only after a very hard look at what possible use such exports from the United States could have for a nuclear device.

It was our feeling that these items would be of no possible use in a nuclear weapons program.

The CHAIRMAN. Do you think that answer will fly in Peoria as well as in 49 African countries?

Mr. ADELMAN. No. To tell you the truth, having dealt with Africans for a long time, the majority of the African countries would like us to have absolutely nothing to do with South Africa. They would like us to stop our diplomatic presence, stop our trade, stop any kind of nuclear dialog, stop any kind of dialog.

I thought for years when I was in the African studies field that that may be very satisfying in the short term. It may win us a lot of points with OAU members in the short term, but it would do nothing to remove the horrendous system of apartheid. It would do nothing except probably have an adverse effect on our efforts to prevent the South Africans from gaining a nuclear weapons capability.

The CHAIRMAN. Thank you very much.

Senator BOSCHWITZ, after your questioning and Senator Cohen's questioning of Director Adelman, Ambassador Kennedy is prepared to summarize his 25-page statement. The full statement will go into the record, but because of the shortness of time, he thoughtfully has indicated that he would summarize that statement.

I will return just as quickly as I can from the floor. Thank you very much for presiding.

Senator BOSCHWITZ [presiding]. Ambassador Kennedy, this question has been going back and forth but let me ask Director Adelman before we proceed to your statement, Ambassador Kennedy. We are not training South Africans?

Mr. ADELMAN. I know that a few years ago we had some South African students in the United States.

Senator BOSCHWITZ. This is not just by way of students. Are we not training South Africans in the area of nuclear facilities?

Ambassador KENNEDY. To the extent that these most recent contracts, the ones which have been discussed here, involve training of South African personnel in the actual maintenance work which the contracts subsume, the answer would be yes. That is one of the purposes as I understand it of those contracts.

The contracts do not provide for the supply of any significant quantity of material or certainly no significant material, only very minor things that would be associated with normal maintenance operations of those facilities. That is what the contracts propose.

In that connection, I think that the contracts also include provisions for training South Africans in the maintenance activities.

Mr. ADELMAN. These again are safeguarded facilities. These facilities do not contribute to a capability for nuclear explosions.

Ambassador KENNEDY. Senator, if I may add too, there are also some South Africans, and I would have to check to be sure how many and under what circumstances, but there are some South Africans who do attend courses in the United States which are under the jurisdiction of the International Atomic Energy Agency.

[The following information was subsequently received for the record:]

Question. Are we training South Africans in the United States?

Answer. Yes, but on a limited basis and under the auspices of the IAEA which selects the students. Six South African nationals have taken Sandia Laboratory's course on Physical Protection of Nuclear Facilities between 1978 and 1983, two this year, two last and two during the remaining period. Two students have taken the Los Alamos course on State Systems of Accounting and Control of Nuclear Material, one in 1983 and one in 1982. In 1979, two South Africans participated in the safety and reliability of nuclear power plant operations course at the Argonne National Laboratory.

Senator BOSCHWITZ. Ambassador Kennedy, you talked about the fact that we have no jurisdiction over this heavy water transfer be-

tween West Germany and Argentina, we in the Congress. I understood that was an earlier answer that you gave.

Ambassador KENNEDY. Under the terms of the Non-Proliferation Act, sir, the heavy water transaction would be one which normally would not have been a matter which would have come before the Congress except in the sense that—I would say that I regret this. As is normally the case as you know we try very hard to make sure that the Congress is fully and currently informed.

Here is a case where we just plain “goofed,” Senator. We should have come up and informed you that this was going on. As a matter of fact, let me recap if I can for a second.

This question arose as early as 1981. It was not a new question at all. It was raised originally in 1981 by the EURATOM Supply Agency with the U.S. authorities and it was in fact in 1982 and again earlier in 1983 under active consideration. It was set aside during the time of the Falkland Islands matter and no action was taken on at that time.

It was only after all of that was cleared up and the United Kingdom which had title to the material at one point transferred it to the Federal Republic of Germany that the question again became active. But the matter had been around and had been called to the attention of the Nuclear Regulatory Commission as early as 12 months ago, probably earlier than that.

So it was not exactly a new matter. The fact that we did not come back up here and discuss it with committee members I regret personally I can assure you. In addition there has been a question, I know, about why the unseemly haste. It was not intended to be unseemly. Nobody was trying to run anything by anybody.

It was handled poorly. We accept that. Indeed we have looked at all of the procedures that surround this kind of transaction, and we have a new set of procedures out now for comment by all of the agencies to prevent this kind of thing.

But I can assure you that a matter of this kind would be a matter which we would want to discuss with the Congress, but it is not a matter which normally would have come up for action by the Congress in the sense that it would have come up under the NNPA.

Senator BOSCHWITZ. Why not? Why would it not normally come up under that?

Ambassador KENNEDY. It is not covered by the law. It is the kind of transaction that would not be covered by the law.

Senator BOSCHWITZ. I understand that there are some requests for direct transfers by Argentina that have languished in the State Department for some time. My notes show that there is a request for direct transfer of 2 kilograms of heavy water that has been pending at the State Department since January 24, 1983.

There is another one for 10 kilograms since June 10, 1982. There is another one for 5 kilograms since February 4, 1982. These are remarkably small amounts. What seems to be the problem in getting them moved forward? Is there a different type of problem in respect to them than there is with respect to the shipment from West Germany?

Ambassador KENNEDY. The very questions which we are now discussing are being looked at. I can assure you that no transaction of that kind would be agreed to by the United States unless all of the requirements of law were met and all of the assurances from a nonproliferation point of view that would be required either by law or policy or both were fully met, as was the case in the case of the 143 tons.

Senator BOSCHWITZ. I do not know that I quite understand your answer, Ambassador Kennedy, that there are these 17 kilograms about 40 pounds or less of heavy water that seem to be caught in some type of a delay. It is a direct transfer and yet 143 tons seems to move right along. Is there some difference in the considerations involved?

Ambassador KENNEDY. The fact is, I am informed, that these specific cases are NRC licensed cases. The NRC has them and has asked certain questions. We, that is, the executive branch, have responded in the normal course to a number of these questions.

There are additional questions. When those questions are answered, then the license presumably will be issued.

Senator BOSCHWITZ. There were no such requirements for 143 tons but there are with 40 pounds?

Ambassador KENNEDY. These small ones are actual transfers directly from the U.S. exports. This being a retransfer was not subject to NRC license.

Senator BOSCHWITZ. So, therefore, the Congress apparently has to tighten up the law that if you transfer it first to West Germany or you transfer it to England which in turns transfers it to West Germany and then it goes to Argentina, a so-called retransfer, everything is fine. There is not much oversight.

Ambassador KENNEDY. Well, there is intensive oversight, Senator, as I indicated to you—

Senator BOSCHWITZ. But not as much as there would be on 40 pounds that is directly transferred.

Ambassador KENNEDY. I submit to you, sir, that it is probably just about the same. The only difference is whether the NRC actually has to issue a license. The review that takes place in the executive branch is precisely the same.

The conditions for allowing the transaction to occur would be precisely the same.

Senator BOSCHWITZ. What about notification of the Congress?

Ambassador KENNEDY. As I indicated to you, I have no brief to make in respect of the fact that we did not notify you of this as we should have in the normal course. I can assure you that our procedures are such now or will be when the new ones are approved which should be very shortly that we will make absolutely certain that that kind of oversight does not occur in the future.

Senator BOSCHWITZ. The NRC is not involved in these retransfers as far as I can gather.

Ambassador KENNEDY. Under the new procedures we will see that they are. As a matter of fact, Senator, in this case the NRC was informed over 1 year ago that this was a prospect.

Senator BOSCHWITZ. The NRC was informed and apparently the NRC sent the DOE, which apparently has jurisdiction in these retransfers, a classified letter in March 1982 which expressed misgivings

about the proposed retransfer and in which it requested the DOE to prepare an analysis of the request. Has that analysis been prepared?

Ambassador KENNEDY. No; and DOE acknowledges that it should have in fact. I was unaware of this transaction until only very recently. DOE acknowledges now, Senator, that in fact it should have more promptly responded to the NRC's questions, but it is to be recalled as I said, that actually the NRC does not have jurisdiction.

When the DOE actually put this to NRC and notified them of it, it was doing it even though the procedures and the law would not otherwise have required it.

Senator BOSCHWITZ. What were the NRC misgivings about this transfer?

Ambassador KENNEDY. I do not know, Senator.

Senator BOSCHWITZ. If, in the event this transfer is undergoing the same scrutiny that the transfer of 40 pounds worth of heavy water that is being directly transferred, as opposed to being retransferred, through foreign countries it would seem to me if the NRC is involved, as you and your assistants say it is going to be involved, then you certainly should be curious and informed of what the NRC's misgivings were.

Ambassador KENNEDY. I am and I will find out what they are. But let me just point out to you that whatever the case all of the considerations both as to the law and as to our policy were fully and completely examined in this case. Only when we were absolutely satisfied that we had all the assurances from the Argentine Government that we required only then did we indicate to the Department of Energy that from our point of view, that is the Department of State's point of view, the executive branch was fully within its rights and within the limits of our nonproliferation policy to go ahead and authorize the transaction.

[The following letter was subsequently supplied for the record:]

U.S. NUCLEAR REGULATORY COMMISSION,
Washington, D.C., October 4, 1983.

HON. DONALD PAUL HODEL,
Secretary of Energy,
Washington, D.C.

DEAR MR. SECRETARY: On August 3, 1983, the Department of Energy approved a request from EURATOM to retransfer 143 metric tonnes of U.S.-origin heavy water from West Germany to Argentina. The Commission recognizes the Executive Branch's responsibility for implementing the U.S. Government's nonproliferation policy. Insofar as this policy is implemented through various export-related activities, the Commission has sought to ensure, in accordance with its statutory mandate, that NRC judgments on export matters take into account and are consistent with U.S. nonproliferation objectives. Moreover, in the great majority of export actions reviewed by the Commission since its inception, the Executive Branch has cooperated with NRC in responding to the Commission's requests for information and the Commission has then completed its review in a timely fashion. In view of this record of proper interagency consultation in conformance with the Nuclear Non-Proliferation Act's requirements, the Commission is troubled over the Executive Branch's actions in the heavy water retransfer case.

As you may know, in the Commission's view, the NRC was not provided complete and accurate information on the status of the Executive Branch review of this retransfer. In addition, the Commission believes that this approval occurred without proper consultation with NRC, despite the fact that the Department had agreed to consult with the NRC on this matter and had been informed

prior to approving the retransfer that the NRC had concerns regarding this case and intended to provide comments. The NRC staff believes that the retransfer request should have been considered a subsequent arrangement as defined in the NNPA. As we informed DOE and State Department representatives in a Commission meeting held to discuss this case on September 8, this is particularly troubling in light of the potential proliferation significance of the case and the fact that a number of NRC staff questions on comparable NRC-licensed commodities for Argentina have yet to be answered by the Executive Branch. In responding to NRC's concerns, Mr. George Bradley, DOE's Acting Assistant Secretary for International Affairs, acknowledged that the request was processed in an irregular manner and indicated regret for the lack of consultation. The Commission was not fully satisfied with Mr. Bradley's explanation of the reasons for the Department's failure to consult with NRC in the heavy water retransfer case. Nevertheless, the Commission appreciates the commitments made by Mr. Bradley during the meeting to take steps needed to assure that this situation will not be repeated in the future.

In this connection, the Commission has received proposed revisions to the interagency review procedures which, *inter alia*, provide for detailed consultation with NRC with respect to retransfers of nuclear commodities covered by Section 109b. of the Atomic Energy Act, as amended. We will review these proposed revisions and provide the Executive Branch with our comments in the near future. We also appreciate Mr. Bradley's assurances that while the interagency procedures remain under review, DOE will treat future retransfers as if the relevant portions of the proposed revisions were in effect.

The Commission appreciates DOE's assistance in addressing this matter and we look forward to improved cooperation with the Department and other interested Executive Branch agencies in discharging our responsibilities on nuclear export matters.

Sincerely,

NUNZIO J. PALLADINO.

Senator BOSCHWITZ. Mr. Secretary, it is very disturbing. Let's just get back to those 40 pounds. It is just remarkable to me that three small shipments, 1 of 4 or 5 pounds, another of 22 pounds and another of 5 kilograms perhaps 11 pounds, that this undergoes such exhaustive scrutiny. These have been some instances since February 4, 1982, and yet the 143 tons comes to our attention recently and yet the objections of NRC are not known by you.

We are concerned about Argentina. I understand that they are developing their own heavy water facilities for extracting or reducing or whatever one does in order to obtain heavy water. Is that correct?

Ambassador KENNEDY. The Swiss plant which is being built in Argentina which is under development now is some way off, a considerable way off. I cannot give you the date, but I will put into the record what our estimate of the completion date is.

[The information referred to follows:]

HEAVY WATER PLANT IN ARGENTINA

The Swiss firm Sulzer Brothers is constructing a heavy water plant at Arroyito in Argentina. This plant is designed to be capable of producing 250 metric tons of heavy water per year. The plant and its product will be covered by IAEA safeguards. If safeguarded heavy water from this plant or any other safeguarded source were used in a previously unsafeguarded reactor, the reactor, its fuel, and any plutonium produced in it would be subject to safeguards.

The Argentine National Atomic Energy Commission has placed a high priority on completing this plant. Although, as is the case with other major industrial projects in Argentina, the country's economic situation has delayed the completion of the plant, the Argentines expect it to begin operation in the first quarter of 1985. However, we would expect it to be some time before a plant of this complexity could be producing heavy water at its full rated capacity.

Argentina also has under construction a small, indigenously developed heavy water pilot plant at Atucha. This plant, which will have a capacity of 2-4 tons of

heavy water per year, is to be used to cover the heavy water make-up requirements of the Atucha I reactor. Since the plant would be indigenously developed, Argentina would not be required to place it under safeguards. The plant was originally scheduled to be completed in 1981, but it has not yet been finished. We do not expect the plant to be ready for operation in the immediate future.

Argentina also has plans to expand its capability to produce unsafeguarded heavy water by constructing a plant with a capacity of 80 tons of heavy water per year. We have no information that would indicate Argentina has begun implementing these plans.

Power reactors, such as those Argentina is operating or constructing, require on the order of 350-500 tons of heavy water to operate with another 50 tons of heavy water in reserve. Such reactors might have make-up requirements on the order of 3-5 tons per year. All power reactors operating or under construction in Argentina are covered by IAEA safeguards.

Senator BOSCHWITZ. Would that not come under IAEA safeguards?
Ambassador KENNEDY. Yes; it would.

Senator BOSCHWITZ. Have the Argentines agreed that it would come under IAEA safeguards?

Ambassador KENNEDY. They had to as a condition of their agreement with the Swiss to build it.

Let me just say, Senator, if I may in respect to Argentina that the fact is that anything or anybody from the outside has been doing with and for Argentina in the nuclear field everything that involves outsiders is safeguarded. It is only those things which Argentina is unable to get anybody to work with them on and which they, therefore, have in their judgment been forced to do on their own and they have a very, very substantially elaborate industry and can do a great deal on their own.

Those things they say we did on our own and it is our determination, therefore, whether they would be safeguarded or not, and we elect not to do so. Anything that is done by anyone else or with a participation of anyone else is fully safeguarded.

Senator BOSCHWITZ. So their commitment to safeguarding under the IAEA is somewhat tenuous.

Ambassador KENNEDY. It has differentiated between those things which it builds itself and those things which it has others participating in.

Senator BOSCHWITZ. In a Congressional Research Service study it notes that Argentina is also trying to develop its own heavy water production technologies through design and construction of a small pilot plant with an annual design output of 2 metric tons. This is scheduled for start up in 1984.

Ambassador KENNEDY. That is the one we were talking about. That is the Swiss plant—I mean, no. It is a smaller one. Excuse me. That is the indigenous plant and that would not be safeguarded. That is correct. I am sorry.

Senator BOSCHWITZ. That was the one I was referring to when I asked the question of whether or not the plant for heavy water would be safeguarded. Apparently they are developing one of their own.

Ambassador KENNEDY. With 2 metric tons capacity.

I would like to review whether in fact 1984 is still a valid estimate as to its completion. When I visited Argentina and spoke at length with all of the Argentine authorities associated with these programs, I came away with a very clear impression that most of these programs were being significantly delayed and may well be well into the future.

Senator BOSCHWITZ. I do not dispute that for a moment, but the report I note is updated through September 21, so it is quite a current report. As Senator Percy pointed out we certainly are very concerned about Argentina as you can well imagine

The Argentines make statements that certainly are irresponsible as the chairman pointed out. They have connections with Colonel Qaddafi as Ambassador Adelman pointed out and in something I have written as we said what a world it would be if Qaddafi or Khomeini got their hands on a nuclear weapon so we do indeed have concerns and these fine distinctions that are drawn that they are all for IAEA safeguards. Well, they have to be and in the event that they can develop themselves then they are not so much for IAEA safeguards.

If we want to sell them 40 pounds of heavy water and it must go through the NRC procedures they must look at it with great care and intensity and apparently 143 tons on the other hand moves through with alacrity. Perhaps there are some additional requirements that we in the Congress must make in order to seek a more uniform means of oversight and in the event that we are denied our ability to say no through a veto we must tighten up the oversight in the first instance.

Ambassador KENNEDY. May I comment, Senator, on a couple of points for the record? First, as to the statements which I think the chairman referred to earlier and to which I think you have now referred as to the military interest in the nuclear field in Argentina there is and will continue to be I am quite sure an interest in nuclear propulsion in Argentina.

Senator BOSCHWITZ. In nuclear what?

Ambassador KENNEDY. Nuclear propulsion; that is, submarines. They have an active interest and they are making efforts in this direction.

It is my judgment that that is the military use to which they are referring. We have received categorical assurances that they have no intention of developing a nuclear weapon as to nuclear explosives, that is the so-called peaceful nuclear explosives. They understand, Senator, that we do not make any distinction. That has been made absolutely clear to them.

As to the peaceful nuclear explosions, they have indicated clearly to us that they have no present intention of moving in that direction and see at this juncture no need to do so. They, however, in this connection will say that if at some point in the future an economic and social development would suggest that peaceful nuclear explosions could be useful in the economic development, that is, presumably dam building or something of this sort in Argentina, they do not at this juncture wish to foreclose that option.

Let me make one last point. As to the oversight question, as I indicated to you we are, as a result of this situation, examining this matter in depth to determine exactly what did occur and how the chronology developed. We have undertaken to issue for comment of all of the agencies, new procedures which would assure that the NRC was given a full opportunity to comment and that, therefore, the oversight question which you suggest would be essentially taken care of. That is the purpose of these new proposed regulations.

Senator COHEN. May I just offer a couple of comments? With respect to a declaration on the part of any country that they have no

present intention of developing a nuclear weapon, I would submit to you that that is an illusory promise.

Mr. Adelman was very active and is still very active in the arms control field. He will recall, for example, during the discussion on the SALT II debate one of the principal areas of concern on the part of many of us in Congress was the fact that we believed the Backfire bomber to have an intercontinental range, making it a strategic weapon.

The Soviets, of course, insisted that they did not intend to use it as an intercontinental weapon. I recall Mr. Adelman and others coming to testify before the Congress that that would set a remarkable precedent in our dealing with other countries in defining arms-control measures, that the declaration of an intent rather than existing capability would then define what a strategic weapon would be.

Many of us believe very strongly that we should not allow any country to declare or to define a weapons system by virtue of its present intent. Capability is really the keystone and not a declaration of intent.

It seems to me that we find ourselves in the same category. Let me give you a chain reaction of a sort, if I can.

India has a bomb, presumably. Pakistan wants a bomb. China is building more bombs. We are now proposing to deal with China and our reports say that China is to supply Pakistan with nuclear materials so what we have is a situation—and I would suggest to my colleague that I do not really disagree with him—where it is not that we need more laws but we have to have a reaffirmation of the policy behind the existing treaty.

What we have now is a situation where more and more countries are acquiring the capability of building nuclear weapons. Admittedly, we would not have sold or allowed the sale of heavy water to Argentina without current safeguards. But more and more countries are acquiring the nuclear capability with "safeguards" which at some future time can be totally disregarded, much as Qaddafi can thumb his nose at any of us and say "I do not have to abide by these safeguards."

Moreover, once these countries acquire the capability they can then say "We are now members of the club, folks, and we do not have to pay any dues. We do not give a damn about your safeguards."

It seems to me that we are simply rationalizing our own inability to make a clear-cut policy decision that we are not going to sell to those countries who refuse to sign the Non-Proliferation Treaty. We have rationalized by saying it is better to deal with them, to try to mollify them, to moderate our differences to see if we cannot establish more diplomatic channels and somehow make it all safer.

The fact of the matter is we are helping to accelerate the proliferation of nuclear capability to countries under the promise that they have no intention of making it into a weapons system, that they are only seeking peaceful explosions. It is not going to be too long before we see many more countries entering the club with our assistance.

Mr. ADELMAN. Let me just say, Senator Cohen, that you are absolutely right on intentions and capabilities. I have never been and I do not think anybody has ever been too interested, except from a public relations point of view, in what the press release says about x, y, and z. It is for that reason that we monitor very carefully what these countries actually do in terms of nuclear capabilities rather than look at what their newspapers say.

Second, the whole purpose of the safeguards is to detect diversion from those facilities under safeguards. If a country has nuclear power-plants and declares tomorrow in order to brag or be a big shot that they have a capability for a nuclear weapons device, it just cannot be true with regard to those facilities.

Now if you are saying that you do not see all the facilities in a country through international safeguards, you are absolutely right. If you are saying that there are certain types of safeguarded facilities where the inspectors do not do as good a job as they could, you are absolutely right.

The system is not foolproof. It is not an absolutely ideal system. It is certainly better than nothing.

Senator COHEN. But we could say, unless you agree to comply with the treaty provisions then we are not going to deal with you. That is pretty clear. That was the policy, but that is not the policy now.

Mr. ADELMAN. The deal with the NPT was that significant nuclear exchanges are going to be encouraged with NPT members and significant exchanges with non-NPT members prohibited. The word "significant" should be underscored. It was not the idea, nor was it the idea of the 1978 law, that all nuclear commerce between the United States and non-NPT countries would be cut off.

Senator COHEN. Yes, but as Senator Boschwitz has said, if we give you a small amount here it comes under our careful scrutiny, but if it is a used car it does not carry the warranties. It is just sort of extended out by having been put through several different countries.

The safeguards tend to diminish with each hand that touches it.

Mr. ADELMAN. If your point is, Senator Cohen, that it is not a good situation you are absolutely right. There should be no apologies that it is a nice situation.

We would like Argentina to have all of its facilities under safeguards. We would like to have this kind of situation cleared up.

If you are saying that the way to do that is through total denial, I believe that has been tried in the past and has not worked. We have gone through in recent years a period maybe not of total denial but of certainly clamping down a great deal.

But did that further nonproliferation or did it not?

Senator COHEN. Well, maybe it has worked better than we thought because, as you said, thank God President Kennedy's predictions have not come true. Perhaps that has been a better device to slow down the proliferation than by simply slowly allowing this material to filter out into the various countries under presumed safeguards which at a later time can in fact be rejected.

Maybe that is a better solution.

Mr. ADELMAN. It has been tried both ways to be very honest with you. Even in our dealings with a country like Argentina throughout history we have had degrees of greater denial and degrees of greater dialog back and forth.

Senator COHEN. I know we are trying to use it as a diplomatic tool to build better relations. In India, for example, my understanding is the spent fuel restrictions will expire in 1993.

Mr. ADELMAN. That is India's interpretation, certainly not ours.

Senator COHEN. Well, we have seen that when India's interpretation comes into conflict with ours, India's prevailed, as it did last time with regard to the sales to India both last year and the year before. Even though we disagreed with their interpretation, they nonetheless prevailed in dealing with the administration.

Ambassador KENNEDY. Senator, if I may, I think that is just a little unfair. They did not prevail with respect to the administration.

Senator COHEN. But the sale went forward.

Ambassador KENNEDY. Yes, it went forward and it was fully understood between us what our view was and that they differed and that before any action was taken to move on their view as contrasted with our own they would consult with us.

Senator COHEN. Ambassador Kennedy, I will turn to Mr. Adelman again.

Mr. Adelman, what has been your experience when there has been a disagreement between two major countries over an interpretation over a treaty provision?

Mr. ADELMAN. My experience has been that they just talk about it forever until the accusing party decides to forget it. It has not been a happy experience.

They may be a little more forthcoming on some facts. They may try things, but what usually happens from our experience is that the accusing country moves on and has other concerns that have become more important and, therefore, they decide to forget it.

Senator COHEN. I submit to you that in 1993, when that period expires, the same sort of ambiguity about interpretation will confront the 1993 Congress. Once again there will be the argument that we have to continue good relations and, therefore, we will allow them to have their interpretation, although we have a different one, and we will pass some more of the nuclear material.

Mr. ADELMAN. Well, that would be a very sad development, but certainly we have had sad developments in the past.

Senator BOSCHWITZ. But as Ambassador Kennedy has said, we will let them know where we stand but they will get the materials and that would be a big disappointment.

Ambassador KENNEDY. But, Senator, we have not exported any nuclear material to India since 1980.

Senator COHEN. Well, parts for their reactor then. We now are talking about spare parts for their reactor. I have been told that one of the General Electric employees who has been to India has indicated that it seems to be in good working order and perhaps it is a bit premature for us to make a decision now to supply them more spare parts.

Ambassador KENNEDY. I have read the General Electric employee's report, Senator, and with all due respect what he said was that these reactors were not in the condition which some had alleged, that no amount of spare parts would put them into operating condition or a safe condition.

What he said was that these reactors were—that it would be possible to put these reactors into an operating safe condition but that spare parts would be required to do that.

Senator COHEN. Why not just give spare parts and say, unless you agree to the rules that you do not build nuclear weapons, which is the whole purpose behind the treaty, you do not get spare parts? What is wrong with having a law on the books which in fact is carried out?

Mr. ADELMAN. The idea was quite frankly that with India you have competing interests just as you do in so many of these cases, that you have a nuclear facility under complete safeguards at Tarapur with which for better or worse—we can all have our opinions on that—the United States has been involved. Then the Indian authorities come to us and say there are health and safety reasons why they need spare parts, and unless they get them the reactor employees and the people who live in the area will be endangered. You have to ask yourself whether it is worth the cost and the kind of controversy it provokes to head off a nuclear accident.

Senator COHEN. Please bear in mind that I am not just picking on India. There is Pakistan also.

Mr. ADELMAN. I understand, but they say there are health and safety considerations and that we can talk about levels and the likelihood that there is an increasing level—

Senator BOSCHWITZ. We could say that if they explode bombs they are no longer interested in the health and safety aspects of the world.

Mr. ADELMAN. Well, we were very interested in their exploding a bomb in 1974.

Senator COHEN. We are spending a lot of money helping with the security interests of Pakistan. What indications do you have that Pakistan is responding to our concerns that they not turn toward nuclear weapons?

Mr. ADELMAN. I really think when you look around at the emphasis that this administration has given on alleviating the motivations to go nuclear that it has been pretty successful.

Senator COHEN. Have you read reports about Pakistan seeking to acquire some technology from China in order to develop nuclear weapons?

Mr. ADELMAN. I do not think anybody should ever have explained the policy or understood the policy of alleviating the motivations for nuclear devices by saying it is going to work perfectly. An argument that I think is absolutely true is that to the extent that you alleviate security concerns you provide one of the many components for a nonproliferation treaty and for a nonproliferation regime.

Perhaps the converse is said easiest, as the security concerns of a country increase, the motivation of that country to have nuclear devices increases.

I think you can see that in our experience with Korea over the years and our experience with Pakistan as well.

Senator BOSCHWITZ. We are going to recess for 10 minutes while we go over to cast our vote or until Senator Percy or somebody else comes back.

[A brief recess was taken.]

Senator PRESSLER [presiding]. Let us resume our hearing and I do apologize for my absence this morning. I was at the Commerce, Sci-

ence, and Transportation Committee where we had a markup of the telephone bill. It is a very important bill, especially with the coming divestiture of AT&T and that occupied all of my time.

Indeed I can only be here for a short time, but I welcome ACDA Director, Ken Adelman and Ambassador Kennedy to this hearing on nuclear nonproliferation policy. Indeed they have made their statements known.

I am especially pleased to have ACDA represented at this hearing. For far too long arms control and nonproliferation have been treated as separate issues. To my thinking, they are one and the same. Moreover, there are areas, such as experience gained through the operation of the IAEA inspection system, which could suggest ways to improve arms control verification.

We and the Soviet Union face difficulties in resolving differences in concluding significant arms control agreements. This dilemma is ours because the nuclear powers are the world's original proliferators. It is in our mutual interests and those of other nations to prevent the further spread of nuclear weapons. Let us remember that the decisions we make today, and in this hearing we will consider several very serious decisions, will determine whether proliferation can be avoided.

It is because of my deep concern for the future that I must take exception to the proposed sale of spare parts to India for use in its Tarapur nuclear reactor. India has previously misused its imported reactor technology to build a bomb. If India refuses to disavow interest in nuclear explosives I cannot support exports to that nation.

Similarly, I have difficulty with the decision to allow reexport of U.S.-origin heavy water to Argentina. Argentina has unsafeguarded nuclear facilities. Argentina, like India, is not a party to the Nuclear Non-Proliferation Treaty and has not satisfied concerns raised about its nuclear intentions. The failure to consult Congress on this sensitive transaction, though there was plenty of time and sufficient opportunity to consult, is disturbing. I hope this episode does not mark the start of a new trend growing out of the Supreme Court's recent decision on legislative veto.

Last, reports in this week's press suggest that the United States is about to establish trade with the South African nuclear establishment. Arrangements at this time raise serious questions. Is it compatible with our nuclear nonproliferation policy to assist a nation that has placed itself outside the nonproliferation system?

In conclusion, let me say that I come here with serious reservations about recent events in the nuclear area. I hope that today's testimony will deal with these issues satisfactorily.

I know that you have testified already. I believe that people have made their statements. Well, I believe one of you has. Another statement is to be given.

Let me ask you to make your statement with the understanding that I have to go back to the floor to offer some amendments. How long is your statement?

Ambassador KENNEDY. I can do it in less time than that in view of the fact that we have already covered much of it in the testimony thus far.

Senator PRESSLER. Very well, Ambassador. Please proceed.

STATEMENT OF HON. RICHARD T. KENNEDY, AMBASSADOR AT LARGE, DEPARTMENT OF STATE, ACCOMPANIED BY JAMES B. DEVINE, DEPUTY ASSISTANT SECRETARY OF STATE FOR NUCLEAR ENERGY AND ENERGY TECHNOLOGY AFFAIRS

Ambassador KENNEDY. Thank you, Mr. Chairman.

I welcome the opportunity to meet with you and the members of the committee today to discuss the administration's program for preventing the spread of nuclear weapons. Let me for the record make it very clear that the commitments which I made nearly a year ago before the Foreign Relations Committee: The administration, and I personally, believe this to be, if not the most significant problem facing the world today, is certainly high on the list of those important problems.

It is a problem which demands our earnest and continuing attention and it is getting precisely that. In a previous appearance before you, I outlined the responsibilities and organizational relationships in the nonproliferation area, relationships in the administration which were contemplated by the President and Secretary Shultz when they nominated me as Ambassador at Large with responsibility in this field.

In that role, I coordinate the efforts of the executive branch and act as the special representative of the Secretary and the President in discussions and negotiations with other countries on nonproliferation matters. I am very pleased to note for the record that these organizational relationships have worked well and have provided an increasingly cohesive approach to a complex, difficult, and vital task.

I particularly want to note this morning the effective contributions of the State Department bureaus and specifically the Bureau of Oceans, Environment, and Science represented here by Deputy Assistant Secretary James Devine, who heads the nuclear section of that Bureau.

The Arms Control and Disarmament Agency, my friend, Ken Adelman, and his staff are of enormous assistance. The Department of Energy and the Department of Defense also contribute immeasurably and work together with us in this effect.

All of the nonproliferation efforts which we undertake are, of course, conducted under the guidelines provided by the President in his statement of July 16, 1981, to which Senator Cohen earlier referred. With your permission, Mr. Chairman, I would appreciate it if the President's statement could be appended to my statement for inclusion in the record.

Senator PRESSLER. Without objection it is so ordered.

Ambassador KENNEDY. My prepared statement, Mr. Chairman, includes an update for the committee on a number of important events which have taken place since we last met in the committee. I will not try to summarize them, but they are included at some length in my full statement.

There were a number of specific items which Chairman Percy noted and asked that I comment upon in his letter of August 4. Again, if I may, I will summarize some comments as to those matters and only deal with some of them in the interest of time. Each of them is discussed at length in my full statement.

First, as to the *Chadha* decision and the legislative veto, Mr. Percy asked if I would comment on the effects of this in respect to the administration's conduct of its nonproliferation policy.

Various provisions of the Atomic Energy Act as amended by the Nuclear Non-Proliferation Act of 1978 have provided for a legislative veto by the Congress of Presidential determinations to permit exports of nuclear hardware and fuel to foreign countries. Basically these statutory arrangements consist of three distinct elements.

First, they establish very strict and specific standards which limit the export of nuclear items. Second, they authorize the President to waive certain restrictions and permit exports if he makes certain findings.

There are also requirements that such waivers and findings be reported to the Congress with specified waiting periods before those actions may become effective. The third element was the legislative veto.

As you know, Deputy Secretary Dam has testified that the Department of State considers that those standards and that waiver authority, as well as the statutory requirement of notifying the Congress and observing a waiting period continue to be valid in all respects. We will continue to wait through the period during which the Congress in the past deliberated over its veto.

During that time the Congress may use its constitutional authority to enact new legislation if it chooses to do so. The only provision that we view as invalid is the third which permitted the legislative veto by concurrent resolution.

Deputy Secretary Dam emphasized last July, and I reiterate today, that neither the Department nor the administration intends in any way to take advantage of the situation created by the *Chadha* decision to take any action which would disturb the relationship of cooperation and collaboration which we have developed with the Congress over the years in the area of nuclear nonproliferation.

We intend to continue consulting regularly with the Congress and its committees and taking your counsel and advice into account in reaching important decisions.

I had prepared notes on the Tarapur reactor question. We have discussed it at some length and will come back to it in questions. Let me turn for a moment to another point which the chairman's letter mentioned, bilateral discussions with the Soviet Union.

The United States and the U.S.S.R. have held two rounds of bilateral meetings on a broad range of nonproliferation issues. The first session was in Washington between December 15-17 last year and the second took place in Moscow in June.

The discussions covered the prospects for strengthening the international nonproliferation regime, assuring the safe development of nuclear energy, encouraging additional countries to sign and ratify the NPT and measures that could be taken in this regard—

Senator BOSCHWITZ. Could we have a copy of your summary by chance or do we have one?

Ambassador KENNEDY. No, sir, I am sorry, and I am further truncating my summary in the interest of time, sir.

We also discussed the newly established convention for physical security of nuclear materials. We discussed at length ways to strengthen the International Atomic Energy Agency and we discussed preparations for the third review conference for the Nuclear Non-Proliferation Treaty which will be held in 1985.

The Soviets I would note expressed support in principle for the concept of comprehensive safeguards as recently proposed by President Reagan. These exchanges were frank and positive and contributed in our view to our efforts to strengthen the worldwide nonproliferation regime.

The chairman also asked that I comment on EURATOM and Japan negotiations and plutonium use. Regarding the EURATOM and Japan negotiations I reported previously to the committee that the United States intended to offer Japan and the countries of EURATOM new long-term arrangements for implementing U.S. consent rights over the reprocessing and use of materials subject to our agreement for peaceful nuclear cooperation.

This advanced long-term approval would apply only to facilities and activities which we determine meet our strict statutory criteria. Moreover, these offers were being made in the context of seeking new or amended peaceful nuclear cooperation agreements with Japan and EURATOM as contemplated by the Nuclear Non-Proliferation Act and that the approvals would be valid only as long as the conditions provided in the agreement included nonproliferation and statutory conditions continued to be met.

We have provided detailed proposals on this subject to Japan and have had several discussions with them. We have made significant progress in a number of areas but they remain important matters yet to be resolved.

Negotiations with EURATOM are complex by their very nature given the institutional arrangements that apply within the European Community and the need for the European Community Commission to consult with member states. We provided the community with details of our new proposals last spring and anticipate talks next month with the Commission to clarify our proposals and agree on how next to proceed.

They have responded thus far by providing to us a list of questions which arose from their review and study of the proposals that we gave them. We intend to meet with them this coming month to discuss those questions and give them our views as to answers.

The chairman also asked that I provide an update on efforts to improve the international guidelines for controlling exports which could be used for nuclear explosives development. As you know there are two internationally agreed trigger lists adopted by nuclear suppliers in the mid-1970's to control their export activities.

The first list is linked to the Non-Proliferation Treaty which requires safeguards on items especially designed or prepared for the processing or production of fissionable material. Second, there is a substantially identical trigger list not linked to the NPT but which was implemented through the informal nuclear suppliers group often referred to as the London group because it initially met there.

Technological developments and the spread of nuclear capabilities to additional nations suggested the need for refinement and clarification of that list. Substantial progress has been made on this initiative.

We are near final agreement on a revised trigger list for gas centrifuge uranium enrichment technology, and we are making good progress on other sensitive nuclear processes. But it will take sustained effort to achieve broad agreement on the range of technologies which must be considered.

We recently have concluded a 2½-year international effort to strengthen IAEA safeguards. In this effort known as the hexapartite safeguards project. The countries which have developed gas centrifuge uranium enrichment technology assisted the IAEA inspectorate and the EURATOM inspectorate in the development of a safeguards approach for enrichment plants using this new technology.

An approach has been developed which provides effective safeguards while properly protecting the technology. In April of this year, the six technology holders undertook an exchange of diplomatic notes in Vienna to permit the implementation of international safeguards based on limited frequency unannounced access approach at their existing and planned commercial gas centrifuge uranium enrichment plant.

We have discussed South Africa, a matter which the chairman asked me to address so let me turn in closing then to some comments about the International Atomic Energy Agency. Since I last testified before the committee a great deal has occurred in the International Atomic Energy Agency.

As you are aware we left last September's general conference in protest against the illegal rejection of the credentials of the Israeli delegation. Since then we have been pleased that our message to the IAEA membership seems to have been heard and heeded.

Our extensive consultations with many members demonstrated that the great majority agreed with us on the need to reduce politicization in the IAEA. Nevertheless, I cannot and would not claim that this year's general conference will be totally free of problems.

We will continue, however, to take strong measures to protect Israel's rights of membership in the IAEA, to assert our view that the Agency must act in accord with the precepts of its statute and concentrate on its mandate to assure the benefits of the peaceful uses of nuclear energy under safeguards to guard against its misuse.

Mr. Chairman, that concludes my abbreviated statement. I would be pleased to deal with any questions the committee may have.

[Ambassador Kennedy's prepared statement follows:]

PREPARED STATEMENT OF HON. RICHARD T. KENNEDY

Mr. Chairman, Members of the Committees: I welcome the opportunity to meet with you today to discuss the Administration's program for preventing the spread of nuclear weapons. It has been about a year since we have had an oversight hearing on this important issue before your committees. You have invited me to discuss a number of very significant topics, including the International Atomic Energy Agency, the question of spare parts for the Tarapur reactors in India, recent discussions we have had with the Soviet Union, the People's Republic of China, Argentina, and Brazil, our plutonium use policy and the status of negotiations with EURATOM and Japan, the Hexapartite Safeguards Agreement, and the impact of the Supreme Court's *Chadha* decision. These are very significant issues and I will attempt to cover each of them in this statement.

As you may recall, in a previous appearance before you, I outlined the responsibilities and organizational relationships in the non-proliferation area—relationships which were contemplated by the President and Secretary Shultz when nominating me as Ambassador at Large with responsibility for non-proliferation matters. In that role I coordinate the efforts of the Executive Branch and act as the Special Representative of the Secretary and the President in discussions and negotiations with other countries on non-proliferation. I am pleased to note that over the past many months, these organizational relationships have worked well and have provided an increasingly cohesive approach to a complex, difficult and vital task. In particular, I want to express my admiration and appreciation for the excellent work done by the staff in the Bureau of Oceans, International Environmental and Scientific Affairs of the State Department, and indeed by all of the various bureaus of the Department which contribute to a fully coordinated effort. I also want to note the effective contributions of the Arms Control and Disarmament Agency, Department of Energy, and Department of Defense, who work together with us in support of the effort. They contributed greatly to the progress which we have made. And, of course, the Nuclear Regulatory Commission continues its important export licensing role, as well as assisting other nations with their own nuclear regulation activities. Through this effective coordinated relationship, we have been able to focus attention on the problem of proliferation, as we believe the Congress had intended.

All of our non-proliferation efforts, of course, are conducted under the guidelines provided by the President in his statement of July 16, 1981. In that statement, the President laid out seven basic guidelines. They are:

1. The United States will seek to prevent the spread of nuclear explosives to additional countries as a fundamental national security and foreign policy objective.

2. The United States will strive to reduce the motivation for acquiring nuclear explosives by working to improve regional and global stability and to promote understanding of the legitimate security concerns of other states.

3. The United States will continue to support adherence to the Treaty on the Non-Proliferation of Nuclear Weapons and to the Treaty for the Prohibition of Nuclear Weapons in Latin America (Treaty of Tlatelolco) by countries that have not accepted those treaties.

4. The United States will view a material violation of these treaties or an international safeguards agreement as having profound consequences for international order and United States bilateral relations, and also view any nuclear explosion by a non-nuclear-weapon state with grave concern.

5. The United States will strongly support and continue to work with other nations to strengthen the International Atomic Energy Agency to provide for an improved international safeguards regime.

6. The United States will seek to work more effectively with other countries to forge agreement on measures for combatting the risks of proliferation.

7. The United States will continue to inhibit the transfer of sensitive nuclear material, equipment and technology, particularly where the danger of proliferation demands, and to seek agreement on requiring IAEA safeguards on all nuclear activities in a non-nuclear-weapon state as a condition for any significant new nuclear supply commitment.

Mr. Chairman, I would appreciate it if the President's statement could be appended to my statement for inclusion in the record.

To these guidelines, Mr. Chairman, I would like to add one additional concept which underlies our policy and which I have asserted in numerous fora—that is, that the United States will never allow its non-proliferation objectives to be undercut for commercial gain. Our policy is to put in place the most effective non-proliferation regime which we, in combination with other concerned nations, can achieve.

I would now like first to bring you up to date on several important events which have taken place since we last met and then turn to the specific areas which you asked me to address.

President Reagan's Comprehensive Safeguards Initiative

U.S. law requires IAEA safeguards on all existing nuclear activities in the recipient non-nuclear weapons state as a condition for major U.S. nuclear exports. President Reagan has called upon all supplier states to require comprehensive safeguards for their own exports. Our objective must be the establishment of

agreed norms which all suppliers will honor. We have pursued this objective through bilateral consultations in capitals and in a number of discussions in Washington. These discussions will continue.

Additional Parties to the Non-Proliferation Treaty

The United States strongly supports universal adherence to the Nuclear Non-Proliferation Treaty (NPT). The Administration continues active diplomatic efforts to encourage countries not yet party to the Treaty to ratify this central instrument of the international non-proliferation regime. During 1982, four additional states became parties—Papan New Guinea, Nauru, the Socialist Republic of Vietnam and Uganda. There are now more than 115 states which are parties to the NPT, making it the most widely accepted multilateral arms control agreement. We also are taking steps to encourage implementation of the Treaty of Tlatelolco.

New Bilateral Agreements for Cooperation in the Peaceful Uses of Atomic Energy

As you know, section 404 of the Nuclear Non-Proliferation Act of 1978 requires that the United States seek to renegotiate Agreements of Cooperation under section 123 of the Atomic Energy Act of 1954. We have renegotiated our agreement with the IAEA, entered into force May 6, 1980; Canada entered into force July 9, 1980; Australia entered into force January 16, 1981; and Colombia (not yet in force). We anticipate that revised agreements with Norway and Sweden will be submitted to the Congress in the near future. We have also concluded new agreements of cooperation with several nations: Morocco (entered into force May 16, 1981), Bangladesh (entered into force June 12, 1982), Peru (entered into force April 15, 1982), Indonesia (entered into force December 30, 1981), and Egypt (entered into force December 29, 1981).

Bilateral Consultations

During the past year, U.S. officials have consulted with more than a dozen countries in Europe, Latin America and Asia on how to pursue more effectively our common goal of preventing proliferation. In these talks, we have paid specific attention to improving nuclear export controls, including the difficult task of controlling "dual use" commodities—items which have both conventional and potential nuclear uses. These meetings have helped others to understand our policies and have contributed significantly to an improved non-proliferation regime.

Improvement of U.S. Nuclear Export Regulations

On February 4, 1983, the Department of Energy issued revised and strengthened regulations which serve to control the transfer of unclassified and unpublished nuclear technology, the "Part 810" Regulations.

U.S. Reprocessing of Research Reactor Fuel

The Department of Energy extended through 1987 its policy of receiving and making financial settlement for U.S.-origin spent fuels from research reactors. This policy applies to highly enriched uranium fuels which raise proliferation concerns because of their potential use in nuclear explosives.

Implementation of Voluntary Safeguards Offer

The United States voluntary offer, made several years ago, to accept safeguards on civil nuclear facilities entered into force during 1980. Under this offer, four U.S. facilities were selected by the IAEA for the application of safeguards, and in 1982, the detailed arrangements under which they are now being safeguarded were brought into force. The most significant of these four is the Exxon fuel fabrication plant where valuable experience has been gained in the effective implementation of safeguards.

Nuclear Export Alerts

Steps to make it more difficult technically for a sensitive country to acquire particular equipment or materials in pursuit of a nuclear weapons capability can buy time for other initiatives to reduce its motivations to acquire those weapons. The United States has worked in close and frequent consultation with other supplier states to shut off specific export transactions of proliferation concern. During the 1982 calendar year, approximately 100 such export alerts were pursued and about 50 have been issued so far this year.

Assistance to Non-Nuclear Weapon States in Spent Fuel Storage and Disposal

Under section 223 of the Nuclear Waste Policy Act of 1982, a Federal Register notice has been published offering to augment U.S. international cooperative arrangements in the area of spent fuel storage and disposal. Non-nuclear weapon states were contacted through diplomatic channels to solicit expressions of interest. The United States was the host for a major IAEA international conference on radioactive waste management in Seattle, Washington, in May 1983.

Emerging Suppliers

A potential problem which the Administration has begun to address is the expansion in the number of nations capable of exporting nuclear materials, equipment and technology. Consultations with other nations have been directed toward alerting these new suppliers to the need for effective controls on their nuclear trade to assure that it is not misused for explosives developments, thereby undermining the current system of nuclear supplier guidelines.

Ratification of Physical Security Convention

President Reagan sought and obtained enactment of domestic legislation making certain acts involving nuclear materials serious Federal crimes. This law implements certain provisions in the Convention on the Physical Protection of Nuclear Material. In late 1982, the United States ratified this Convention, a major step in dealing with threats of nuclear terrorism and proliferation. The Administration also remains committed in its efforts to work with other countries to assure the adequacy of physical security measures, especially where nuclear materials of U.S.-origin are involved.

Now, Mr. Chairman let me address the specific items you mentioned in your letter of August 4.

Chadha Decision and the Legislative Veto

Various provisions of the Atomic Energy Act as amended by the Nuclear Non-Proliferation Act of 1978 have provided for a legislative veto by the Congress of Presidential determinations to permit nuclear exports. Basically, these statutory provisions contain three distinct elements. First, they establish very strict and specific standards which limit the export of nuclear items. Second, they authorize the President to waive certain restrictions and permit exports if he makes certain findings. There are also requirements that such waivers and findings be reported to the Congress within a specified waiting period before those actions may become effective. The third was the legislative veto.

The Department of State made its position clear on this issue last July when Deputy Secretary Dam testified before this Committee and at a hearing before the House Foreign Affairs Committee. Secretary Dam testified that the Department of State considers that those standards and that waiver authority, as well as the statutory requirement of notification to Congress and the observance of a waiting period, continue to be valid. We will continue to wait through the period during which the Congress, in the past, deliberated over its veto. During that time, the Congress may use its constitutional authority to enact new legislation if it chooses. The only provision that is invalid is the third, which permitted a legislative veto by concurrent resolution.

Secretary Dam emphasized last July, and I reiterate today, that neither the Department nor the Administration intends to take advantage of the situation created by the *Chadha* decision to take any action which would disturb the relationship of cooperation and collaboration we have developed with the Congress over the years in the area of nuclear non-proliferation. We intend to continue consulting regularly with the Congress and its Committees and taking your counsel and advice into account in reaching important decisions. Our commitment to that spirit of cooperation is strengthened rather than diminished by the *Chadha* decision. As Secretary Dam said last July:

"If anything, I believe *Chadha* will make the departments and agencies of the Executive Branch more, not less, conscious that they are accountable for their actions."

Spare Parts for the Tarapur Reactors in India

With regard to India's Tarapur Atomic Power Station, the Government of India is seeking to obtain from the United States and other countries spare parts

for the Tarapur reactors, which were designed and built by U.S. companies. India considers the continued operation of this facility, which is subject to IAEA safeguards, as vital to meet its electric power needs. The parts it seeks are important to furthering the safe operation of the plant. We are principally concerned with the health and safety of individuals working at the Tarapur facility and those living nearby.

It was in these circumstances that Secretary Shultz informed the Government of India during his recent visit to New Delhi that the President would be prepared to take measures designed to ensure the availability from the United States of required parts that could not be supplied from other sources.

Notwithstanding the significant health and safety aspect involved, the steps which have been taken so far in this matter—and the steps we will take in the future—will be with full and careful attention to the non-proliferation considerations involved, both from the standpoint of our overall policy and that policy vis-a-vis India.

To date, we have not been able to determine whether all of the required parts will be available from non-U.S. sources. Discussions between India and potential non-U.S. suppliers are continuing.

Discussions with the People's Republic of China

Over the course of the last several years, the People's Republic of China has developed plans for an ambitious program for the installation of a substantial number of nuclear power stations in those areas of the country where coal and hydroelectric resources are not available. Those plans call for the importing of the initial plants and, at the same time, the acquisition of the technology and the facilities to permit China's industry to manufacture much of the equipment required for the later plants.

The Chinese authorities have expressed an interest in obtaining the services of experienced U.S. firms in implementing that program. Accordingly, since 1981, the possibility of a bilateral agreement for cooperation in the peaceful uses of atomic energy, as required by the Atomic Energy Act for significant exports of the kind that would be sought by the PRC, has been discussed with China. This Administration believes that, under appropriate conditions, such cooperation would be in the interest of the United States. Conclusion of an agreement for cooperation within the terms of the Atomic Energy Act would demonstrate the readiness of the United States to expand its relationship with the PRC in areas of mutual interest and could lead to cooperation in other areas, as well. It would also provide additional opportunities to encourage China to adopt non-proliferation policies including those related to its exports of nuclear materials, equipment and technologies—policies which would be consistent with those which have been developed and adopted by the major suppliers.

The most recent discussions with the Chinese authorities took place in July, when a delegation visited Washington at the invitation of Secretary Shultz. In those discussions, non-proliferation matters were addressed extensively. Overall, good progress was made in clarifying the views of both sides. At that time, we were told that the PRC was considering joining the International Atomic Energy Agency. Since then, Director General Blix has visited Beijing to discuss PRC's interest in membership and, just recently, its formal application has been submitted. We welcome this action by the PRC as an indication of its intention to play a constructive role in non-proliferation and international cooperation in the peaceful uses of atomic energy.

Within the next few days, I will lead a delegation to Beijing to continue the discussions with the PRC. We will seek to confirm that we share the same basic principles regarding non-proliferation as a basis for further discussion of possible cooperation.

Bilateral discussions with the Soviet Union

The United States and the U.S.S.R. have held two rounds of bilateral meetings on a broad range of non-proliferation issues. The first session was in Washington between December 15-17 last year and the second took place in Moscow, this June 14-16. I headed the U.S. delegation at both sessions, and the Soviet side was headed in December by Ivan Morozov, until recently Deputy Chairman of the State Committee on the Utilization of Atomic Energy, and in June by A. M. Petrosyants, Chairman of the State Committee. The talks during both rounds were frank and positive, with a very constructive exchange of views.

The discussions were divided into plenary and working group sessions. In the plenary, a wide range of issues was covered. These included prospects for strengthening the international non-proliferation regime, assuring the safe development of nuclear energy, and encouraging additional countries to sign and ratify the NPT and the newly established Convention for the Physical Security of Nuclear Materials. Discussions also took place on ways to strengthen the IAEA, and on preparations for the third review conference for the Nuclear Non-Proliferation Treaty to be held in 1985.

Working groups held detailed discussions on specific issues, such as export controls and multilateral issues, including the IAEA and its safeguards system.

The two sides agreed that the IAEA safeguards system was crucial to the success of the international nuclear non-proliferation regime. They agreed to take steps to try to strengthen that system, and also agreed that other IAEA-sponsored activities, such as the work of the Committee on Assurances of Supply and Technical Assistance and Cooperation activities, should also be strongly supported. The Soviets expressed support for the concept of comprehensive safeguards, as recently proposed by the President, but believe the policy cannot be effective until all major suppliers adopt it.

On export issues, it was clear that the United States and the Soviets share the view that meaningful controls over nuclear exports can make a significant contribution to achieving our non-proliferation goals. The need to insure that controls evolve in respect to technological change and the spread of nuclear capabilities was dealt with in some detail. The Soviets also agreed with us that it will be important for emerging new suppliers to apply meaningful export controls and adopt standards equivalent to those in the current international non-proliferation regime.

The two rounds of discussions and the accompanying exchange of views with the Soviets on non-proliferation issues have made a useful contribution to our efforts to restrain the spread of nuclear explosives.

EURATOM and Japan Negotiations—Plutonium Use

Regarding the EURATOM and Japan negotiations on plutonium use, you may recall that in September 1982 I testified before the Subcommittee on Energy, Nuclear Proliferation and Government Processes of the Committee on Governmental Affairs on the policy decisions made by the President in June 1982 on these matters. At that time, the President decided on a new approach to give our close allies in EURATOM and Japan a firmer and more predictable basis upon which to plan their vital energy programs, while at the same time furthering our non-proliferation objectives, including strengthened controls over civil plutonium.

At that time, I reported that the United States was offering Japan and the countries of EURATOM new, long-term arrangements for implementation of United States consent rights over the reprocessing and use of materials subject to our agreements for peaceful nuclear cooperation. This advance, long-term approval would apply only to facilities and activities which we determine meet our strict statutory criteria. The United States would be prepared to state its intention to consent to other facilities and activities in these programs when we have sufficient information about them to make the necessary determinations under our law. Finally, I noted that these offers were being made in the context of seeking new or amended peaceful nuclear cooperation agreements with Japan and EURATOM and that the approvals would be valid only as long as the conditions provided in the agreement, including non-proliferation and statutory conditions, continued to be met. Our willingness to take these steps presumed a continuing strong commitment of these countries to our common non-proliferation efforts and to developing and implementing more effective controls over plutonium.

We have provided detailed proposals on this subject to the Government of Japan, and in the last year have had seven negotiating sessions with the Japanese, both in Washington and Tokyo, in an effort to reach agreement both on the long-term arrangement for plutonium use and on the peaceful nuclear cooperation agreement. I can report to you that we have made significant progress in a number of areas, but that there are important matters that remain to be resolved as well. As the substance of these issues is under negotiation between the two governments, I cannot go into the details in open session. I can say, however, that both sides continue serious and intense efforts to find solutions and approaches that will permit them to reach agreement at an early date. As I have always done, I will keep the Congress briefed on significant developments.

Progress with EURATOM is slower. This is understandable, since negotiations with EURATOM are complex by their nature, given the institutional arrangements that apply within the European Community, and the need for the EC Commission to consult with Member States. I can report that we provided the Commission with details of our new proposals last spring. The Commission requested time to study those proposals and to consult informally with Member States. This month we have just received a number of detailed questions concerning our proposals, and we would anticipate early talks with the Commission to clarify our proposals and to agree on how to proceed thereafter.

Trigger List Upgrade

You have requested an update on our efforts to improve international guidelines for controlling exports which could be used for nuclear explosives development. As you know, there are two internationally agreed trigger lists adopted by nuclear suppliers in the mid-1970's to control their export activities. They are called "trigger lists" because the export of any listed item triggers the application of safeguards on that item. The first list is linked to the Non-Proliferation Treaty, which requires safeguards on items "especially designed or prepared" for the processing or production of fissionable material. This list is implemented through the 21-member NPT Exporters Committee—also called the Zangger Committee, after its Swiss chairman. In addition to the Zangger List, there is a substantially identical trigger list not linked to the NPT, but which was implemented through the Informal Nuclear Suppliers Group—often referred to as the London Group because it initially met in the United Kingdom.

Both these lists have been extremely important for the effort to control sensitive nuclear exports to countries of proliferation risk. Over the past few years, however, it has become clear to us, and several other suppliers, that it would be useful to further refine and clarify the lists, in response to technological developments and the spread of nuclear capabilities to additional nations.

I am pleased to report that substantial progress has been made on this initiative. We have made a commitment to other participating governments that the detailed status of the negotiations would remain confidential until administrative arrangements can be completed. This will take a few months. I would be pleased to go into specifics with you or members of your staff in closed session; however, I can make a few comments in open session which give a general picture of our approach and the progress achieved so far.

First, we have decided to approach the trigger list upgrade on a technology-by-technology basis. We have begun the discussions of each process on a technical basis, with a small group of the key technology holders in that field. Once a technical consensus has been achieved on what refinements in the trigger list are necessary, the discussions have been expanded to other nations. The additional nations may not be centrally involved with the industrial applications of a particular technology, however, they may nonetheless be able to export certain items related to that process. Therefore, the participation of such non-technology holders is important, if the control regime is to be effective.

We began our efforts over a year ago with the gas centrifuge uranium enrichment process, because of its sensitivity and the interest being shown in the process by nations of proliferation concern. After much effort, we are near final agreement on a revised trigger list for this technology. We are making good progress on other sensitive nuclear processes, but it will take sustained effort to achieve broad agreement on the range of technologies which must be considered.

In concluding my remarks on this subject I would like to emphasize two points. First, we regard this important initiative as fully consistent with our non-proliferation obligations under Article III of the NPT and other commitments we have undertaken in the Nuclear Suppliers Group. The NSG guidelines recognize that periodic review and updating of the trigger lists may be necessary to assure that they remain effective. We are committed to this process of continuing review. Second, implementing strict non-proliferation controls and revising them periodically is not an exercise in technology denial, as some have charged. If nuclear power is to play a role in meeting the world's energy needs, world public opinion must be assured that this technology will not be diverted from its intended peaceful purposes to explosives development. Our export control system plays a key role in providing that assurance. Therefore, all nations have a stake in a non-proliferation regime which clearly demonstrates that nuclear technology will not be misused, a regime which adjusts to meet changed circumstances—whether technical or political.

Hexapartite Safeguards Project

As you may know, we have recently concluded an important international effort to strengthen IAEA safeguards. In this effort, known as the Hexapartite Safeguards Project, or HSP, the countries which have developed gas centrifuge uranium enrichment technology assisted the IAEA Inspectorate (and the EURATOM inspectorate) in the development of a safeguards approach for enrichment plants using this new technology.

Several years ago several countries had developed gas centrifuge enrichment technology to the point where they began to build demonstration or commercial scale plants and, pursuant to their NPT obligations, make these plants available for IAEA safeguards. The IAEA at that time had no experience safeguarding gas centrifuge enrichment plants (or any other type of enrichment plant, all of which had been located in nuclear weapons states). At the urging of the United States, a special international project was established, comprising technical experts from the six countries that have this technology, and from the safeguards inspectorates of the IAEA and EURATOM. During the next two and one-half years these experts developed a safeguards approach that provides effective safeguards while properly protecting the technology.

In April of this year, the project was concluded and the six technology holders undertook, in an exchange of diplomatic notes in Vienna, to permit the implementation of international safeguards based on the limited frequency unannounced access approach at their existing and planned commercial gas centrifuge uranium enrichment plant. Four of the project participants have gas centrifuge enrichment plants in operation or under construction. The operating plants include the two URENCO facilities at Almelo in the Netherlands and at Capenhurst in the United Kingdom, and the Japanese pilot plant at Ningyo Toge. In the United States, the Department of Energy's Gas Centrifuge Enrichment Plant, known as GCEP, is currently under construction, and is expected to begin recycle operations in the summer of 1984, with actual production for late summer of 1985.

We understand that the facility attachment negotiations for the Dutch and Japanese plants will be begun in the near future. The United Kingdom has listed its Capenhurst plant as eligible for IAEA safeguards under the U.K. voluntary offer, the IAEA has selected this plant for safeguards, and facility attachment negotiations are also expected to begin in the near future.

For our part, following the exchange of notes, we immediately took steps to place GCEP on the list of facilities eligible for safeguards under the U.S. voluntary offer, as required by our commitment in that offer to make available for safeguards all U.S. facilities deemed not to be of direct national security significance. Following notification to Congress, the IAEA was informed that GCEP was eligible for selection for safeguards, and the IAEA was invited to participate in a facility orientation visit to GCEP. At the end of July, the IAEA formally selected GCEP for safeguards, and the first IAEA inspection was conducted in early August, as the first small quantity of nuclear material was brought onto the site. The IAEA team responsible for negotiating facility attachments for all gas centrifuge enrichment plants was given a special orientation briefing and tour of the facility at this time. Once plant construction is sufficiently advanced, we will provide the appropriate design information to the IAEA and initiate facility attachment negotiations. We expect to provide the design information sometime around the first of next year.

To summarize then, all the HSP participants are currently engaged in the implementation of their respective undertakings, as made at the conclusion of the project. We fully expect that by the time that the facility attachment for GCEP is completed and enters into force, that the other parties will have completed similar arrangements with respect to their existing gas centrifuge enrichment plants.

Reestablishing Dialogue—Brazil and Argentina

A key element in our non-proliferation efforts has been to reestablish or strengthen a dialogue on nuclear cooperation and non-proliferation matters with states where such dialogue may have languished. This effort is perhaps best exemplified in the cases of Brazil and Argentina. For several years our relations with these two countries in the nuclear area were severely strained. The export of nuclear fuel and facilities to these countries had been prohibited by the NNPA unless full scope safeguards were adopted, and each country has indigenously developed nuclear facilities which have not been admitted to safeguards. Both

countries have declined to sign the NPT, although both have signed, but not brought into force, the Treaty of Tlatelolco.

We have stressed to both Brazil and Argentina the importance of the NPT, the benefits of full adherence to IAEA safeguards, and we have urged both countries to waive into force the Treaty of Tlatelolco. We have urged both to strengthen their support for the IAEA and its safeguards programs. Meanwhile, we believe it important to carry on a dialogue on nuclear matters with those countries so that we can create a stronger sense of mutual confidence and an informed understanding of each other's non-proliferation concerns and objectives. In this respect, the Administration is looking to limited nuclear cooperation in the area of nuclear safety and waste management, consistent with the Atomic Energy Act, while engaging these countries in renewed discussions regarding our non-proliferation goals.

Our discussions with Brazil have taken place under the aegis of the United States/Brazil Joint Working Group which was established jointly by President Reagan and President Figueiredo, following President Reagan's trip to Brazil last winter. The Working Group was tasked with exploring bilateral problem areas and exploring new opportunities for cooperation. Five subgroups were established, one of which dealt with nuclear matters.

Last May, I led a U.S. delegation for the first meeting of the nuclear subgroup in Brasilia. At that time we outlined potential areas of nuclear cooperation, and also had a full discussion of non-proliferation matters, including the importance of controls over nuclear exports and adherence to the Treaty of Tlatelolco. Significantly, the Brazilian side stressed that by virtue of signing the Treaty of Tlatelolco, Brazil considered itself legally and morally bound by its principles even though the Treaty was not yet in force.

The United States/Brazil nuclear subgroup met again in Washington in August and agreed to pursue a number of areas of nuclear cooperation, including nuclear safety, spent fuel and waste management, and reduced enrichment for research and test reactors. The meeting also afforded the opportunity to discuss President Reagan's initiatives on comprehensive safeguards and a series of non-proliferation and multilateral issues, including reducing politicization in the IAEA, the IAEA Committee on Assurances of Supply, and the prospects for an international plutonium storage regime (IPS). We also discussed the United States/Brazil enrichment services contract. We have been unable to complete our side of the contract in the existing circumstances because we cannot export the enriched product to Brazil given the limits of the Non-Proliferation Act. Accordingly, the United States and Brazil agreed that it would be in their mutual interest to suspend indefinitely the contract, as to which we had already suspended the first reload. We will continue discussions with Brazil concerning safeguards matters, and would hope that a situation could be developed which would permit reinstating the fuel supply contract. We believe that the working group meetings were highly successful and have led to a renewed spirit of cooperation between the United States and Brazil. For our part, we will be continuing these contacts, taking the opportunities to discuss with Brazil our non-proliferation concerns.

Argentina has presented a similar situation for many years. Our relations in the nuclear area have been strained and it has been difficult to find opportunities to pursue our non-proliferation objectives with the Government of Argentina. For this reason, the Administration is also working to regain a dialogue with Argentina—a dialogue which would encompass renewed discussion of our non-proliferation goals, while at the same time we seek areas where the United States and Argentina can cooperate, within the limits of our law.

During my trip to South America last May, I had extensive discussions with Admiral Castro Madero, the President of the Argentine Atomic Energy Commission. I stressed the importance of bringing into force the Treaty of Tlatelolco, the necessity of strengthening IAEA safeguards, the desirability of comprehensive safeguards, the need for emerging nuclear suppliers, such as Argentina, to follow agreed rules of nuclear trade, and the need to support and strengthen the IAEA. As in the case of Brazil, we discussed possible areas of nuclear cooperation between the United States and Argentina. Argentina has since followed up on our discussions and indicated an interest in pursuing cooperation in nuclear safety, waste management and spent fuel technical assistance, systems of accounting and control, reduced enrichment for research and test reactors, and laboratory-to-laboratory exchanges. Over the next few weeks, we will be examining these possibilities with a view to further talks during the IAEA General Conference in October.

Again, I believe that our initiative toward a dialogue is proving productive. Our discussions were frank and cordial and, while differences of view are evident, our talks have shown that there is a considerable measure of agreement on the need for common efforts to prevent the spread of nuclear weapons.

South Africa

South Africa is another country with which we are reestablishing a dialogue on non-proliferation matters. In the absence of South Africa's acceptance of full scope safeguards, the United States has not permitted the export of significant nuclear materials or equipment to South Africa since 1978. Unfortunately, over the same period our discussions with South Africa on non-proliferation matters had languished.

During the past year, we have revived our discussions with South Africa across a broad range of safeguards and non-proliferation matters, including adherence to comprehensive safeguards and the NPT, strengthening the IAEA safeguards regime, and requiring safeguards on all significant nuclear fuel and facilities placed in international commerce. We have also taken the opportunity to stress to the South Africans the benefits of placing their enrichment facilities under IAEA safeguards. At the same time, we have also discussed the possibility of resolving our differences on the existing uranium enrichment services contract between South Africa and the U.S. Department of Energy.

We believe that South Africa recognizes the importance of safeguards, as they might apply to their semi-commercial enrichment facility. We also believe that South Africa understands the importance of safeguards on international nuclear commerce. As these discussions continue, I plan to keep the Congress fully and currently informed on any developments which may occur.

International Atomic Energy Agency

Since I last testified before the Committee, a great deal has occurred in the International Atomic Energy Agency (IAEA). As you are aware, we left last September's General Conference in protest against the illegal rejection of the credentials of the Israeli delegation. Since then, we have been pleased that our message to the IAEA membership seems to have been heard and heeded. Our extensive consultations with many members demonstrated that the great majority agreed with us on the need to reduce politicization in the IAEA. Following an extensive reassessment of U.S. participation in the IAEA, the President approved the resumption of U.S. participation and agreed that the IAEA safeguards system performs a critical role for U.S. national security, non-proliferation, and peaceful nuclear cooperation interests. Significantly, both the February and June meetings of the IAEA Board of Governors were businesslike and devoid of excess rhetoric or divisive dispute.

Thus, we are encouraged, Mr. Chairman, that the majority of the membership appears to agree that (1) the IAEA is a useful and worthwhile organization, (2) that extraneous political posturing and actions which threaten to destroy the IAEA are counterproductive, and (3) it is time to concentrate on the main objectives of the IAEA—to spread the benefits of peaceful nuclear technology under appropriate safeguards.

Nevertheless, I cannot claim that this year's General Conference will be totally free from problems. We will continue, however, to take strong measures to protect Israel's rights of membership in the IAEA to assert our view that the Agency must act in accord with the precepts of its statute and concentrate on its mandate to assure the benefits of the peaceful uses of nuclear energy with safeguards to guard against its misuse.

That concludes my formal statement, Mr. Chairman. I know that you and other Members of the Committees have a number of questions you wish to ask and I would be happy to respond to them at this time.

[From the U.S. Department of State, Bureau of Public Affairs, Washington, D.C., Current Policy No. 303, July 16, 1983]

NUCLEAR NONPROLIFERATION

Following is a statement by President Reagan on July 16, 1981

Our nation faces major challenges in international affairs. One of the most critical is the need to prevent the spread of nuclear explosives to additional countries. Further proliferation would pose a severe threat to international peace, regional and global stability, and the security interests of the United States and other countries. Our nation has been committed on a bipartisan

basis to preventing the spread of nuclear explosives from the birth of the atomic age over 35 years ago. This commitment is shared by the vast majority of other countries. The urgency of this task has been highlighted by the ominous events in the Middle East.

The problem of reducing the risks of nuclear proliferation has many aspects, and we need an integrated approach to deal with it effectively. In the final analysis, the success of our efforts depends on our ability to improve regional and global stability and reduce those motivations that can drive countries toward nuclear explosives. This calls for a strong and dependable United States, vibrant alliances and improved relations with others, and a dedication to those tasks that are vital for a stable world order.

I am announcing today a policy framework that reinforces the longstanding objectives of our nation in nonproliferation and includes a number of basic guidelines. The United States will:

Seek to prevent the spread of nuclear explosives to additional countries as a fundamental national security and foreign policy objective;

Strive to reduce the motivation for acquiring nuclear explosives by working to improve regional and global stability and to promote understanding of the legitimate security concerns of other states;

Continue to support adherence to the Treaty on the Non-proliferation of Nuclear Weapons and to the Treaty for the Prohibition of Nuclear Weapons in Latin America (Treaty of Tlatelolco) by countries that have not accepted those treaties;

View a material violation of these treaties or an international safeguards agreement as having profound consequences for international order and U.S. bilateral relations and also view any nuclear explosion by a non-nuclear-weapon state with grave concern;

Strongly support and continue to work with other nations to strengthen the International Atomic Energy Agency (IAEA) to provide for an improved international safeguards regime;

Seek to work more effectively with other countries to forge agreement on measures for combating the risks of proliferation;

Continue to inhibit the transfer of sensitive nuclear material, equipment, and technology, particularly where the danger of proliferation demands, and to seek agreement on requiring IAEA safeguards on all nuclear activities in a non-nuclear-weapon state as a condition for any significant new nuclear supply commitment.

I am also announcing that I will promptly seek the Senate's advice and consent to ratification of Protocol I of the Treaty of Tlatelolco.

The United States will cooperate with other nations in the peaceful uses of nuclear energy, including civil nuclear programs to meet their energy security needs, under a regime of adequate safeguards and controls. Many friends and allies of the United States have a strong interest in nuclear power and have, during recent years, lost confidence in the ability of our nation to recognize their needs.

We must reestablish this nation as a predictable and reliable partner for peaceful nuclear cooperation under adequate safeguards. This is essential to our nonproliferation goals. If we are not such a partner, other countries will tend to go their own ways, and our influence will diminish. This would reduce our effectiveness in gaining the support we need to deal with proliferation problems. To attain this objective, I am:

Instructing the executive branch agencies to undertake immediate efforts to insure expeditious action on export requests and approval requests under agreements for peaceful nuclear cooperation where the necessary statutory requirements are met;

Requesting that the Nuclear Regulatory Commission act expeditiously on these matters.

The Administration will also not inhibit or set back civil reprocessing and breeder reactor development abroad in nations with advanced nuclear power programs where it does not constitute a proliferation risk.

The United States will support IAEA programs and other international cooperative efforts in the areas of nuclear safety and environmentally sound nuclear waste management.

To carry out these policies, I am instructing the Secretary of State, working with the other responsible agencies, to give priority attention to efforts to reduce proliferation risks, to enhance the international nonproliferation regime, and,

consistent with U.S. security interests, to reestablish a leadership role for the United States in international nuclear affairs.

The CHAIRMAN [presiding]. Thank you very much, Ambassador Kennedy. We do appreciate very much your summarizing your testimony.

I have gone over it on the floor as I was there getting an amendment which is essential for Illinois, Ohio, and other States where unemployment compensation ends tonight. We have to do something about the 100,000 people out there who are worried about it.

But to return to our other worries, I would like to ask you as I did Director Adelman about Argentina. You may recall the nonproliferation hearings which I chaired at which you testified right after the Falkland Islands war.

I gave you the CRS report which concluded that Argentina could have a nuclear explosive device within 2 to 5 years and now 1 to 4 years. You said at the time that you were not surprised that the report came to this conclusion but you wanted time to review it.

Now that you have had time to study it, could you give us your view of this projection. In your judgment is it correct?

Ambassador KENNEDY. Senator, it is not my impression that Argentina is as far down the road to the development of a nuclear device as the report would suggest. It is perfectly clear that Argentina is by way of developing a fully unsafeguarded fuel cycle. But my own observation, and I believe assessments by others, would suggest that achievement of that result is somewhat farther off than this report would suggest.

Second, there are a great many activities other than fuel cycle activities which normally would be associated with the development of a nuclear explosives capability. We do not see evidence, conclusive evidence certainly that these activities are going on, or if they are in any way going on, that they are going on in a genuinely purposeful way, that is, that they would lead to a quick resolution and conclusion.

Also we do not see any conclusive evidence that a decision to move in this direction on the political level has in fact been made. That is my view of the situation.

I noted earlier while you were out, Senator, that we have categorical assurances on the part of the Government of Argentina that it has no intention of developing a nuclear weapon and no present intention indeed of developing a so-called peaceful device. Now, I fully share the views which were expressed earlier by Mr. Adelman that we do not deal in intentions, but obviously intentions are in fact part of the equation.

But we do not rely upon intentions. We look at the facts and the facts are I believe essentially as I stated them that together with the stated intentions would suggest that we are somewhat farther away if indeed they are moving in this direction at all.

The CHAIRMAN. I did ask you at the time also how the Falkland Islands war might have been different if Argentina had had nuclear arms in its arsenal. I remember vividly your ant description. With a full head of hair you said it would raise the hair on the back of my neck.

Is this still your view? Do you agree with me that if this had been the case it could have had really terrifying and tragic consequences?

Ambassador KENNEDY. Senator, it obviously would have pitted two nuclear-weapon states against one another in a direct conflict situation. Again, I would reiterate it would stand the hair on the back of my neck just to think about the prospect.

Let me say also and reiterate what I mentioned when you were out of the room. It is true that the Argentinians have from time to time and even recently commented that they have an interest in military applications of nuclear energy.

I inquired specifically as to what this might refer to, and the answer—and I can confirm that that is true—certainly an answer is that they are interested in nuclear propulsion. They are interested in a submarine program. How far this is advancing is another question, but they do have people working on this program.

They are interested in it and have inquired of other countries, I am told, as to what their reaction to such a program might be. Adm. Castro Madero, who is in charge of the nuclear programs in Argentina, told me that he was surprised that for the most part the answers were if it was confined to nuclear propulsion other countries did not see this as a serious problem.

The **CHAIRMAN.** I put a question to Director Adelman about Argentina's nuclear transactions with Libya and the Soviet Union. Recently I asked our CRS to report to me on the Libyan nuclear program, and I would like to quote directly from that report.

They said:

Libya's one operating reactor is a small research reactor of 10 megawatt output supplied by the Soviet Union. Libya has been talking with the Soviet Union about supply of a 440 megawatt nuclear power plant but apparently still does not have a firm commitment.

This raises a question in my mind. Do you think the Soviet Union might in any way be behind this Argentine-Libyan cooperation?

Ambassador KENNEDY. Senator, I do not know. My guess is no. Let me speak first to the nature of the cooperation.

I was assured when I specifically raised this question. After all, Libya is an NPT state. Argentina is not. We made clear to the Argentinians in the opening dialog that we undertook in the spring that our concern with Libya was considerable despite their adherence to the NPT. There should be no mistaking that and that we would hope that the Argentinians would fully understand the depth of our concern about the Libyan program.

I was assured that the Argentineans shared our concern and that the extent of any cooperation between Argentina and Libya would be extremely limited and essentially limited indeed to radioisotope production and not go beyond this, certainly not into any kind of sensitive nuclear effort or technology. As to the Soviets, it is our understanding that the Soviets are being meticulous in their assurances with the Libyans that safeguards shall be applied to anything in which the Soviets are involved in Libya and that they are also limiting their own efforts in Libya to nuclear power activities and even there in a comparatively limited way.

We are continually watchful and mindful of the situation in Libya. We have made our concerns known widely to other potential suppliers of any kind of materials. We have urged that these be restrained and

certainly in no way do we countenance any exports which would be sensitive in any way.

The CHAIRMAN. The New York Times recently ran a story that an intelligence report is circulating, indicating that Argentina has a secret plan to divert 1 ton of uranium to make bomb material. This is a frightening prospect.

Given the administration's willingness to engage in nuclear dealings with Argentina can you provide any guarantee to this committee that Argentina is not building an atomic bomb?

Ambassador KENNEDY. Senator, I have some abilities, but guaranteeing the actions of other states is not among them. Let me say, however, that it is not our impression that Argentina at this juncture has made any decision to do so, or in fact that it is undertaking steps in this direction.

The CHAIRMAN. In the wake of the Supreme Court's legislative veto decision, the need for consultation between the executive branch and Congress has become if anything greater than it was before. Nuclear nonproliferation is a longstanding bipartisan policy that is of very great concern to many Members. I commend you for your concern and that of Director Adelman in the consultations that we continually have had. I very much appreciated those consultations. You really reached out to share your thoughts with us, and they have been extremely helpful. Yet since the Supreme Court's ruling, there have been matters, the recent heavy water transfer to Argentina for instance, where the administration has had excellent opportunities to consult before taking action. But in those cases, it did not choose to do so, which is in contrast to consultations that we have had in the past.

If the administration is abandoning its commitment to consult with Congress, I for one will not stand in the way of legislation to assure Congress a continuing role. Can you give me advice as to whether we can and will be consulted on matters as important as that or whether we would just have to provide a legislative remedy, which I certainly do not prefer to—just the assurances—that I would have and would accept in lieu of that?

Ambassador KENNEDY. Senator, let me restate the point which I made in my short testimony: Neither the Department nor the administration intends to take advantage of the situation created by the *Chadha* decision in any way that would disturb the relationship of cooperation and collaboration that we have developed over the years in this field in particular.

I will give you my personal commitment and I know that it is the commitment of the President and the Secretary that we will consult as we have as I indicated earlier. As to the heavy water question, we goofed, Senator.

As I indicated in my earlier answer to a question, that matter had been around for some 18 months. It had been discussed widely with everyone in the executive branch.

It should have been a matter which I, or one of my staff, was in touch with you about in the normal course, but we did not do it. Let me also note, however, that in that connection this would have been something which is, I think, the sort of thing that we have been doing regularly with the committee and in particular with the senior mem-

bers of the committee to be sure that they were fully and currently informed on everything that we are doing and everything that is going on.

This would not have been a matter, though, that would have been required under the NNPA, but that is irrelevant. We understand that we should have informed you of what we were doing and the rationale for it.

I can assure you that that problem will not arise again. I noted also to other members that there were a number of procedural problems arising as we went back and looked at the whole chronology of that event. To correct the procedural difficulties and anomalies, we have issued a revised set of procedures which will cover those and make certain that those kinds of difficulties do not arise in the future.

We will, though not required by law, make certain that the Nuclear Regulatory Commission is consulted and that it has an opportunity to make its comments. That sort of thing will be incorporated into the procedures.

I can assure you that the committee will not be forgotten, sir.

The CHAIRMAN. I thank you for that assurance. I have just a few more questions but would like to yield now to Senator Boschwitz.

Senator BOSCHWITZ. Thank you, Mr. Chairman.

We asked a number of questions in your absence so I yield back to you, and I can make a closing statement.

The CHAIRMAN. Thank you very much, Senator Boschwitz.

I would like to make a brief point about China. Any agreement between the United States and the People's Republic of China for cooperation in nuclear energy would be a significant new development. I am sure that members of this committee and other Members of the Senate are interested in this and will want to express their views in advance. What assurance can we have that the Department of State will fully consult with the committee before any final or irrevocable action is taken on this agreement?

Ambassador KENNEDY. I categorically assure you that that will be done, Senator, and indeed we are attempting to work out some arrangement by which the first such consultation could take place as early as next week. I can tell you, as I mentioned earlier in your absence, that we are discussing these arrangements, such arrangements, possible arrangements with the People's Republic of China, but in doing so we are at this point concentrating on assuring that the People's Republic fully understands the import of our own laws and regulations—that we fully, of course, intend to comply with any arrangements that might be worked out.

We have made considerable progress, we believe, in the effort to confirm that the two of us share the same basic principles as to the nonproliferation question. Only when we can be sure that those principles are understood fully and that all of the provisions of law can be fully met would we think of entering into an agreement, and the Chinese understand that.

Let me, if I may, note here that we think considerable progress has been made over the time in which these discussions have been going on. The Chinese have announced their intention to become a member of the IAEA and that will be a matter before the Board next week in Vienna.

and the General Conference I am confident will elect them to membership.

This is a major step forward. The Chinese see it that way as an evidence of their own commitment to nonproliferation. They have indicated to us and I think may by this time have stated publicly that indeed following accession to the IAEA which will take place at the first of the year all exports from China of nuclear materials would be made subject to IAEA safeguards, another step forward for the worldwide nonproliferation regime as we see it.

The CHAIRMAN. When President Zia of Pakistan was here, Ambassador Kennedy, he gave the Foreign Relations Committee every assurance at the meeting that we held with him, that Pakistan was not attempting to build a nuclear weapon and was not working in that direction at all. The Secretary of State just visited Pakistan.

We had been concerned about the direction of their program for a number of reasons. Did Pakistan give him any assurance that they are not building a nuclear weapon and updated the information we had before?

Ambassador KENNEDY. They have reiterated their assurances. Let me if I may extend that, Senator, because following the meetings here President Zia subsequently made a public statement to the effect that he did not distinguish between nuclear weapons and nuclear explosives, that they were the same and, therefore, he was talking about nuclear explosives.

This in our view was an important new development in the sense that it eliminates any ambiguities which may have arisen about peaceful nuclear explosions since he now no longer distinguishes between those and weapons. Again, the assurances which were given to the committee and following have been reaffirmed.

Let me say in that connection if I may, however, that we remained concerned about a number of activities which are unsafeguarded fuel cycle activities, enrichment activities, and reprocessing plant development. These things are proceeding slowly but nonetheless they are of concern because they are not safeguarded.

We continue to make our concern about those matters clearly known to Pakistan and to all potential suppliers of any kind of sensitive material to Pakistan.

The CHAIRMAN. With respect to India as you know Senator Glenn and I coauthored the Non-Proliferation Act, yet we still differ sharply as to the interpretation of that act and how it should be applied with respect to the Tarapur plant. On the one hand, I am deeply concerned about the health and safety of the workers and people who live near the Tarapur reactors, but I am also concerned about the health and future and safety of future generations all around the world who are threatened by the spread of nuclear weapons.

This is a concern shared by literally all mankind and certainly all of us who are working in this field. India has brought a problem on itself by refusing to accept comprehensive safeguards and refusing to sign a nonproliferation treaty.

If we send them the parts that they have now indicated they need I worry that we may bring about more problems. If we supply the equipment to keep the Tarapur plant running we are just proving to

proliferators perhaps that all they need to do is to remain steadfast as India has and eventually the United States would cave in and supply what they need.

We gave India a second chance when we sent the fuel to Tarapur in 1980. Since then it has done virtually nothing to resolve our concerns.

If anything India is more of a nonproliferation problem today than it was 3 years ago, in the judgment of some experts in the field. If you were to take just a look at the chart that is over there [indicating], if we send the parts are we showing that our tough nonproliferation policy in a sense is a paper tiger?

Ambassador KENNEDY. Senator, let me address the question in a general context first. The parts in question are parts which would be necessary to the continued safe operation of the plant.

The question runs between providing nothing and the hope that that somehow gets you something from a nonproliferation point of view, to providing something and trying out of that to get some sort of assurances. It seems to us that if one looks at the broader concerns from a nonproliferation point of view, if India were to go ahead and continue operating those plants without the parts—and they might well decide to do that because of their concern for the need for power in that region which serves Bombay and it is an important part of the power of that region—if they decided to go ahead and continue operating the plants in increasingly unsafe conditions and an accident occurred, (a) the plants were of U.S. origin. They were built by U.S. companies. (b) It would be known that the United States had been approached as to the possibility of providing some assistance by way of parts to protect against an accident.

So I think, therefore, (c) one might see arguments in the Third World—I am thinking particularly in that area where India's role is a large one—might anticipate the charge, however untrue, that the United States was unwilling to bend in any way its concern over nonproliferation in the interest of health and safety and the welfare of human beings.

Now, I doubt seriously that that would be a big nonproliferation gain for us with the rest of the Third World. I think it might well put us into a difficult position to argue what are we really trying to do.

Particularly this is so if one realizes the second point that the reactors are fully under IAEA safeguards and the parts involved themselves have no proliferation significance. So, on balance, we concluded that should India be unable to acquire the parts from other sources we should consider the possibility of making them available.

It was with that rationale, Senator, that we thought it all through. It is a health and safety question. An accident would hurt people. Continuation of the operation could possibly result in such an action. Alternatively it would mean forcing the plant to shut down and causing economic deprivation which would not be helpful either.

The CHAIRMAN. I have just one last question. I am sure that you agree that any real progress on nuclear nonproliferation requires the agreement and cooperation of the world's nuclear suppliers.

Every year the heads of the world's leading nuclear suppliers meet to discuss issues of common economic and security concerns at a summit meeting. While this seems to me like the perfect occasion to dis-

cuss nonproliferation, it has not made it on the agenda for, I think, the last 3 years despite repeated requests by the Congress that nonproliferation be raised.

Can you tell me why this is? Isn't nonproliferation important enough and a summit opportunity good enough for us to try to make some real progress at a high level?

Ambassador KENNEDY. Senator, there is no question about its importance and no question about its importance as seen by the President. Indeed it was on the agenda as originally conceived for Williamsburg.

Unfortunately you will recall that events in the Middle East were of extraordinary importance at that particular time and a considerably longer period of discussion occurred on such matters at the summit and a number of things had to be then bypassed off the agenda to fit the agenda within the time available. Nonetheless, immediately after this the President addressed a number of heads of state indicating his concern about this very question and indicating his interest in discussions among the supplier states on the question of comprehensive safeguards, a matter to which he referred in a public address as well.

That effort is ongoing and there will be consultations. We had consultations in the spring on a bilateral basis. We are moving toward a broader set of consultations along this line with an effort to seeing what can be done about tightening up the so-called trigger list that now exists moving toward an agreed consensus on comprehensive safeguards as a condition for any significant new supply.

The CHAIRMAN. I have just one last brief comment that I want to get from each of you. I have expressed my own deep concern about this problem, my preoccupations with it for years now, and the close followup and working relationship that we have had with you on nuclear nonproliferation.

Having worked on the problem, how concerned are you as to whether we are making sufficient progress so that we can sleep well at night or toss about still grappling with the problem? Are there aspects of it that really do give you cause for deep worry and concern about the future of the human race and all life on Earth?

Ambassador KENNEDY. Senator, first whatever progress we have made, and I with all humility suggest that we have made considerable progress, whatever the progress that we have made and however one measures it, it can never be enough. We have to continue to put every bit of energy we have into this problem, addressing this problem on a continuing basis.

We need the support of the Congress. We have had it and we appreciate it.

As to the executive branch, there could not be better cooperation than now exists. We have, I think, a cohesive and coherent approach to the problem, and I think we will continue to make progress.

We obviously cannot do this alone. The important consideration always must be that if it is to be successful, if our own efforts are to be successful, we must persuade others to work with us. That is the effort which is going to take every bit of energy that we have and that is the effort that we are undertaking.

The CHAIRMAN. Thank you very much. Is there anything that you would like to briefly add, Mr. Adelman?

Mr. ADELMAN. Let me just say, Mr. Chairman, that being Director of ACDA my preoccupation is with arms control across the board. I have said here in my confirmation hearings and since that time that the 90 percent of the attention usually is paid to the START and the INF negotiations, and it would be a shame to look back on this period and say as important as these negotiations are that we had arranged ourselves to deal with those two negotiations while missing the kind of proliferation risks that prove more important to world history and to our future than did those two negotiations however important they are.

As I told you at the time of my confirmation and I reiterate now we in ACDA will arrange ourselves to make sure that no such oversight takes place. In the chart that you show right here and with your help and the help of this committee and hopefully the help of the Senate to get our increases in budget and in upgrades of positions, I think that will help us in our efforts to keep our eye on the important ball of nonproliferation.

The CHAIRMAN. Senator Boschwitz.

Senator BOSCHWITZ. Mr. Chairman, let me make a closing statement and let me also say that if so many of our Members were not running for other office the attendance here would be better because a number of our Members indeed have a great interest in this subject as well as other Senators. I am pleased to hear your closing statements from both of you gentlemen.

The possibility of use of nuclear weapons I think is far greater in the area of proliferation and who knows what the consequences and what snowballing effect might take place from such use, what mistakes can be made. We see a country that is so almost nervous that they shoot down an airline. When we see that who know what the reaction would be in the event that through the proliferation of nuclear weapons one day a weapon is used in some part of the world.

It is more likely that through proliferation there will be use of a weapon than that the superpowers will use them against one another. We are simply both too strong and too able to respond despite a first strike.

So the area of nuclear proliferation and controlling it is of great interest to many of us and something which is one of the highest challenges of our time. Second, it seems to me as an observer without the depth of knowledge that either one of you gentlemen has that it is one of the more controllable aspects on the nuclear scene.

If other countries are going to develop nuclear weapons they will at least for the long foreseeable future require the aid of a very limited number of nations. It would seem to me that these nations that are the most developed in the world should be able to constrain and restrict themselves in the proliferation of nuclear technology and materials that would be used in nuclear weaponry.

I think that the Russians to their credit are very interested in this whole area. Just as a matter of national policy I think they are more restrictive than we are.

So I would conclude, Mr. Chairman and Ambassadors Kennedy and Adelman, by saying that it really is one of the high challenges of our age and an achievable challenge. It is one that I believe very strongly we have to undertake and meet.

The CHAIRMAN. Thank you, Senator Boschwitz, very much. I appreciate it, and we thank our witnesses very much for being with us.

We have a vote on now. I will have to stay on the floor after that vote. We have one witness remaining, Paul Leventhal, a friend of this committee. I wonder if he could come forward. His statement will be incorporated in the record in full.

Paul, would you care to comment, in the few minutes before this vote ends, on what you have just heard and the general overall question put to our witnesses now? I think we would appreciate that and it would wrap us up.

Also, we will keep the record open, Mr. Leventhal, for any extended comments that you would like to make or responses to any of the questions that have been put to any of our witnesses.

Senator BOSCHWITZ. Mr. Chairman, may I ask since we are going to be giving rather short shrift to Mr. Leventhal may I suggest that there will be other hearings of this nature, and we certainly should ask him back.

The CHAIRMAN. I certainly think so. That would be fine and Ambassador Kennedy, Mr. Adelman, gentlemen, thank you very much.

[Pause.]

The CHAIRMAN. Would Mr. Leventhal come up here immediately please?

I want to express publicly my deep appreciation for what Paul Leventhal has meant to this entire field and the invaluable assistance that he provided to me and to other members of this committee. I think that the Nuclear Control Institute is playing an invaluable role by continuing to make the American public and the world aware of this problem. As I say, Paul, I apologize profusely to you. I will ask them to hold the vote for just a couple of minutes for me. I have about 2 or 3 minutes that I can make it in. If you could speak for 3 minutes, we will keep the record open so that you could extend your comments in any way you like.

STATEMENT OF PAUL LEVENTHAL, PRESIDENT, NUCLEAR CONTROL INSTITUTE, WASHINGTON, D.C.

Mr. LEVENTHAL. I will keep my comments very short in consideration of your problems, Mr. Chairman. I appreciate the opportunity to be here.

I expect that my entire testimony will be made a part of the record as you have indicated. I would also like to insert certain items into the record that I was intended to do in the course of my testimony, materials that pertain to the very questions that were discussed here today.

If I could have your permission they are only a few items and I will submit them to the stenographer.

The CHAIRMAN. They will be included in the record.

Mr. LEVENTHAL. In 1 minute I will try to make a point that I think having heard these witnesses as you have that there is an urgent need not for further discussions with the administration, not for promises that they will consult with you but indeed for remedial legislation that will upgrade the standards that the exports that are going out now that you are concerned about will not be able to go out unless the President waives these higher restrictions.

My testimony describes that particular piece of legislation. The House at this moment is about to vote on an amendment that does that very thing, full scope safeguards as a condition of supply of components and technology transfers.

I think this committee should consider that particular piece of legislation. It is an amendment to the Export Administration Act which is still pending before the Senate.

There is an opportunity here to tighten standards to require the administration to report to you prior to any action being taken consistent with the President's waiver authority, and the way the amendment offered by Mr. Wolpe is worded there would be 60 days layover time for the Congress to consider what the President wants to do despite the prohibitions in the Non-Proliferation Act.

So given the shortness of the time of my presentation I did at least want to bring to the committee's attention that amendment and urge the committee either as a committee or on the floor to support that kind of an amendment to the Export Administration Act.

Thank you, Mr. Chairman.

[Mr. Leventhal's prepared statement and attachments follow:]

PREPARED STATEMENT OF PAUL LEVENTHAL

Mr. Chairman and members of the Foreign Relations Committee and the Governmental Affairs Subcommittee on Energy, Nuclear Proliferation and Governmental Processes: I appreciate your invitation to testify today at this joint hearing on current developments in the Administration's efforts to curb the spread of nuclear weapons.

Hearings like this are important to Congress' essential role in overseeing the Government's nuclear export program to ensure that both the spirit and the letter of non-proliferation law are being adhered to. Congress needs to redouble its oversight role in this area so that such sensitive and far-reaching export decisions as the Administration's recent approval of the retransfer of 143 tons of U.S.-origin heavy water to Argentina are known to Congress and to the public before the fact rather than after.

I will discuss the Argentina matter in greater detail during the course of my testimony.

Nuclear Control Institute is a not-for-profit educational organization concerned exclusively with the problem of nuclear-weapons proliferation. We develop studies and strategies for exploring options to strengthen the international nuclear non-proliferation regime and to ban nuclear-explosive materials—separated plutonium and highly enriched uranium—from commerce. We chair an informal Working Group on Nuclear Explosives Control Policy, which is made up of some 30 public-interest organizations that have an interest in this problem area.

Nuclear Control Institute's ongoing activities include leading an intervention by six organizations before the Nuclear Regulatory Commission to block the export of reactor components to India. We are exploring whether the Administration's decision in the Argentine heavy-water case is lawful under the Nuclear Non-Proliferation Act. In addition, we recently won a lawsuit in Federal District Court requiring the NRC to release a classified report (the "Morgan Memorandum") on weaknesses in the safeguards inspections of the International Atomic Energy Agency. The case is now under appeal. And, in response to Congressional requests, we have assisted in the drafting of the Nuclear Explosives Control Act

of 1983 (S. 1326 and H.R. 3058), now pending before the Senate Foreign Relations and House Foreign Affairs Committees.

Each of these efforts is a response to what we regard as dangerous directions being followed by the Administration in its non-proliferation program. Both by its own domestic nuclear program and by its nuclear-trade initiatives with other nations, this Administration is helping nations that do not now possess nuclear weapons to acquire the capability to build them. At the heart of the problem is the Administration's acceptance of plutonium—a nuclear weapons material—as a legitimate civilian fuel. In sharp contrast to the policies of the Ford and Carter Administrations, the Reagan Administration is promoting reprocessing and plutonium-use both at home and abroad. It is engaging in or facilitating nuclear trade with nations that refuse either to ratify the Nuclear Non-Proliferation Treaty, to accept international safeguards on the full scope of their nuclear activities or to pledge not to set off nuclear explosions. Unless Congress takes steps promptly to check these policies and practices, the Administration will undercut—perhaps permanently—the traditional U.S. leadership role in non-proliferation, and will cause an already overburdened international inspection system to be overwhelmed by highly sensitive nuclear facilities and materials that cannot be safeguarded effectively against misuse for making weapons of mass destruction.

This was our assessment nearly one year ago when testifying in this hearing room on U.S. non-proliferation policy. Unfortunately, in the intervening months there have been few positive developments to alter that assessment and several negative ones to confirm it.

On the positive side, the Administration has taken important steps by entering into regular bilateral negotiations with the Soviet Union on non-proliferation issues, by making a concerted effort to persuade other nuclear suppliers to refrain from exporting sensitive items and materials to Pakistan, and by the President's announcing an effort to persuade U.S. allies to require the application of comprehensive safeguards as a basic condition of nuclear supply.

On the negative side, the Administration has undercut the non-proliferation regime by pursuing arrangements to supply nuclear reactor fuel and components to India, by approving the transfer of a powerful computer and of heavy water for Argentina's nuclear program, by preparing to permit U.S. companies to provide technical training and maintenance services for reactors in South Africa, by seeking to negotiate a nuclear agreement with China despite China's conspicuous abstinence from basic non-proliferation norms, and by seeking to negotiate a long-term arrangement with Japan for the reprocessing of U.S.-supplied nuclear fuel and for the use of plutonium from that fuel in Japan's civilian nuclear program.

I will cover each of these positive and negative developments and then I will close my testimony with another matter of concern to this joint hearing—the impact of the Supreme Court's *Chadha* decision on the Nuclear Non-Proliferation Act.

POSITIVE DEVELOPMENTS

1. United States-U.S.S.R. Non-Proliferation Negotiations

The non-proliferation negotiations being held on a regular basis with the Soviet Union grew out of a meeting between Secretary of State Shultz and Foreign Minister Gromyko at the opening of the U.N. General Assembly last fall. These negotiations are important because of an underlying common interest of the superpowers to prevent the spread of nuclear weapons to a multitude of nations. This common interest transcends the basic East-West conflict and, as a result, the non-proliferation talks can serve as an important means to ease tensions between the superpowers.

These talks should be used to establish a basis for crafting stricter export controls among all nuclear supplier countries, for building stronger support of the IAEA and its system of safeguards, and for promoting multinational nuclear fuel cycle cooperation.

The greatest challenge for the superpowers in these talks is to establish clear linkage between their common interest in nuclear non-proliferation and their other nuclear arms control negotiations. Continued failure by the superpowers to make real progress toward limiting and reducing their nuclear arsenals will be perceived as a failure to live up to their solemn arms control undertaking in Article VI of the Nuclear Non-Proliferation Treaty. Such a situation is likely to cause the United States and the Soviet Union real difficulties at the next NPT Review Conference in 1985.

It is important, therefore, for the two superpowers to exploit opportunities made possible by these non-proliferation talks in conjunction with other arms control negotiations. For example, United States-U.S.S.R. ratification of the Comprehensive Test Ban Treaty could make possible their dedicating one or more of their retired test sites as international repositories for unprocessed spent fuel from civilian nuclear power plants and for the still relatively small amounts of plutonium already separated from spent fuel. A joint United States-U.S.S.R. offer to collect and store civilian spent fuel and separated plutonium under international auspices can be combined with a parallel offer to provide low-enriched fuel at a substantial discount to those nations that agree to forego the use of plutonium in their spent fuel. Such an arrangement would constitute realization of the "fissile pool" concept that was the basis of the original Atoms for Peace program. It is not too late to establish such proliferation-resistant fuel cycle cooperation if the superpowers are of a mind to pursue it. The growing worldwide surplus of natural uranium and enrichment services, and the resulting adverse economics of plutonium recycle in conventional power and breeder reactors, serve to establish a climate receptive to international nuclear fuel assurances and nuclear waste management. What is lacking is the leadership of the superpowers to put such a system in place.

2. Embargoing Nuclear Exports to Pakistan

The Administration is to be commended for its diplomatic efforts to persuade other nuclear suppliers to join the U.S. embargo on exports of nuclear powerplants and of sensitive fuel-cycle components to Pakistan. This U.S. leadership role is slowing Pakistan's progress toward development of nuclear weapons.

The apparent success of this effort demonstrates that the United States still can be rather persuasive in the international nuclear community. One can't help but wonder why the Administration doesn't apply these same persuasive powers to achieving a general embargo on nuclear exports to the other principal non-NPT nations—India, Brazil, Argentina and South Africa.

Related to the effort to bar nuclear exports to Pakistan is the recent extension of the nuclear suppliers' "trigger list" to include key components needed for construction of an ultra-centrifuge enrichment plant. But the trigger list agreement is flawed in that it permits, even promotes, exports of centrifuge enrichment components so long as the plants in which they are to be used are subject to the application of IAEA safeguards. The problem is that application of effective safeguards on these plants is likely to be impossible to achieve for both technical and political reasons. The supplier should agree not to export such facilities, and instead to export low-enriched fuel from such facilities already built within their own borders.

Would the suppliers be prepared to export a centrifuge enrichment plant to Pakistan if Pakistan agreed to put that plant under safeguards? If the answer is no, as it should be, then that says something about the desirability of making enrichment (or reprocessing) plants a legitimate export item.

3. The President's Comprehensive Safeguards Commitment

On March 31, in a major arms control address, the President called on U.S. allies to join the United States in adopting "comprehensive safeguards as a condition for nuclear supply commitments that we make in the future." He said he would discuss with other world leaders "the need for urgent movement on this and other measures against nuclear proliferation."

Such strong public statements by the President are essential to U.S. non-proliferation efforts. Unfortunately, there was no apparent follow-through on this commitment at the Williamsburg economic summit a month later. The indications are that the President did not raise it once it became clear that France in particular would resist any commitment to fullscope safeguards as a condition of supply.

Another problem is that the Reagan Administration has violated its own comprehensive safeguards principle with regard to U.S. nuclear fuel and other supply arrangements with non-NPT nations that refuse to accept safeguards on the full scope of their nuclear activities—namely, India, Argentina, Brazil and South Africa. It also should be stressed that even if a universal commitment to comprehensive safeguards were achieved, there remains the problem of the ineffectiveness of those safeguards and the need not to export materials and facilities that cannot be safeguarded effectively—specifically, separated plutonium, highly enriched uranium, and the facilities that produce and utilize them.

NEGATIVE DEVELOPMENTS

1. Nuclear Fuel and Components to India

The United States, by arranging for the continued supply of nuclear fuel and component parts for India's U.S.-built Tarapur reactor, is, in effect, rewarding a leading NPT rejectionist nation for continuing to defy both U.S. non-proliferation law and the international non-proliferation regime.

The rationale for arranging for the French to serve as an alternative supplier of enriched fuel for Tarapur is that this is the only way to ensure that the ton of plutonium produced thus far at Tarapur—enough for about 150 atomic bombs—remains under safeguards and is not separated out into weapons-usable fuel, at least for the time being. The problem is that India reserves the right to reprocess the spent fuel any time it pleases, and to remove the spent fuel and the plutonium contained in it from safeguards after the expiration of the United States-India nuclear cooperation agreement in 1993. Further, India insists that its nuclear explosion program is not a weapons program, and also reserves the right to use plutonium from Tarapur to set off such "peaceful nuclear explosions."

The rationale for providing India the component parts, either by direct export from the United States or by approving the retransfer of U.S.-origin parts from Europe and Japan, is that these components are needed for humanitarian reasons to eliminate high levels of radioactivity that threaten plant workers and residents near Tarapur. In fact, transfer of these parts will not solve the health and safety problems; they will serve only to perpetuate the unsafe operation of the reactor. Other General Electric reactors of the same vintage as the twin reactors at Tarapur are being decommissioned in the United States, Germany, Italy and Japan because of high levels of radioactivity from leaking fuel.

The Reagan Administration should not be permitted to proceed with direct export or retransfer of U.S.-origin components for the Tarapur plant. To proceed would be to submit to two types of Indian blackmail. First, implicit in the Indian demand for these parts is the threat that if an accident occurs at Tarapur, it will be blamed on the United States for failing to provide the component parts. Second, there is the implicit threat that if these parts are not supplied, India will reprocess the spent fuel to produce separated plutonium, will remove the plutonium from safeguards and will be free to use the plutonium in nuclear explosive devices.

It would appear that the Nuclear Regulatory Commission cannot lawfully approve the export of components from the United States, given the uncertainties regarding safeguards at Tarapur and India's continuing nuclear explosion program. That is the basis of the case Nuclear Control Institute and five other organizations have made in our intervention before the NRC. However, even if the NRC disapproves the exports, the President can override that decision and Congress, as a result of the *Chadha* decision, may no longer have a legislative veto of a Presidential override. Further, as we have seen in the Argentine heavy-water case, the Executive Branch considers itself free to approve the retransfer of U.S.-origin components to India from other nations without notifying or consulting with Congress.

The direct export and retransfer of these components to India is made possible by a loophole in the Nuclear Non-Proliferation Act. The safeguards conditions governing the export of components under Section 109 of the Act are less strict than those governing the export of nuclear powerplants and nuclear fuel under Sections 127 and 128. The Act does not require a receiving country to accept full-scope safeguards as a condition of receiving components as is required with regard to the export of nuclear powerplants and nuclear fuel. Instead, the Act requires simply that safeguards apply only to the facility in which the components are to be used.

The resolution introduced by Senators Glenn and Boschwitz, and now pending before the Senate Foreign Relations Committee, expresses Congressional disapproval of any transfer of components to India prior to receiving from India guarantees that it will not develop nuclear weapons or explode additional devices and that it will accept safeguards in perpetuity at Tarapur. This is an important step in the right direction, but unfortunately it is not binding on the Administration. What is needed is remedial legislation to end the asymmetrical and ineffectual treatment of nuclear components in the Nuclear Non-Proliferation

Act by requiring that component exports and retransfers be subject to the same requirements as nuclear powerplants and fuel. Section 17 of S. 1326, the Nuclear Explosives Control Act, can serve as a model for such a measure.

2. Computer and Heavy Water to Argentina

The Administration has approved the export of a powerful industrial-process computer to Argentina for use in the heavy water production plant being built for Argentina by Switzerland. The Administration also has approved the retransfer from West Germany of 143 tons of U.S.-origin heavy water for use in Argentina's Atucha II power plant being built by West Germany. Both of these transfers are made possible, as in the case of the reactor components for India, by the absence of a full-scope safeguards requirement in the Nuclear Non-Proliferation Act for export or retransfer of components.

Argentina, like India, is a non-NPT nation that refuses to accept full-scope safeguards and is fast developing an independent fuel cycle and the capability to set off nuclear explosions. The exports to Argentina are all the more egregious because heavy water is no ordinary nuclear component: its use in a CANDU-type natural uranium reactor is the "functional equivalent" of enriched uranium in a light water reactor in that each is the essential ingredient for converting non-explosive uranium, which cannot be used to trigger nuclear weapons, into explosive plutonium, which can.

Nevertheless, the Nuclear Non-Proliferation Act treats heavy water as a non-sensitive component, requiring as a condition of export only the application of safeguards on the facility in which it is going to be used, rather than requiring the receiving country to accept safeguards on all its nuclear activities, as is the case for enriched-uranium exports.

It should be noted that Argentina intends to build its own unsafeguarded heavy water plant after completion of the safeguarded plant that Switzerland is building for it. The United States, therefore, is assisting Argentina's development of an unsafeguarded heavy-water production capability by providing the computer needed to complete the first plant and by providing heavy water to help meet Argentina's immediate needs for this material in its nuclear program.

Why are we providing such valuable assistance to Argentina? What are we getting in return?

It appears that the main concession Argentina has made to the United States is to agree to put back on its IAEA safeguards inventory some 7 tons of heavy water it had removed in the early 1970s when, because of a bookkeeping error, the United States had failed to jointly notify the IAEA of the 7 tons sent to Argentina under safeguards. In other words, we agreed to make available some 143 tons of heavy water to Argentina in return for Argentina once again agreeing to accept IAEA safeguards on 7 tons of previously shipped heavy water. It seems like a good deal for Argentina, and a questionable one for the United States.

It is unclear whether the Argentines have made a no-explosion pledge with regard to the plutonium produced through use of the U.S.-origin heavy water. State Department officials informally indicate that Argentina made such a commitment in a 1978 exchange of notes with the United States, but in a recent press guidance issued by the State Department, it is stated that Argentina pledged that there "will be no explosive use of the heavy water," with no mention made of byproduct plutonium. This is a crucial point that the State Department should be required to clarify on the public record.

Also of concern is the manner in which the Executive Branch approved the retransfer of heavy water to Argentina. There are no procedures spelled out in law or regulations for the United States giving prior consent to such a retransfer. Consequently, the Departments of State and Energy failed to notify or consult with Congress, pointedly kept the NRC out of the consultation and decision-making process and then approved the retransfer one day after placing a notice in the Federal Register announcing a "proposed" approval of the retransfer based on a finding that it was not inimical to U.S. national security interests.

Your two committees should obtain specific assurances from the State and Energy Departments that such high-handed procedures will not be followed in the future, particularly with regard to the prospective approval of the retransfer of component parts to India. These types of procedural abuses can be avoided, and tighter controls over the export and retransfer of heavy water and other components can be established, only if remedial legislation is enacted, as discussed above.

3. *Training and Services for South Africa*

The Reagan Administration is preparing to approve a technology transfer to permit U.S. companies, principally Westinghouse, to provide maintenance services and technical training for South Africa's French-built Koeberg power reactors.

South Africa is a non-NPT nation that operates an unsafeguarded uranium enrichment plant capable of producing atom-bomb material. It prepared a desert test site in 1977 but apparently decided not to set off a nuclear explosion after being pressured by nuclear suppliers. Two years later, there were unconfirmed U.S. satellite indications of a nuclear test in the South Atlantic off the South African coast.

The pending deal with South Africa points up a dangerous gap in non-proliferation law. Under the law, the United States is barred from exporting nuclear reactors and nuclear fuel to South Africa, but there is no prohibition against providing training and maintenance services for reactors built and fueled by another country in South Africa. This is because full-scope safeguards and a general no-explosion pledge are required for the export of reactors and fuel, but not for the transfer of technology in the form of training and services for such reactors. As a result, the Administration is free to facilitate the production of large quantities of plutonium in the South African reactors. Plutonium will provide South Africa with a second potential pathway to the bomb. The Koeberg reactors and their fuel are safeguarded, but South Africa reserves the right to use plutonium produced by the reactors to set off nuclear explosions.

Last year, the Administration further assisted the South African nuclear program by helping U.S. firms to broker shipments of nuclear fuel from Europe for use in the Koeberg reactors. This fuel replaced U.S.-enriched uranium that had been embargoed because of export restrictions in the Non-Proliferation Act. In addition, the Administration approved the export of two powerful dual-use computers to South Africa, and was prepared to export other sensitive dual-use items until strong objections were raised on Capitol Hill.

Some 30 Members of Congress recently sent a letter urging the Administration not to proceed with the technology transfer of maintenance and services because of deep concerns about the direction of South Africa's nuclear program and about the nation's racist apartheid regime. The Administration is about to approve the transfer anyway, in the absence of any requirement that Congress be given the opportunity to review the transfer before it takes effect.

The best way to ensure that technology transfers to non-NPT nations are subject to public scrutiny and Congressional review is to amend the Non-Proliferation Act to require that such transfers be subject to full-scope safeguards and other criteria now required for exports of reactors and fuel. The President would have authority to waive these restrictions, but such a waiver would be subject to Congressional review and override procedures before the transfer could go forward. Sections 13 and 14 of S. 1328, the Nuclear Explosives Control Act, comprise such a measure.

4. *Nuclear Negotiations with China*

The Administration is now negotiating a nuclear cooperation agreement with China that would clear the way for U.S. reactor vendors, probably Westinghouse, to transfer nuclear power technology and equipment to that nation. China is a nuclear weapons state that has refused to ratify the NPT, has not joined the International Atomic Energy Agency and that apparently has transferred sensitive nuclear-weapons design information to Pakistan and unsafeguarded nuclear exports to Argentina and South Africa. It is hard to imagine at this point how the United States can negotiate an agreement that requires China to conform to even minimal non-proliferation standards as a condition of receiving U.S. nuclear power technology and facilities.

The gut issue is not whether China will accept IAEA safeguards on all its nuclear activities. As a nuclear weapons state prior to the NPT coming into force in 1970, it is not required to do so. Rather, the issue is whether it will ratify the NPT or, at a minimum, require full-scope safeguards as a condition of its exports to other nations.

Our concern is that the Administration will settle for China's joining the IAEA (something it has already indicated it is willing to do) and requiring safeguards only on specific exports rather than requiring full-scope safeguards as a condition of supply. These minimal concessions by China should be unacceptable to the United States as the basis for negotiating a nuclear cooperation agreement.

A United States-China agreement should set a high standard for the world nuclear community, not merely redefine the lowest common denominator. The U.S. price for such an agreement should be China's ratification of the NPT, a full-scope safeguards requirement for its exports to other nations, a voluntary acceptance of some IAEA safeguards on its own civilian nuclear facilities and materials (similar to the voluntary safeguards undertaken of the United States, the United Kingdom and the Soviet Union), and finally a written commitment, publicly confirmed, that it pledges never again to transfer bomb-making information to a non-nuclear weapons state.

It should be emphasized that under the Nuclear Non-Proliferation Act, no U.S. nuclear exports can go to a nation that has "assisted, encouraged or induced any non-nuclear weapons state to develop nuclear explosive devices" unless the President finds that "sufficient progress toward terminating such assistance, encouragement, or inducement has been made." It is essential, therefore that Congress insist that the whole matter of China's transfer of weapons information to Pakistan be brought into the open and be certified to have ended before any nuclear cooperation agreement with China is submitted to the Senate for its advice and consent.

5. Reprocessing and Plutonium Use in Japan

As we testified before the Foreign Relations Committee a year ago, the Administration's efforts to negotiate a long-term approval of Japanese reprocessing of U.S.-supplied fuel and use of the separated plutonium in its nuclear program represents an unwarranted and dangerous departure from U.S. non-proliferation policy. Such an approval represents a Rubicon which, once crossed, legitimizes and inaugurates the plutonium economy.

We do not believe that large amounts of plutonium can be effectively safeguarded. Every effort should be made to provide cooperative nuclear fuel assurances in the form of low-enriched uranium to Japan and other nations before plutonium use is approved. Such assurances are provided in the Nuclear Explosives Control Act, and they deserve the close scrutiny of your two committees. That bill, if enacted, would permit Japan to separate and utilize U.S.-origin plutonium sufficient to meet its existing research and development needs, including development of a demonstration breeder reactor, if sufficient plutonium for those purposes is not available from other sources. Widespread use of U.S.-origin plutonium for a commercial power program could not be approved until such time as Congress determines that effective international safeguards and sanctions are in place to deal with diversions for weapons purposes.

Japan, as a close United States ally, should be prepared to engage in cooperative fuel supply and waste-management arrangements with the United States to avoid the use of plutonium fuel to the fullest extent possible. The Administration should be negotiating these types of arrangements rather than an agreement for widespread use of plutonium.

CONCLUSION

The proliferation concerns discussed here may seem "tame stuff" compared with recent events in Lebanon and those surrounding the downed Korean airliner that are commanding the attention of Congress today. It is essential, however, that your committees vigorously pursue the proliferation problem so that we do not soon find ourselves in a world in which many tons of nuclear explosive materials are being trafficked in commerce and are beyond effective control.

At a minimum, the Administration should be put on notice that there is grave Congressional concern with the present nuclear trade arrangements being made with China, India, Argentina, South Africa and Japan.

Given the immediate proliferation dangers posed by these arrangements, however, Congress should go considerably farther. There should be prompt consideration and enactment of remedial legislation based on those provisions of the Nuclear Explosives Control Act that upgrade requirements for component exports and technology transfers and that impose tough restrictions on U.S. approvals of spent fuel reprocessing and plutonium-use abroad. Ideally, the entire bill should become law, so that other nations can be offered the benefit of provisions for positive incentives in the form of nuclear-fuel assurances and technical assistance, to forgo the use of plutonium and highly enriched uranium in their nuclear programs. But since little time remains for legislative action in this session, priority should be given to those provisions that would correct the Administration's dangerous turn in nuclear trade policy.

Finally, Congress also needs to review the Nuclear Non-Proliferation Act in light of the *Chadha* decision to determine whether, in the possible absence of a legislative veto, certain Presidential authority to waive restrictions on nuclear transfers and approvals should be repealed.

Failure to take such precautionary steps today could result in an unmanageable proliferated world in the future.

[From Nuclear Fuel, Sept. 26, 1983]

UNITED STATES-JAPAN TALKS ON LONG-TERM PLUTONIUM USE SEEN LIKELY TO DISSOLVE AFTER RECENT ROUND

Talks aimed at amending the United States-Japanese agreement for nuclear cooperation are likely to dissolve but just when is uncertain, according to informed Washington sources. The two sides were still apart on several issues after a recent meeting in Tokyo but there may be another meeting before any decision on suspending the negotiations is made, they said. Originally, the two sides hoped to arrive at an arrangement under which the Japanese would have long-term permission to reprocess U.S.-origin fuel. In exchange, the United States wanted to incorporate all the requirements of its Nuclear Non-Proliferation Act (NNPA) under the current bilateral agreement, as required by the act, and at one point pressed the Japanese to adopt United States nuclear export criteria as their own—something not required by the act.

While the agreement covers most of the NNPA criteria, it doesn't cover certain provisions of section 123 which would give the United States extended approval rights over reprocessing, enrichment and Pu use. Demands to meet those criteria are apparently too much and, with routine retransfer requests coming through on a more predictable basis than under the Carter Administration, the impetus for a long-term agreement is just not there, sources say. Besides that, they add, the Japanese are not particularly happy about the United States refusal to grant unconditional approval of a planned commercial reprocessing plant. Also influencing the outcome, according to one source, is "sentiment in Japan favoring a decoupling from the U.S." on nuclear matters.

So, he says, if U.S. negotiators feel there are no further avenues to explore, they will likely make a recommendation to suspend discussions to Secretary of State George Shultz who would forward the recommendation to the President. Without a generic arrangement, he observes, issues such as the continued operation of the Tokai Mura reprocessing plant will continue "to be decided one-by-one." The current agreement allowing reprocessing of U.S.-origin spent fuel at Tokai runs through 1984. It was signed in the fall of 1981.

Congress is "not likely to nitpick the Administration" if the talks are suspended, a congressional source says. There is "no timetable set up in the bill" for renegotiating bilateral agreements for cooperation to incorporate NNPA criteria, he says, and with all its other nonproliferation-related concerns, Congress would be unlikely to focus on the Japanese agreement.

Blix Says IAEA's Role Is Promotional

IAEA Director General Hans Blix says he sees the agency's activities, including safeguards, as promotional rather than regulatory. Speaking at the Fourth Pacific Basin conference in Vancouver earlier this month, Blix said the agency was "set up specifically to promote the peaceful uses of nuclear energy. Its statute stipulates that 'the agency shall seek to accelerate and enlarge the contribution of atomic energy to peace, health and prosperity throughout the world.'" To carry out the mandate, he said, the agency must ensure that assistance it provides is not used to further any military purpose and, to that end, must establish and administer safeguards.

"While it has often been suggested that the agency has the dual roles of promotion and regulation (i.e. safeguards), this is only one way to view the situation," Blix said. "I would rather view all the agency's activities, including safeguards, as promotional. The safeguards system fosters confidence among nations that nuclear activities are devoted to peaceful rather than military applications. Without such confidence, international nuclear trade might well grind to a halt."

Blix stressed the importance of international cooperation, saying that without it many nations would have a difficult, if not impossible, time developing peaceful

nuclear power programs. "There is a wide variety of aspects of the development of nuclear energy that individual countries cannot achieve alone or that they can accomplish more easily through international cooperation," he said. "Specific mechanisms are needed in order to implement such cooperation." Various international scientific societies exist for that purpose, he said, but "the IAEA is a unique mechanism because it is the only universal institution, i.e., open to all countries." There are presently 111 member states in the agency, he noted.

SUMMARY—THE NUCLEAR EXPLOSIVES CONTROL ACT OF 1983 (S. 1326 AND H.R. 3058)

The bill has three principal objectives :

I. To discourage and sharply restrict commerce in nuclear-explosive materials—plutonium and highly enriched uranium ;

II. To offer other nations positive incentives, in the form of nuclear-fuel assurances and technical assistance, to forego the use of plutonium and highly enriched uranium in their nuclear programs ;

III. To strengthen nuclear-export criteria for all Federal agencies to ensure that nuclear exports go only to nations that accept international safeguards inspections of all their nuclear activities ("full-scope safeguards") and have nuclear-cooperation agreements with the United States.

I. RESTRICTIONS ON NUCLEAR-EXPLOSIVE MATERIALS

Bans U.S. exports of civilian technology and equipment that are important to the construction of enrichment, reprocessing and heavy water plants essential to the production of nuclear explosive materials (section 4) ;

Defers foreign extraction (reprocessing) of plutonium from nuclear fuel provided by the United States for commercial activities until such time as Congress determines adequate international safeguards and sanctions are in place (section 5) ;

Requires the phasing out of U.S. exports of highly enriched uranium as soon as research reactors can be operated with lower enriched fuel unsuitable for nuclear weapons (section 6) ;

Requires Federal agencies to improve physical security arrangements for nuclear exports (section 11) ;

Strengthens the process in existing law for cutting off nuclear trade with nations that develop or assist other nations in developing nuclear weapons or that violate safeguards or other fundamental non-proliferation commitments (section 19) ;

II. NUCLEAR-FUEL ASSURANCES AND TECHNICAL ASSISTANCE

Offers to nations which agree to forego development of reprocessing and enrichment facilities, as well as to forego the use of separated plutonium, the following major incentives (section 8) :

A substantial discount on the price of U.S. uranium enrichment services for low-enriched uranium fuel, which is unsuitable for nuclear weapons ;

A further discount on the enrichment price for nations agreeing to run reactors on specially improved low-enriched fuel that conserves uranium, reduces spent fuel generation and lowers the production of residual, by-product plutonium ;

A single export license to assure supplies of low-enriched uranium fuel sufficient to meet the lifetime requirements of all their nuclear powerplants—the fuel to be provided in shipments sufficient to operate each plant for three years at a time ;

Technical assistance to increase the fuel efficiency of light water reactors and thereby reduce inventories of residual, by-product plutonium ;

Technical assistance to resolve nuclear-waste management problems, including the storage and disposal of spent fuel ;

Technical assistance in developing alternative energy sources.

III. STRENGTHENED NUCLEAR EXPORT CRITERIA

Upgrades export criteria for the Energy and Commerce Departments to ensure that exports of nuclear technology and "dual-use" items go only to nations that accept full-scope safeguards and have a nuclear-cooperation agreement with the

United States—the same strict standard that now governs Nuclear Regulatory Commission licensing of nuclear-reactor and fuel exports (sections 13, 14 and 16) ;

Establishes the same strict standards for NRC export licensing of nuclear components as now exist for NRC export licensing of complete reactors and fuel (section 17) ;

Requires that nuclear transfers by foreign affiliates of U.S. companies are subject to the same requirements as transfers directly from U.S.-based firms (section 18) ;

Requires the Secretary of Defense to play a key non-proliferation role in determining that proposed nuclear agreements, exports and arrangements are not inimical to the common defense and security (section 15) ;

Requires that U.S. origin nuclear materials cannot be substituted for nuclear materials not under the control of the United States without the approval of the Secretary of Energy (section 7).

MAY 18, 1983.

HON. RONALD REAGAN,
President of the United States,
The White House,
Washington, D.C.

DEAR MR. PRESIDENT: We are profoundly concerned over your Administration's relaxation of efforts to curb the spread of nuclear weapons. The proliferation of these weapons poses a grave danger, rivaling that of the arms race between the superpowers. As the number of nations possessing nuclear weapons grows, so does the likelihood that nuclear weapons will be used.

Yet, actions by your Administration to prevent proliferation have been inconsistent and all too often motivated by undue concern for promoting nuclear-export sales. In some instances, the effect of your policies has served to facilitate, rather than inhibit, the spread of technology, equipment and nuclear-explosive materials that can be applied to making nuclear weapons.

Pressure and criticism from Congress—from both Republicans and Democrats—finally resulted in your Administration beginning to recognize the need for stronger anti-proliferation controls. The effectiveness of even these belated initiatives has been woefully compromised, however, by your earlier policies and actions that undermined the bipartisan approach to non-proliferation developed during the Ford and Carter Administrations.

We, therefore, call for restoration of the bipartisan spirit that always has characterized efforts to combat nuclear-weapons proliferation, and we offer to work closely with you in this spirit. We seek a return to forcefulness and consistency in U.S. non-proliferation policy. We would hope, as in the past, that Republicans and Democrats will join in this endeavor. We are committed to five principles that must guide all U.S. non-proliferation efforts:

First, halting the spread of nuclear weapons must become a principal goal of U.S. foreign policy. Attaining this goal requires an emphatic, public commitment by the President to non-proliferation and active Presidential involvement in the formulation and implementation of a consistent U.S. non-proliferation policy.

Second, the spread of nuclear-explosive materials—separated plutonium and highly enriched uranium—and of the facilities that produce these weapons materials, constitutes the most fundamental threat to controlling nuclear proliferation and to protecting long-term U.S. security interests. Consequently, the United States must redouble its efforts to strengthen international restraints on the transfer of these materials and on the technology for producing them. The United States must work to reduce the demand for, and otherwise discourage the use of, separated plutonium and highly enriched uranium as civilian fuels by helping to ensure economical and secure supplies of alternative fuels that are not usable in weapons. To set a meaningful world example, the United States should defer its domestic use of separated plutonium and highly enriched uranium in its commercial power program. This is possible since there is no need to use these dangerous materials in this century.

Third, the cooperation of other nuclear-supplier nations is essential to controlling the spread of nuclear weapons. A major objective of United States diplomacy must be gaining agreement of these nations to:

(A) Intensify export controls over commodities that can be applied directly to development of nuclear weapons in recipient nations, and

(B) Suspend all nuclear exports to any nation refusing to allow International Atomic Energy Agency inspections of all its nuclear activities, in order to verify that it is not diverting materials to nuclear-explosive purposes.

To strengthen these diplomatic initiatives, the United States must exert leadership by scrupulously adhering to these principles in the conduct of its own nuclear export activities.

Fourth, the United States must work to strengthen the capabilities of the International Atomic Energy Agency by supporting greater access and authority for the agency in conducting safeguard inspections; increased numbers and improved training to IAEA inspectors; development and deployment of upgraded safeguards technology; and greater disclosure of inspection data.

Fifth, in keeping with its obligations under the Treaty on the Non-Proliferation of Nuclear Weapons, and to otherwise strengthen its credibility in persuading other nations to forego development of nuclear arms, the United States must actively pursue efforts to halt the nuclear arms race with the Soviet Union.

As it now stands, your Administration's most troublesome departure from past bipartisan policy is its active promotion of plutonium, a nuclear explosive material, as a civilian nuclear fuel. By strongly encouraging early commercial development of reprocessing plants and breeder reactors at home and abroad, your Administration is paving the way for an industrial process that will produce by the ton materials that can be used by the pound to make atomic bombs. Your Administration is opening the door for exports of the very technologies and materials that can be turned into weapons of mass destruction and used against us.

Even though international commerce in these nuclear-explosive materials cannot be adequately safeguarded by the IAEA; even though many studies now show the use of plutonium fuels as uneconomic; and even though an excess supply of uranium, unsuitable for use in weapons, glutts world markets thus making use of plutonium as a reactor fuel unnecessary and unjustifiable for many decades, if ever—your Administration is promoting the breeder and reprocessing at home and abroad and has sought to end the long-standing bipartisan policy of never exporting reprocessing technology. In particular, it is of grave concern that your Administration intends to grant Japan long-term approval to extract plutonium from used U.S.-origin reactor fuel at will. Your Administration is also prepared to offer these major nuclear trade concessions without obtaining any meaningful strengthening of international non-proliferation controls.

Your Administration has taken a similarly dangerous stance with regard to the other nuclear weapons material, highly enriched uranium. Your Administration has abandoned the decades-old embargo on the export of the technology for manufacturing this material. Your Administration also has slashed funding for programs to develop a non-weapons usable substitute fuel that could replace highly enriched uranium in research reactors around the world.

Since passage of the Nuclear Non-Proliferation Act in 1978 by an overwhelming bipartisan majority, a key element of U.S. policy has been the suspension of nuclear exports to nations not possessing nuclear weapons that refuse to permit IAEA inspections of all of their nuclear installations ("full-scope safeguards"). Yet, during its first two years, your Administration repeatedly circumvented this restriction. First, it encouraged other supplier nations to step in and provide nuclear fuel embargoed under U.S. law to three countries not accepting the required full-scope safeguards—India, South Africa, and Brazil. Second, your Administration has offered, or indicated a willingness to offer, other nuclear technology, not explicitly embargoed by law, to South Africa and India. In addition, your Administration has allowed sensitive nuclear technology to pass through an intermediary nation to an additional nation that refuses comprehensive IAEA inspections—Argentina. Only because of staunch Congressional opposition is the Executive Branch reconsidering this latter policy and withholding certain exports.

In not one of these instances, did your Administration obtain the slightest strengthening of non-proliferation controls in the recipient nation in return for relaxation of U.S. export restrictions. Indeed, since each of the recipient nations involved has developed or is developing the capability to produce nuclear-weapons materials in facilities not under international inspections, this course of action not only undermines the Nuclear Non-Proliferation Act, but also permits these countries to pursue this most dangerous activity without penalty.

From the outset, your Administration also sought to undermine a second key U.S. non-proliferation law, the Glenn-Symington restrictions in the 1976 For-

aign Assistance Act. These restrictions prohibit U.S. military and economic aid to nations not possessing nuclear weapons that import nuclear technology capable of producing nuclear-weapons material. Only strong Congressional opposition prevented the virtual repeal of these restrictions originally sought by your Administration in 1981.

We now see all too plainly the unfortunate result of two years of neglect and weakening of U.S. non-proliferation policy by your Administration: the undermining of the legally required U.S. initiative to persuade other nuclear-supplier nations to adopt our tough, full-scope safeguards export treatment.

We reject these dangerous and ill-advised deviations from the bipartisan consensus established by your predecessors and in statute. We, therefore, are supporting legislation being introduced today that would remedy many of our concerns. Under this bill, for example, all nuclear exports to nations that have not accepted full international inspections would be prohibited; exports of technology and equipment directly applicable to producing nuclear-weapons materials would be banned; approvals of the reprocessing of plutonium from U.S.-origin fuel for existing research, development and demonstration activities would be severely limited and approvals for new commercial activities would not be permitted until Congress determines adequate international safeguards and sanctions are in place; and new incentives for nations to forego plutonium would be provided by offering them U.S. uranium enrichment services at a substantial discount to produce assured supplies of non-weapons usable, low-enriched uranium fuel. It is particularly fitting that U.S. facilities that originally had been used to create nuclear bombs would now be used to help curb the spread of nuclear explosive plutonium.

As important as this new legislation is, we cannot, however, legislate what is needed most in this field from the Executive Branch: leadership. We cannot legislate the initiative and vigor so essential to U.S. nuclear diplomacy; we cannot legislate the assertiveness and constancy necessary to enforce the letter (and the spirit) of U.S. non-proliferation laws; and we cannot legislate the sense of urgency and concern needed to make non-proliferation a major priority in your Administration's conduct of U.S. foreign policy.

Today, the deepest aspiration of all Americans is to reduce the horrifying dangers of nuclear conflict. Our citizens, who already fear that your Administration has turned its back on serious nuclear arms control negotiations, are coming to recognize that your Administration also has turned away from what always has been a resolute bipartisan commitment to halt the spread of these arms to additional nations.

You have stated you will address non-proliferation control with other Western leaders at the Williamsburg Summit. We agree that their cooperation is essential to strengthen the international non-proliferation regime and particularly, to tighten the rules of international nuclear commerce. But a strong and cohesive policy among the Western nations will only be brought about by resolute U.S. leadership, by setting a good U.S. example, and by a non-proliferation initiative supported in deed as well as word.

We urge you in the strongest terms to give heed to the yearnings of the American people and to devote yourself to reestablishing our nation's leadership in this vitally important area. We urge you to support the legislation being introduced today and the sound policy it reflects.

Representative Richard L. Ottinger, Senator Alan Cranston, Senator Gary Hart, Representative Edward J. Markey, Representative Morris K. Udall, Representative Don Bonker, Representative Michael Barnes, Representative Howard Wolpe, and Walter F. Mondale.

[Press Release from Nuclear Control Institute, Federation of American Scientists, Union of Concerned Scientists, Greenpeace, Energy Research Foundation, Committee for a Sane Nuclear Policy (SANE), July 28, 1983]

LEGAL CHALLENGE TO BLOCK NUCLEAR EXPORTS TO INDIA ANNOUNCED BY SIX PUBLIC-INTEREST ORGANIZATIONS

WASHINGTON.—Six public-interest organizations today challenged as illegal the Reagan Administration's plan to provide more nuclear assistance to India despite India's continuing program to develop nuclear weapons.

The coalition joined in a legal action to block export of reactor components for India's nuclear powerplant at Tarapur, near Bombay. The groups filed a petition today with the Nuclear Regulatory Commission to intervene in an export-licensing proceeding involving the spare parts for the U.S.-supplied plant.

Joining in the legal action were the Nuclear Control Institute, Federation of American Scientists, Union of Concerned Scientists, Greenpeace, Energy Research Foundation and Committee for a Sane Nuclear Policy (SANE).

The groups contended that India is violating nuclear-export requirements in U.S. non-proliferation law by actually pursuing a nuclear-weapons program that began with India's "peaceful nuclear explosion" in 1974. India also is in violation of U.S. requirements, the coalition stated in its petition, by refusing to guarantee that international safeguards inspections will be permitted indefinitely to verify that the twin reactors at Tarapur, and the plutonium produced by them, are not used for the manufacture of nuclear weapons.

The coalition's petition to the NRC was filed in response to Secretary of State Shultz' announcement in New Delhi on June 30 that the United States would supply India with reactor parts not available from other countries. Shultz' action served to break a logjam that dates back as far as May, 1980 on six applications to export reactor components to India. The applications, filed by General Electric, manufacturer of the Tarapur plant, and by four other American companies, had lain dormant before the NRC in the absence of an Executive branch recommendation of the Tarapur plant, and by four other American companies, had

The required recommendation was held up pending the outcome of U.S. diplomatic efforts to win firm commitments from India not to repeat its nuclear test of 1974, as well as to permit continued international safeguards inspections and U.S. controls on plutonium produced at Tarapur through use of nuclear fuel and equipment supplied by the United States. India has refused to make any such commitments, proceeding instead to prepare another nuclear test site and threatening, over U.S. objections, to extract pure, explosive plutonium from the Tarapur plant's used, or "spent," fuel.

The Reagan Administration is expected to recommend to the NRC to proceed with the exports anyway, based on a statement by a State Department spokesman with Shultz in India that the Administration "is prepared to take the necessary actions to supply those parts which are not available from elsewhere," including "the kind of action that will permit those spare parts to be made available in the United States."

In a joint statement on behalf of the coalition of public-interest intervenors, Paul Leventhal of Nuclear Control Institute said: "The Reagan Administration is caving in to Indian demands for the reactor parts, ostensibly for health and safety reasons, but actually to remove what it considers an irritant from U.S.-India relations. India has made no concessions on altering the military nature of its supposedly peaceful nuclear program. Still in dispute is control over the one metric ton of plutonium produced thus far at Tarapur—enough for about 150 atomic bombs. The Administration is squandering legitimate leverage by agreeing to supply reactor parts that cannot be obtained elsewhere. This undermines long-standing American efforts to curb the spread of nuclear weapons. U.S. appeasement in the face of Indian blackmail will not go unnoticed in the world community. It can only embolden other nuclear customers of the United States to follow India's example."

In rejecting Reagan Administration contentions that the reactor parts should be exported for humanitarian reasons to eliminate high levels of radioactivity that threaten plant workers and residents near Tarapur, the intervenors state in their petition that the exports "by prolonging the unsafe operation of Tarapur, will exacerbate these problems and contribute to the continuing accident and other health and safety risks" associated with operation of the facility. The petitioners noted that the radiation hazards at Tarapur are caused in large part by leakage from fuel elements fabricated by the Indians themselves—a problem that the spare parts ordered by India will not eliminate.

"The risk of a serious reactor breakdown or accident, resulting in widespread death or disease, threatens U.S. relations with India and other U.S. trading partners," according to the petition filed with the NRC. "Accordingly, authorization of these exports would be 'inimical to the common defense and security' (within the meaning of the law governing exports of reactor components) and, therefore, the Commission cannot lawfully grant the pending license applications."

In addition to the health and safety question, the petition cited the following additional reasons why the Nuclear Regulatory Commission is barred from au-

thorizing the exports by the Atomic Energy Act, as amended by the Nuclear Non-Proliferation Act of 1978:

APPLICATION OF SAFEGUARDS

Under the U.S.-India agreement governing operation of the Tarapur plant, inspections and other safeguards are to be applied by the International Atomic Energy Agency (IAEA) on both the facility and the nuclear materials that pass through it. The agreement expires in 1993, and India has refused to accept the U.S. interpretation that the IAEA safeguards will apply in perpetuity—that is, beyond 1993. "There is a real risk that it (India) will continue to insist on this interpretation and that, after 1993, safeguards will be removed," according to the petition. Consequently, since the Atomic Energy Act requires safeguards as a condition of supply of nuclear components, the NRC cannot lawfully grant applications for export of the reactor parts to India.

DEVELOPMENT OF NUCLEAR EXPLOSIVE DEVICES

The law also prohibits exports of any nuclear component that will be used for "development of any nuclear explosive device." Since the components ordered by India would permit continued production of plutonium at Tarapur, and since IAEA safeguards and U.S. controls on this plutonium are still in dispute, "plutonium produced at Tarapur is subject to diversion or theft and ultimate use in either a subnational terrorist explosive device or in the Indian government's nuclear explosives program," the petition said. Consequently, there is no assurance that the legal requirement barring use of components for development of explosive devices can be met, and the Commission cannot lawfully grant the export licenses.

ACQUISITION OF NUCLEAR EXPLOSIVE DEVICES

The law bars any nuclear exports to countries found by the Commission or by the President to be "engaged in activities . . . having direct significance for the manufacture or acquisition of nuclear explosive devices. . . ." According to the petition, "there is evidence that the Government of India is preparing a site for the testing of a nuclear explosive device, as reflected in the construction of additional shafts at its Rajasthan Desert test site." If the Commission finds that such preparations are underway, the petitioners said, it must disapprove the export as "inimical to the common defense and security" unless the President finds that India has made "sufficient progress toward terminating such activities."

REPROCESSING OF TARAPUR SPENT FUEL

India has announced its intention to begin reprocessing Tarapur spent fuel into plutonium by the end of 1983 or the beginning of 1984 despite the U.S. position that, under the U.S.-India Tarapur agreement, no such reprocessing can take place without the approval of the United States. India insists that the United States lost its rights to withhold approval once the IAEA began applying safeguards at India's new reprocessing plant at Tarapur last year. "Consequently, India may proceed to reprocess spent fuel without awaiting United States approval, thereby obtaining possession of directly weapons-usable material," according to the petitioners who contended that exports to India under such circumstances are "inimical to the common defense and security" and, therefore, barred by law.

RETRANSFER OF EXPORTED COMPONENTS

U.S. law bars the export of nuclear components unless any retransfer of the components to a third country is subject to the "prior consent of the United States." Because of the uncertainties of India's view of its obligations under the U.S.-India Tarapur agreement beyond its expiration in 1993, there is no assurance India will live up to this obligation, and the Commission, therefore, cannot grant the export licenses.

"The significance of these nuclear exports extends far beyond the ton of disputed Tarapur plutonium or the current state of U.S.-India relations," Leventhal said on behalf of the coalition. "At stake is the way some 220 tons of civilian plutonium already produced by nuclear powerplants in the free world will be treated—an amount that will grow to 1,750 tons by the end of the next decade. If the United States acquiesces in India's demands, it will further legitimize the

fiction of 'peaceful' nuclear explosions and erode the legal and political barriers now preventing conversion of tons of civilian plutonium into thousands of nuclear weapons."

Copies of the coalition's petition can be obtained from Nuclear Control Institute (822-8444) or from Eldon Greenberg (833-9084), attorney for the intervenors. Organizations joining in the intervention are listed below.

COALITION OF INTERVENORS

Nuclear Control Institute, 1000 Connecticut Avenue, NW., Washington, D.C. 20036, 202-822-8444. A 1,000 member non-profit organization engaged in developing studies and strategies for stopping the further spread of nuclear weapons.

Federation of American Scientists, 307 Massachusetts Avenue, NE., Washington, D.C. 20002, 202-546-3300. A non-profit, membership organization composed of 5,000 natural and social scientists concerned with arms control and other problems of science and society.

Union of Concerned Scientists, 28 Church Street, Cambridge, Mass. 02238, 617-547-5552. A non-profit organization, supported by contributions from 100,000 citizens, and organized by a coalition of scientists, engineers and other professionals concerned with the impact of advanced technology on society, especially in energy and weapons policy areas.

Greenpeace, 2007 R Street, NW, Washington, D.C. 20009, 202-462-1177. A non-profit organization with 280,000 members in the U.S. concerned with protection of the global environment, with particular concern for wildlife protection, control of toxic substances and disarmament.

Energy Research Foundation, 2530 Devine Street, Columbia, S.C. 29205, 803-256-7298. A non-profit, operating foundation engaged in research and public education on nuclear and other energy issues.

SANE, 711 G Street, SE, Washington, D.C. 20003, 202-546-7100. A 60,000 member non-profit organization concerned with organizing citizens to lobby and disseminate information on arms control and economic conversion issues.

[From the Nuclear Control Institute]

WORLD INVENTORIES OF CIVILIAN PLUTONIUM AND THE SPREAD OF NUCLEAR WEAPONS

SUMMARY

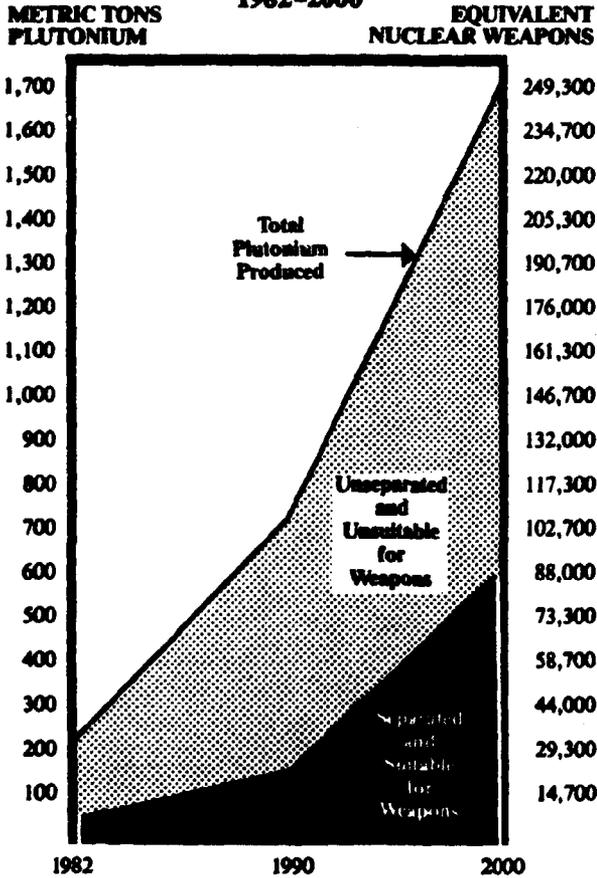
A key barometer of nuclear-weapons proliferation can be found in the inventories of plutonium, a nuclear explosive material, that are rapidly accumulating as a by-product of civilian nuclear power programs throughout the world.

The modern nuclear powerplant, in addition to producing enough electricity for a city of about one million people, also produces enough plutonium each year for dozens of atomic bombs. There are now 211 nuclear powerplants in the non-communist world with a combined capacity to produce 159-billion watts of electricity and about 40 metric tons (88,000 pounds) of plutonium a year. This is enough electricity for about 150 million people and enough plutonium for about 6,000 atomic bombs a year.

This report provides the most complete available information on how much plutonium has been produced by civilian power reactors in each country through 1982, as well as the amounts projected to be produced through the year 2000. It also provides the best available information, by country, of how much plutonium already has been processed into weapons-usable form, how much has been contracted to be processed into such form through 1990, and how much weapons-usable plutonium can be separated by the end of the century.

Plutonium is a by-product of the splitting of uranium atoms—the "fission" process that takes place inside the reactor of a powerplant. So long as plutonium remains in the highly radioactive used ("spent") fuel of a reactor, it is inaccessible and in an impure, diffuse form unsuitable for making weapons. If plutonium is chemically extracted from spent fuel in a heavily shielded reprocessing plant, it becomes concentrated into a pure form that can be reused as reactor fuel, but also can be used in nuclear weapons. (Plutonium was used in the first atomic bomb tested by the United States and in the bomb that destroyed Nagasaki.)

**PLUTONIUM PRODUCED
IN WORLD NUCLEAR POWERPLANTS
(Non-Communist Countries)
1982-2000**



WORLD POWERPLANT PLUTONIUM (Metric Tons)			
YEAR	1982	1990	2000
Unseparated	175	560	1150
Separated	44	150*	600*
TOTAL PLUTONIUM	219	710	1750

*Based on planned reprocessing capabilities worldwide.

Although commercial plutonium is accumulating at an alarming rate throughout the world, most of it still remains "locked" in highly radioactive spent fuel. Some 219 metric tons of plutonium have been produced by power reactors in the non-communist world through 1982, of which about 44 tons, or 20 percent, have been reprocessed from spent fuel. Nearly all of the separated plutonium remains in nuclear-weapons states where most of the commercial reprocessing plants are now located.

[This report deals primarily with commercial plutonium in the non-communist world, for which the best data exist. Available data indicates that in the communist countries some 41 metric tons of plutonium have been produced in civilian power spent fuel (excluding breeders)—36 tons, or 88 percent, of it in the Soviet Union—and that all Eastern Bloc spent fuel is stored in the Soviet Union where most of it has not been reprocessed to date.]

The fact that four-fifths of the free world's plutonium remains unprocessed while most of the remaining one-fifth remains in nations already possessing nuclear weapons, indicates that the wherewithal to develop large nuclear arsenals has *not* yet spread throughout the world. This situation presents a major and final opportunity for the United States and other nuclear industrial nations to develop a non-proliferation strategy that controls and contains plutonium before large quantities of it spread in weapons-usable form to nations not now possessing nuclear weapons. This opportunity is enhanced by the fact that construction and operation of commercial reprocessing plants have encountered severe technical, economic and in some cases political difficulties, thereby putting the industry's plans for recovery and reuse of plutonium behind schedule. On the other hand, the official long-term commitment to using plutonium as fuel in conventional and breeder reactors remains high in most developed and developing countries with nuclear power programs, even if this objective takes longer to achieve than originally planned.

Unless this commitment to plutonium is reversed, there is the grim prospect that vast stocks of weapons-usable plutonium will proliferate throughout the world over the next two decades in the absence of an international safeguards system capable of assuring that significant amounts are not diverted to the manufacture of nuclear weapons. Furthermore, the risk of hijackings and thefts by terrorists will increase in proportion to the increasing amounts of separated plutonium that are introduced into world commerce.

Projections of vast amounts of plutonium in commerce remain firm even in the face of substantial reductions in nuclear powerplant construction throughout the world. Plutonium in spent fuel is projected to increase nearly ten-fold from 175 tons in 1982 to 1700 tons in the year 2000 while installed nuclear power capacity triples or quadruples during this period.

An average of three to six tons of plutonium is now being reprocessed from spent fuel annually: this will increase to 19 to 22 tons annually by 1990—most of the increase attributable to an expansion of the French reprocessing plant at La Hague. As much as 150 tons of plutonium will be separated through 1990, some 60 percent of it in France. The French have contracted to reprocess about one-quarter of all the plutonium in spent fuel from light-water reactors (the most common type of power reactor) through 1990—40 percent of it from foreign sources.

By the year 2000, about 600 tons, or about one-third of the plutonium produced in the spent fuel of nuclear powerplants by that time, will have been separated out if reprocessing plants are built and operated as planned throughout the world. This amount of separated plutonium is equivalent to at least 88,000 nuclear weapons—about half again as many as in the combined arsenals of the superpowers today.

It is not suggested that this many weapons will actually be built. It is suggested that large national stores of separated plutonium provide the wherewithal for large nuclear arsenals. Furthermore, undetected diversions of at least one percent of separated plutonium would be possible and could result in hundreds of new nuclear weapons. Plutonium poses a sufficient global danger to warrant all nations promptly abandoning the reprocessing of spent fuel and the use of plutonium as a civilian fuel.

The CHAIRMAN. Thank you very much. Your statement is a valuable one and I will commend it to the reading of every member of this committee. We thank you again.

This hearing is adjourned.

[Whereupon, at 1:13 p.m., the committee adjourned, subject to call of the Chair.]