

STATEMENT OF  
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BEFORE THE  
COMMITTEE ON ARMED SERVICES  
MILITARY APPLICATION OF NUCLEAR ENERGY PANEL  
ON THE DEPARTMENT OF ENERGY'S PLANS FOR  
SURPLUS FISSILE MATERIAL CONTROL AND DISPOSITION

APRIL 19, 1994

Mr. Chairman and members of the Committee, I am pleased to appear before you today to discuss the Department of Energy's plans for surplus fissile material control and disposition.

With the passing of the Cold War, significant quantities of weapons-capable nuclear materials have become surplus to national defense needs both in the United States and Russia. These stocks of fissile materials pose significant global dangers. The dangers reside in the potential proliferation of nuclear weapons and in the potential for environmental, safety and health consequences if surplus fissile materials are not properly managed. The manner and effectiveness with which we deal with these concerns is clearly one of the key challenges of our time. In the judgement of the National Academy of Sciences, the existence of this surplus material constitutes a "clear and present danger" to national and international security. The context for our various initiatives on the control and disposition of surplus fissile materials has been set by a number of significant events which have occurred over the past several months.

#### PRESIDENTIAL NONPROLIFERATION AND EXPORT CONTROL POLICY

On September 27, 1993, President Clinton announced the establishment of a framework for U.S. efforts to prevent the proliferation of weapons of mass destruction. This comprehensive approach involves several agencies of the federal government to assure effective policies and programs which set an example for other nations to follow. This policy commits the U.S. to undertake a comprehensive approach to the growing accumulation of fissile materials from

dismantled nuclear weapons and within civil nuclear programs. As key elements of the President's policy, the United States will:

- Seek to eliminate, where possible, accumulation of stockpiles of highly enriched uranium or plutonium, and to ensure that where these materials already exist they are subject to the highest standards of safety, security, and international accountability.
- Propose a multilateral convention prohibiting the production of highly enriched uranium or plutonium for nuclear explosives purposes or outside international safeguards.
- Encourage more restrictive regional arrangements to constrain fissile material production in regions of instability and high proliferation risk.
- Submit U.S. fissile material no longer needed for our deterrent to inspection by the International Atomic Energy Agency.
- Pursue the purchase of highly enriched uranium from the former Soviet Union and other countries and its conversion to peaceful use as a reactor fuel.
- Explore means to limit the stockpiling of plutonium from civil nuclear programs, and seek to minimize the civil use of highly enriched uranium.
- Initiate a comprehensive review of long-term options for plutonium disposition, taking into account technical, nonproliferation, environmental, budgetary and economic considerations. Russia and other nations with relevant interests and experience will be invited to participate in the study.

These policies, announced by the President in speech before the United Nations, represent the broadest statement of national policy on surplus fissile material control and disposition.

## LEGISLATIVE DIRECTION

The Congress has also provided specific direction and funding to address these problems.

The Soviet Nuclear Threat Reduction Act of 1991, known as Nunn-Lugar, was enacted on December 12, 1991, and amended by a title of the National Defense Authorization Act for Fiscal Year 1993, authorizes the President to establish and conduct programs to assist the demilitarization of the independent states of the former Soviet Union. To date, Congress has appropriated \$1.2 billion for the Nunn-Lugar program. Among the authorized activities are programs to:

- transport, store, safeguard and destroy nuclear, chemical, and other weapons;
- establish verifiable safeguards against the proliferation of such weapons and their components;
- prevent diversion of weapons-related scientific expertise to terrorist groups or third countries;
- facilitate the demilitarization of defense industries;
- establish science and technology centers to employ weapons scientists and engineers in peaceful purposes;
- expand military-to-military contact.

Three other legislative provisions are worthy of note in regard to fissile material control and disposition.

First, Subtitle D of Title 31 of the National Defense Authorization Act for Fiscal Year 1993, International Fissile Material and Warhead Control, urged the President to enter into

negotiations with member states of the Commonwealth of Independent States with the goal of achieving verifiable agreements in the following areas:

- dismantlement of nuclear weapons
- the safeguard and permanent disposal of nuclear materials
- an end to the production of plutonium and highly enriched uranium for nuclear weapons

The provision also urged the extension of these issues to all nations capable of producing nuclear weapons materials. It contained a framework for negotiations involving exchanges of information and technical working groups, and amended the Atomic Energy Act to allow the President to release Restricted Data if the U.S. and member states of the Commonwealth of Independent States reach reciprocal agreement on the release of such data. As part of the provision, \$10 million was directed to be spent by the Department of Energy to carry out a verification technology program in support of verifying the agreements called for in June. The subsequent report provided by DOE to Congress in June 1993, indicated that fiscal year 1993 funding called for in the provision exceeded this amount; that is \$58.2 million.

Second, Senator Biden attached a condition to the START I Treaty that, in connection with any further agreement reducing strategic nuclear arms, the President shall seek an appropriate arrangement, including the use of reciprocal inspections, data exchanges, and other cooperative measures, to monitor:

- the numbers of nuclear stockpile weapons on the territory of the parties to the treaty; and

- the location and inventory of facilities on the territory of the parties to this treaty capable of producing or processing significant quantities of fissile materials.

Finally, the National Defense Authorization Act for Fiscal Year 1994 contains a provision, known as the Markey Amendment that requires the President to certify that Russia is committed to halting the chemical separation of weapon-grade plutonium from spent nuclear fuel and is taking all practical steps to halt such separation at the earliest possible date. The provision would prevent obligation of Nunn-Lugar funds to assist the Russian Ministry of Atomic Energy in the construction of a storage facility for surplus plutonium from dismantled weapons until such a certification was made.

#### CLINTON ADMINISTRATION INITIATIVES

In the summer of 1993, as part of the U.S./Russia Vancouver Summit, Presidents Clinton and Yeltsin set in motion a series of efforts to strengthen and increase cooperative ties between our nations in the post-Cold War world. In the months that followed, Vice President Gore structured and then led a U.S. delegation to Moscow for a meeting of the newly-created Gore-Chernomyrdin Joint Commission on Economic and Technological Cooperation. One of the Commission's committee's, the Energy Policy Committee, is led by Secretary O'Leary. Under this Committee, a number of nuclear cooperation initiatives have begun. These include: a commitment to shut down Russian plutonium production reactors once alternative sources are available; material control and accounting (MC&A); nuclear reactor safety; joint

study on alternative energy sources; and, agreement to study the health effects of radiation.

Consultations on these and related matters set in motion by the Commission are ongoing.

### JANUARY 1994 SUMMIT STATEMENT

President Clinton and President Yeltsin, during their meeting in Moscow on January 14, 1994, agreed that the proliferation of weapons of mass destruction and their missile delivery systems represents an acute threat to international security in the period following the end of the Cold War. They declared the resolve of their countries to cooperate actively and closely with each other, and also with other interested states, for the purpose of preventing and reducing this threat. Specifically,

- They expressed their support for the International Atomic Energy Agency in its efforts to carry out its safeguards responsibilities. They also expressed their intention to provide assistance to the Agency in the safeguards field, including through joint efforts of their relevant laboratories to improve safeguards.
- They noted that an important contribution to the goal of nonproliferation of nuclear weapons would be made by a verifiable ban on the production of fissile materials for nuclear weapons and by the most rapid conclusion of an international convention to this effect with the widest possible participation of states and on a non-discriminatory basis.
- They agreed to cooperate with each other and also with other states to elaborate measures designed to prevent the accumulations of excessive stocks of fissile materials and over time to reduce such stocks.

They agreed to establish a joint working group to consider:

- including in their voluntary IAEA safeguards offers all source and special fissionable materials, excluding only those facilities associated with activities having direct national security significance;
- steps to ensure the transparency and irreversibility of the process of reduction of nuclear weapons, including the possibility of putting a portion of fissionable

material under IAEA safeguards. Particular attention would be given to materials released in the process of nuclear disarmament and steps to ensure that these materials would not be used again for nuclear weapons.

- The Presidents also tasked their experts to study options for the long-term disposition of fissile materials, particularly of plutonium, taking into account the issues of nonproliferation, environmental protection, safety, and technical and economic factors.
- They reaffirmed the intention of interested organizations of the two countries to complete within a short time a joint study of the possibilities of terminating the production of weapon-grade plutonium.
- The Presidents agreed that reduction of the risk of theft or diversion of nuclear materials is a high priority, and in this context they noted the usefulness of the September 1993 Agreement to cooperate in improving the system of controls, accounting, and physical protection for nuclear materials. They attached great significance to further joint work on the separate but mutually connected problems of accounting for nuclear materials used in the civilian and military fields.

#### INDEPENDENT REPORTS AND RECOMMENDATIONS

Between September 1993 and January 1994, a number of comprehensive reports and recommendations on fissile materials control and disposition were issued by respected and independent organizations such as the National Academy of Sciences, the Rand Corporation and Congress' Office of Technology Assessment, among others. These studies, which included the contributions of scores of individuals with technical, scientific and policy experience, underscored the urgency of addressing the complex and challenging issues of surplus fissile materials management. They have served to provide a valuable framework for developing and implementing domestic and international plans and policies. Collectively, these reports contain useful discussions of the full range of considerations that must be addressed. These include: materials accounting and declaration; environment, safety and



health vulnerabilities; technical, scientific, policy and economic considerations for near term, long term, and ultimate control and disposition of surplus materials in both the U.S. and former Soviet Union; public involvement and openness and organizational approaches to the problem.

### DEPARTMENT OF ENERGY STRATEGIC PLANNING

Over this same time period, the Department's Office of Defense Programs and Office of Nonproliferation and National Security developed a strategic plan for the Department's national security activities. This national security strategic plan adopted "Reducing the Global Nuclear Danger", as the strategic vision, or organizing principle, for the Department's national security programs. A number of key objectives in this plan involve the drawdown of weapons stockpiles, and the safe control and disposition of resulting surplus nuclear materials and components that could contribute to proliferation.

### DEPARTMENT-WIDE PROJECT FOR SURPLUS MATERIALS CONTROL AND DISPOSITION

To address the urgency of matters related to the availability of significant quantities and forms of excess nuclear materials resulting from the end of the Cold War, Secretary O'Leary created a Department-wide project on January 24, 1994, to better coordinate efforts within the Department concerning the control and disposition of surplus fissile materials. The project reports directly to the Under Secretary and has line responsibility for developing Departmental

recommendations and for directing implementation of decisions concerning the control and disposition of excess nuclear materials.

The objective of this effort is to provide for safe, secure and environmentally sound control, storage and ultimate disposition of surplus fissile materials. In pursuing this objective, the project will coordinate the Department's participation on nuclear materials matters being addressed by the President's Interagency Working Groups.

As one of its earliest efforts, the Department-wide project has initiated the development of a strategic plan building on that part of the Department's National Security Strategic Plan dealing with surplus fissile materials disposition. The purpose of the plan is to better coordinate the increasingly complex relationships among the Department's ongoing initiatives, and to ensure coordination and consistency with administration policy and legislative requirements. Drafting of the plan has included input from a wide range of contributors within the government, private sector and the public. In addition, the planning process included thoughtful consideration of the findings and recommendations contained in the various independent reports and studies I noted earlier.

The strategic objectives contained in the draft plan are derived directly from the President's September 27, 1993, Nonproliferation and Export Control Policy, as well as the joint statement of Presidents Clinton and Yeltsin at their meeting in Moscow on January 14, 1994. Our strategic objectives include:

- Foster and implement policies that result in the dismantlement, inventory declaration and placement of fissile materials that are surplus to U.S. national security requirements in environmentally sound, safe, secure, and verifiable interim storage;
- Contribute to efforts to identify means to limit and ultimately reduce the stockpiles of Russian weapons-capable materials, and assist in the environmentally sound, safe, secure, and verifiable interim storage of fissile materials surplus to Russian national security requirements;
- Assist in efforts to place nuclear materials from the disarmament process in a form or condition that is substantially and inherently more difficult to use in weapons;
- In support of U.S. policy not to encourage the separation and stockpiling of plutonium, participate in the identification of non-reprocessing alternatives to the recycling of civil plutonium and help develop short and long-term activities and strategies that can be implemented;
- Accelerate efforts to minimize the use of highly enriched uranium in civil programs; and
- Evaluate options that could in the long-term result in the maximum destruction of surplus plutonium.

In the sections which follow, I will describe more fully some of the significant actions that are already underway.

#### ACTIONS UNDERWAY

##### SHUTDOWN AND REPLACEMENT OF PRODUCTION REACTORS AT TOMSK AND KRASNOYARSK

To further the agreements reached by Presidents Clinton and Yeltsin on January 14, 1994, and by Vice President Gore and Prime Minister Chernomyrdin on December 16, 1993, Secretary Hazel O'Leary and Minister Victor Mikhailov of the Ministry of Atomic Energy (MINATOM) of the Russian Federation met on March 16 and agreed on a protocol for

replacement of Russian plutonium production reactors with alternate energy sources. Under the terms of the agreement, the Department of Energy and a broad interagency team are working with national and regional officials from the Russian Federation on the issue of shutting down Russia's three remaining production reactors near the cities of Tomsk and Krasnoyarsk.

At the meeting, Minister Mikhailov agreed to shut down the reactors once replacement sources of heat and power are implemented. U.S. technical experts are expected to travel to Moscow, Tomsk, and Krasnoyarsk within a month's time, in order to assess the situation on the ground and evaluate the Russians' preliminary plans for gas-fired replacement capacity in Tomsk, and coal-fired capacity for Krasnoyarsk. Our overall goal will be to assure a speedy shutdown by securing financing for the completion of feasibility studies to meet the requirements of Western financial institutions and private sector investment for the replacement heat and electric power sources.

The Russians also indicated their willingness to negotiate an agreement to cease "military use" of the plutonium produced after the date of the agreement. This cessation would begin even before the reactors were taken off line and would provide for verification and compliance measures.

On March 17, pursuant to section 1612 of the National Defense Authorization Act of 1994, Secretary of State Warren Christopher certified that the Russian Federation is committed to

halting the chemical separation of weapon-grade plutonium from spent nuclear fuel, and is taking all practical steps to halt such further separation at the earliest possible date. The Secretary of State reached this judgment based on Russia's commitments to take certain actions in the future and the implementation of those actions.

#### RECIPROCAL U.S./RUSSIAN INSPECTIONS OF PLUTONIUM FACILITIES

During the March meetings, Secretary O'Leary and Minister Mikhailov declared their intention to initiate reciprocal inspections of plutonium facilities by the end of 1994. This is a followup to the Summit Statement of Presidents Clinton and Yeltsin in which they agreed to pursue steps to assure the "transparency and irreversibility" of the dismantlement process for nuclear weapons. An initial meeting of technical experts is proposed for the week of May 9 in Moscow to establish the procedures for these inspections. The Department of Energy is joined in this important effort by the Departments of State and Defense and the Arms Control and Disarmament Agency. This initial bilateral inspection initiative is the first step in developing the transparency and irreversibility measures envisioned by the two Presidents.

#### CHERNOBYL AGREEMENT

The Department also recently announced its intention to assess, together with experts from the full interagency community, the requirements that would lead to the shutdown of the Chernobyl nuclear power plant. Deputy Secretary Bill White visited Kiev April 6 to 9 and

expressed the substantial concern of the United States and the entire international community about the safety risks posed by Chernobyl. These risks were again underscored in a recent report of the International Atomic Energy Agency.

Representatives of the Ukrainian government insisted that they were unable to close the plant until power to replace Chernobyl's current 1700 mw output is located and the Ukrainian energy system is stabilized. The U.S. and Ukrainian sides announced the formation of a working group which will analyze all issues associated with the earliest possible shutdown of Chernobyl.

#### PURCHASE FROM RUSSIA OF HIGHLY ENRICHED URANIUM

In February, 1993, the U.S. Government signed an historic agreement with the Russian Federation to purchase low enriched uranium derived from up to 500 metric tons of highly enriched uranium extracted from nuclear weapons of the Former Soviet Union. On January 14, 1994, the United States Enrichment Corporation, as agent for the U.S. Government, signed an implementing contract with the Russian Federation. In addition, a trilateral accord was signed by the Presidents of the United States, Russia, and Ukraine that provides for highly enriched uranium from dismantled Ukrainian weapons to be processed in Russia in exchange for nuclear fuel to be shipped back to the Ukraine. The U.S. Government is providing an advanced payment to Russia for this transaction.

On March 18, 1994, the Department of Energy, as the responsible Government agency for the development and implementation of transparency measures to ensure that the material delivered under the contract is derived from highly enriched uranium extracted from nuclear weapons, signed a further protocol with the Russians. This protocol is designed to begin the development of transparency assurances necessary while respecting Russian security and sovereignty needs. This week, the Department will be leading a team of Government experts on a familiarization visit to the plant in Russia where the blending will occur. The visit will assist in defining any additional procedures required for the initiative.

#### IAEA SAFEGUARDS INSPECTIONS

The Department has formally requested the Department of State to take the necessary steps to add Vault 16 at the Y-12 Plant to the Eligible Facilities List under the U.S.-International Atomic Energy Agency (IAEA) Voluntary Safeguards Agreement. This initiative stems from the President's September 27, 1993, Excess Fissile Material Initiative announced as a key element of the Administration's Nonproliferation and Export Control Policy, and the Clinton/Yeltsin agreement of January 14, 1994, to establish a joint working group to pursue additional steps to ensure the transparency and irreversibility of the process of reduction of nuclear weapons, including the possibility of putting a portion of fissionable material no longer required for national security purposes under IAEA safeguards. The Department hopes to be able to host IAEA inspections of up to 10 metric tons of highly enriched uranium at Vault 16 by the end of September, 1994, and is considering plans to submit other materials,

including plutonium, to international safeguards at DOE's Hanford and Rocky Flats facilities in the future -- perhaps as early as the end of 1994 or early in 1995.

### MATERIAL CONTROL AND ACCOUNTING

The U.S. places a high priority on assisting Russia to improve controls on fissile materials, both nuclear materials resulting from dismantlement activities and materials which have been solely in civil programs. In their January 1994 Summit meeting, Presidents Clinton and Yeltsin "agreed that reduction of the risk of theft or diversion of nuclear materials is a high priority." Accordingly, it is a central objective of U.S. nuclear nonproliferation policy to ensure, to the maximum extent possible, that all nuclear materials in Russia are subject to effective nuclear material control and accounting and physical protection measures. In this regard, the U.S. has a number of initiatives currently underway to cooperate with Russia in strengthening its controls over nuclear materials.

First, in September 1993, the U.S. Department of Defense and the Russian Ministry of Atomic Energy signed an agreement for cooperation concerning the control, accounting, and physical protection of nuclear material. This is the implementing agreement for Nunn-Lugar assistance to Russia in nuclear material controls and accounting. An initial funding authority of \$10 million was approved for this agreement. The U.S. is now in the process of determining Russian requirements for material control and accounting and



physical protection systems at the Russian fuel fabrication plant at Elektrostal, near Moscow.

Second, in March 1994, as a result of the January 1994 Summit and the December 1993 Gore-Chernomyrdin agreements, the U.S. proposed to cooperate with Russia on a program to provide equipment and other assistance to address urgent needs at key Russian HEU and plutonium sites. As a first step in this expanded cooperation, the U.S. has invited Russia to send experts to a technical exchange at a DOE plutonium storage facility at Hanford, Washington, followed by a U.S. visit to the Russian civilian plutonium storage facility at Mayak.

Third, an additional \$20 million in Nunn-Lugar assistance for material control and accounting in Russia has been approved to support cooperation with Russia at the HEU to LEU conversion and blending facility, as well as the near-term upgrades for urgent needs at HEU and plutonium sites. Funding in this area includes support to the former Soviet Union, including Russia, in the area of material control, accounting, and physical protection.

#### LAB TO LAB COOPERATION

In addition to DoD funded Nunn-Lugar assistance, DOE is establishing laboratory-to-laboratory cooperation with a number of Russian institutes. This effort focuses on the

need to prevent emigration of nuclear weapons scientists to possible proliferant states and was initiated under DOE and Department of State guidelines in March, 1992. The objective is to encourage joint projects/contracts in non-weapons related areas in order to improve the transparency of weapons laboratories in the former Soviet Union and to assist in the development of a market economy, thereby reducing economic pressures for emigration. Since 1992, technical collaborations have resulted in over 200 contracts, totaling over \$5 million, with 40 Institutes in Russia and Ukraine.

In addition, the International Science and Technology Center (ISTC) in Moscow was authorized under Nunn-Lugar funding in joint sponsorship with Japan and the European Community to develop, finance, and monitor projects primarily within the Russian Federation. The Center is chartered to provide employment for former weapons scientists as a nonproliferation measure. In March, 1994, \$11.6 million was committed to start 23 projects and additional projects will be selected in June, 1994. The Department of Energy is supporting the center by the assignment of the U.S. Representative to the Board of Governors, two senior technical advisors in Moscow, and one scientific advisory committee member. In addition, the DOE's National Laboratories are forming partnerships with Russian Institutes on ISTC projects and are continuing to interact on Laboratory-to-Institute projects. The International Science and Technology Center in Moscow has also approved a Russian proposal for development of material control and accounting systems at Russian nuclear facilities.

NEWLY INDEPENDENT STATES (NIS)  
INDUSTRIAL PARTNERING PROGRAM

The Department of Energy has a lead role in a new program aimed both at reducing the risk of proliferation of weapons of mass destruction and commercializing technologies that are developed by NIS research and development organizations. The NIS Industrial Partnering Program, which was initiated by Congress under the Foreign Operations, Export Financing, and Related Programs Appropriations Act for FY 1994 (P.L. 103-87), will provide a total of \$35 million that will be used to:

- stabilize laboratories of the former Soviet Union that were involved in the development and production of weapons of mass destruction, and
- support collaborative efforts between U.S. industry and NIS institutes to commercialize technologies at NIS institutes.

From the U.S. side, participants will be the DOE laboratories, as well as U.S. industry. Participating organizations from the NIS side will include organizations in Russia, Ukraine, Kazakhstan and Belarus.

SURPLUS NUCLEAR MATERIALS INVENTORY

As the first step in implementing the President's commitment to unilaterally submit surplus fissile materials to inspection by the International Atomic Energy Agency, last fall the National Security Council tasked the Nuclear Weapons Council to identify quantities of nuclear materials which can be made available for safeguards. Key tasks involve developing consensus on the quantities that can be declared surplus based on a

comprehensive data base of forms and locations for the highly enriched uranium and plutonium. Efforts will also include declassifying information on surplus fissile material to the maximum extent practicable consistent with national security and with the need to protect information that could assist a potential proliferant.

The declassification of information on surplus fissile materials is needed to support bilateral and international inspection efforts. It is also an essential element of the Secretary's efforts to build public trust by providing information that is important to the current debate about the proper management and disposition of these materials. Release of this previously secret information will be used to encourage other nations to reciprocate and declassify similar information.

REDUCED ENRICHMENT RESEARCH  
AND TEST REACTOR PROGRAM (RERTR)

The Reduced Enrichment Research and Test Reactor program (RERTR) was launched by DOE in 1978 to address the proliferation concerns associated with the use of HEU in research and test reactors. The goal of the programs is to develop the technical means needed to minimize use of HEU in research reactors. Research reactors consume nearly all the HEU used for civilian use, and therefore the RERTR program supports directly the U.S. policy of minimizing HEU use in civilian nuclear programs.

The RERTR program has developed, tested, and qualified several fuel types containing LEU that can be used in research reactors instead of the HEU fuels. The most advanced of these fuels can be used to convert to LEU nearly 90% of the research reactors that used HEU when the program began. Nearly all the research reactors that use HEU of U.S. origin, which are spread among nearly thirty countries, are participating in the program. Twenty reactors have already fully converted to the use of LEU fuel and many more are in the process of doing so. The RERTR program is now in the process of extending its activities to Russian and Chinese-design reactors, and is preparing to resume development of advanced fuels which, if successful, might allow conversion of HEU-fueled research reactors.

One key activity underway is the proposed urgent relief acceptance of foreign research reactor spent fuel. Beginning in the 1950s the U.S. supplied highly-enriched uranium for use in research reactors abroad. It had been U.S. policy to accept back spent fuel containing this HEU. In 1988 the policy for acceptance of foreign research reactor spent fuel was allowed to lapse. In early 1993, the Department of Energy restarted the National Environmental Policy Act (NEPA) process for foreign research reactor spent fuel acceptance. The process has been divided into two steps. Part one is an Environmental Assessment for receipt of a limited amount of spent fuel. Comments on the Environmental Assessment were closed on April 8. Part two, is an Environmental Impact Statement (EIS) on the proposal to accept 15,000 foreign research reactor elements over the next 10 to 15 years.

The administration believes that this spent fuel return policy is important for two reasons. First, we want to keep research reactors in the RERTR program. This program provides high density, low enriched fuel to replace the highly enriched uranium fuel in these reactors. Second, we do not want the reactor operators to resort to reprocessing this highly enriched spent fuel because they have run out of storage space.

#### SOVIET NUCLEAR THREAT REDUCTION ACT OF 1991 (NUNN-LUGAR)

The Department of Energy continues to work with the Departments of State, Defense and others on programs for the safe, secure dismantlement of nuclear weapons in the former Soviet Union. These activities, initiated by Congress under the Soviet Nuclear Threat Reduction Program (Nunn-Lugar) include:

- Fissile Material Containers -- designing and manufacturing containers for transportation and storage of fissile material from dismantled Russian nuclear weapons;
- Railcar Upgrade Kits -- designing and modifying existing Russian railcars to enhance the security and safety of nuclear weapons during rail transport;
- Soft Armor Blankets -- providing soft armor blankets to enhance nuclear weapons protection;
- Material Control and Accounting and Physical Protection -- developing and implementing enhanced national systems of material control and accounting and physical protection of special nuclear materials in Russia; and
- Fissile Material Storage Facility -- assisting the Corps of Engineers in design of a Material Control and Accounting and Physical Protection System, safety analysis for the facility and other design assistance related to fissile material storage as required.

## CONTROLLING CIVILIAN NUCLEAR MATERIALS

The administration's non-proliferation policy states that the United States does not encourage the civil uses of plutonium and does not itself reprocess plutonium for either nuclear power or nuclear explosive purposes. However, the policy also states that the U.S. will maintain its existing commitments regarding the civil use of plutonium in Western Europe and Japan. In addition, the policy commits the U.S. to explore means to limit the stockpiling of plutonium from civil nuclear programs and to seek to minimize the civil use of highly-enriched uranium.

Because separated plutonium and highly-enriched uranium can be used in nuclear weapons, its accumulation can create serious proliferation and security dangers. The Department of Energy is working to minimize the civil use of highly enriched uranium and to identify alternatives to civil plutonium separation and use. We will work with other government agencies to implement these strategies.

## PLUTONIUM INVENTORY VULNERABILITY STUDY

On March 15, 1994, Secretary O'Leary directed DOE's Office of Environment, Safety and Health to conduct a comprehensive assessment of the environment, safety and health vulnerabilities associated with the Department's inventory of plutonium in storage. This assessment will contribute materially towards implementing an element of President

Clinton's Nonproliferation and Export Control Policy calling for the U.S. to ensure that where these materials already exist they are subject to the highest standards of safety, security, and international accountability.

The results of this effort will serve as the technical information base to identify corrective actions and options for the safe management of surplus fissile materials. This assessment, which will also be provided to the Congress, is scheduled to be completed by September 30 and will be followed by an assessment of highly enriched uranium.

#### DEVELOPMENT OF LONG-TERM DISPOSITION OPTIONS

The President's Nonproliferation and Export Control Policy calls for the U.S. to seek to eliminate, where possible, the accumulation of stockpiles of surplus highly-enriched uranium or plutonium. Long-term disposition of surplus fissile materials is also a subject of the joint statement issued by Presidents Clinton and Yeltsin at the January 14, 1994 summit meeting in Moscow.

The Department's strategic goal for the long-term disposition of plutonium supports these Presidential initiatives and involves placing plutonium in a form or condition that is substantially and inherently difficult to use in weapons, and to achieve this objective in an environmentally sound, safe, secure and verifiable manner. The recent National Academy of Sciences report entitled, Management and Disposition of Excess Weapons



Plutonium, provides a useful framework for addressing short-term measures as well as long-term disposition options. The Department will use the Academy study, as well as other input, in our efforts to develop recommendations and arrive at a broad-based consensus on actions for the long-term disposition of plutonium. The principal options that might be considered include: converting plutonium to spent nuclear fuel by fissioning it in reactors (including accelerator driven reactors) so that the resulting high level of radiation serves as a barrier to diversion and proliferation; immobilizing plutonium in different forms such as combining it with high level waste and vitrifying it; disposal in deep boreholes or repositories; and long-term storage.

A primary objective of the technical evaluation process will be to prepare the United States to engage Russia, and other nations with relevant interests and experience, in efforts that would lead to making reuse of the plutonium for weapons much more difficult. The criteria for eliminating and selecting options will therefore be influenced by the feasibility of these options in other nations as well as technical, environmental, safety and health, economic and cost factors. The Department of Energy will participate in the joint working group called for during the January 14, 1994, summit in Moscow held by Presidents Clinton and Yeltsin. The working group is expected to meet in the near future to identify options for the long-term disposition of plutonium that might be studied jointly with the Russians.

## NUCLEAR MATERIALS PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

The disposition options identified during the scoping process will be evaluated to a level of detail that allows for analysis in a Programmatic Environmental Impact Statement (PEIS) and the subsequent selection of the most attractive option(s) in a Record of Decision. The PEIS will include comprehensive information on the environmental, safety and health impacts to workers and the general public associated with the range of options for plutonium disposition. We intend to publish a notice of intent for this effort in the month of May and conduct public scoping meetings and data collection into the fall of this year. Our objective is to prepare a draft of the Programmatic Environmental Impact Statement and conduct public hearings during the middle of next year in order to support completion of a record of decision by early 1996.

### INTERAGENCY COORDINATION

In the same way that our Departmental efforts gain focus and effectiveness through coordination and integration across internal program lines, so ~~to~~ do our efforts with other government agencies through an inter-agency coordination process. The Department's longstanding working relationships and experiences in international negotiations and nuclear initiatives with the Departments of State and Department of Defense, and the Arms Control and Disarmament Agency, among others, confirm that the effectiveness of our combined efforts is greater than the sum of our individual contributions.

Through the National Security Council's Interagency Working Group process, the Departments of Energy, State, Defense, Commerce, and the Central Intelligence Agency, Environmental Protection Agency, Office of Management and Budget as well as the Office of Science and Technology Policy, Arms Control and Disarmament Agency and the Nuclear Regulatory Commission are joined together to assure timely sharing of information and coordination of actions on fissile materials control and disposition. The success of many of the specific efforts described earlier, rely on contributions from agencies throughout the government. Collectively, our efforts help form a strong foundation for attaining our fissile materials control and disposition objectives.

#### CLOSING

The manner and effectiveness with which we deal with the control and disposition of surplus fissile materials is clearly one of the most urgent and significant challenges of our time. We must bring to bear the full range of our experiences and capabilities to meet this global challenge and help assure a lasting peace. This comprehensive approach will involve numerous federal government agencies and will require prompt, coordinated actions to assure effective policies and programs which set an example for other nations to follow. The Department of Energy is ready and fully committed to this effort. The support that this Panel has provided in the past has been, and will continue to be instrumental to our initiatives. With your continued support, we will advance these

initiatives and work effectively with other nations in reducing the global nuclear danger.

This concludes my prepared remarks. At this time, I would be pleased to answer any questions you have.