

148695

GAO

Testimony

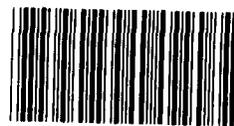
Before the Committee on Governmental Affairs, U.S. Senate

For Release on Delivery  
Expected at  
10:00 a.m., EST,  
Tuesday,  
March 9, 1993

SOVIET NUCLEAR  
WEAPONS

U.S. Efforts to Help Former  
Soviet Republics Secure and  
Destroy Weapons

Statement of Joseph E. Kelley, Director-in-Charge,  
International Affairs Issues, National Security and International  
Affairs Division



148695



056819/148695

---

---

Mr. Chairman, Members of the Committee:

I am pleased to be here today to discuss the results of our review of U.S. efforts to implement the Soviet Nuclear Threat Reduction Act. I would like to note at the outset of my comments that at your request we are also reviewing issues concerning the dismantlement of U.S. nuclear weapons. The results of that work should be available to you in May.

As you know, the Soviet Nuclear Threat Reduction Act<sup>1</sup> calls for the United States to help former Soviet republics

- destroy nuclear, chemical, and other weapons;
- transport, store, and safeguard weapons in connection with their destruction; and
- establish verifiable safeguards against proliferation.

The Dire Emergency Supplemental Appropriations Act of 1992 allows the Department of Defense (DOD) to transfer up to \$400 million in DOD appropriations or working capital account funds to support these objectives. The fiscal year 1993 defense appropriations act authorizes the transfer of an additional \$400 million for these and other objectives.

In response to the Committee's request we reviewed

- overall U.S. efforts to implement the Soviet Nuclear Threat Reduction Act,
- U.S. support for Russia's fissile material storage,
- U.S. consideration of disposal options for Russia's plutonium,
- Russian nuclear weapons dismantlement capabilities,
- arrangements for implementing Condition 8 of the Senate Foreign Relations Committee's report on the START treaty, and
- issues concerning the prospective sale of Russian highly enriched uranium (HEU) to the United States.

Our review relied on classified and unclassified sources of data. We therefore submitted a classified draft of my statement to several U.S. agencies for their security review. In response to their guidance, we have deleted several important sections of

---

<sup>1</sup>Public Law No. 102-228, December 12, 1991. We did not focus our review on the implementation of more recent related legislation, such as the Former Soviet Union Demilitarization Act of 1992 (Title XIV of P. L. 102-484, Oct. 23, 1992) or Title V of the Freedom Support Act (P. L. 102-511, Oct. 24, 1992).

today's statement, including our discussions of Russia's ability to dismantle nuclear weapons and of the status of U.S. efforts to implement Condition 8. We will provide the Committee with a complete, classified version of our statement in the very near future.

#### SUMMARY

To date, DOD has announced plans to obligate over \$303 million in support of projects aimed primarily at improving the safety and security of former Soviet nuclear weapons and materials and at preventing proliferation. While the United States will not have a direct role in dismantling Soviet nuclear weapons (e.g., nuclear warheads and bombs), it is seeking to help former Soviet republics destroy delivery vehicles. In a related effort, the United States and Russia have agreed to cooperate in converting HEU from former Soviet weapons into reactor fuel for possible sale to the United States. The sale would not require the use of DOD funds.

Despite these positive steps, significant gaps remain in our nation's understanding of how to best deal with the former Soviet Union's legacy of nuclear weapons and delivery vehicles. U.S. consideration of Russia's request for help in building a fissile material storage facility has been hampered by persistent questions. The United States has deferred selecting an approach for the long-term disposition of Russian plutonium until more can be learned about various technologies. Moreover, it is still too early to determine precisely how the United States would integrate converted Russian HEU into U.S. reactor fuel enrichment operations.

#### EFFORTS TO IMPLEMENT THE ACT

The President has delegated the authority to establish and fund the program called for by the Soviet Nuclear Threat Reduction Act to the Secretary of Defense. The program is also guided by an interagency steering group that includes representatives from the Departments of Defense, State, and Energy; the Arms Control and Disarmament Agency; and the National Security Council. Several agencies have been involved in developing potential projects. A special State Department envoy has led U.S. negotiation efforts.

Although the act calls for U.S. assistance in destroying former Soviet nuclear weapons, the possibility of such assistance has been blocked by Russia's insistence that it neither needs nor wants a direct U.S. role in its dismantlement operations. Moreover, according to DOD, only personnel with access to sensitive former Soviet nuclear weapons design and fabrication information would be able to safely dismantle such weapons. Accordingly, the executive branch focused initially on projects that would enhance the safety and security of nuclear weapons as well as on projects to limit proliferation.

DOD currently plans to obligate more than \$303 million to support 22 projects,<sup>2</sup> including

- \$242.2 million to (1) facilitate the safe and secure transportation and storage of former Soviet nuclear weapons and materials by providing Russia with armored blankets, emergency response equipment,<sup>3</sup> security enhancements for railcars, and containers for fissile materials and (2) help Russia design and build a fissile material storage facility, begin planning the destruction of its chemical weapons, establish an export control system, set up a fissile materials control and accounting system, and create a science center to find work for its scientists and weapons experts;
- \$27.2 million to provide Ukraine (1) emergency response and government-to-government communications equipment and (2) help in establishing an export control system and a material control and accounting system and in setting up a science center;
- \$9.6 million to provide Belarus with emergency response and government-to-government communications equipment and help in developing export controls; and
- \$14.6 million to provide Kazakhstan (1) with help in setting up a materials accounting, control and protection system and an export control system; (2) government-to-government communications equipment; and (3) emergency response equipment and training.

Most of this assistance has not yet begun arriving in the former Soviet Union. Executive branch officials note that working with experts and officials from the former Soviet Union has been time-consuming. According to recent DOD and Department of State reports, several agreements needed to implement some projects have yet to be concluded. On January 30, 1993, DOD reported that it had actually obligated about \$20 million during 1992 and had delivered 250 surplus armored blankets and 6 sets of emergency access equipment to Russia.

However, the amount of assistance reaching Russia appears to be increasing. Over the next 3 years DOD plans to deliver additional emergency response equipment, 2,500 armored blankets, 115 kits to improve the safety and security of railcars carrying Russian nuclear weapons and weapons materials, and 10,000 fissile material

---

<sup>2</sup>A list of the 22 projects--and their individual funding levels--is attached to this statement. DOD also plans to obligate up to \$10 million to help assess and develop projects.

<sup>3</sup>Such equipment would include protective clothing, video and optical gear, and access and communications equipment.

containers. DOD also hopes to conclude concept design assistance to Russia's fissile material facility effort this month.

The executive branch has now shifted the program's top priority towards dismantling nuclear delivery vehicles. According to the Department of State, the United States has discussed this topic with Russia, Ukraine, and Kazakhstan and should soon be able to draw up a detailed assistance agreement with Russia. DOD anticipates that a significant portion of additional aid to Russia will be directed towards dismantling delivery vehicles. According to the State Department, the United States has agreed in principle to Ukraine's initial requests for such aid and is studying new requests from that nation.<sup>4</sup> Aid to Ukraine would be aimed, in part, at ensuring that Ukraine ratifies the START treaty and accedes to the Nuclear Nonproliferation Treaty as a nonnuclear weapon state.

Our classified statement will include additional information concerning potential U.S. assistance to these nations' efforts to dismantle former Soviet delivery vehicles.

#### RUSSIAN FISSILE MATERIAL STORAGE FACILITY

Russian officials maintain that a lack of storage for fissile material<sup>5</sup> is the most important factor limiting Russia's dismantlement effort. They have stated that they are overloading their existing storage space and that they need a new storage facility by 1997 to meet their dismantlement schedule. The facility would house U.S.-supplied containers filled with fissile materials from dismantled former Soviet nuclear weapons.

Despite unresolved questions regarding the facility's cost and Russia's storage needs, DOD plans to obligate up to \$90 million to support the facility's design, construction, and outfitting. However, such funding may not be enough to cover the total cost of the facility. The executive branch doubts the reliability of a Russian estimate of \$150 million and has been unable to confirm the estimate due to Russia's reluctance to share data on local materials and labor costs.<sup>6</sup>

---

<sup>4</sup>The State Department's envoy has testified that the United States has promised to provide Ukraine with up to \$175 million in Act-related aid.

<sup>5</sup>Two examples of fissile material are plutonium and HEU.

<sup>6</sup>A State Department official testified in July 1992 that \$150 million had been tentatively reserved for the facility.

Russian officials have agreed in principle that the United States would be able to monitor the facility's use.<sup>7</sup> However, the two nations have not discussed this topic in detail.

During our review we developed significant information concerning the facility project. Although I cannot discuss this information at today's hearing, we include it in our classified statement.

#### PLUTONIUM DISPOSITION OPTIONS

Various options have been suggested for disposing of plutonium from dismantled weapons and civilian reactor operations, including (1) storing the plutonium in its current form; (2) "spiking" it with highly radioactive wastes; (3) vitrifying it into a glass-like substance, with or without waste products; (4) placing it deep within the earth or the sea; (5) or "burning" it as fuel, in varying concentrations, in reactors.<sup>8</sup>

The executive branch has concluded that more information is needed before a method can be selected for ultimately disposing of the plutonium from dismantled former Soviet weapons and that the plutonium will have to be stored in some manner over the next several years--regardless of its final disposition.

We have developed some important information which we will include in our classified statement concerning the executive branch's consideration of this matter.

#### U.S.-RUSSIAN HEU NEGOTIATIONS

It is too early to determine exactly how the Department of Energy (DOE) or the new U.S. Enrichment Corporation (USEC)<sup>9</sup> would use Russian HEU. Although the United States and Russia have recently agreed to cooperate in converting 500 metric tons of HEU from Russian nuclear weapons, they have not yet negotiated a contract to implement the sale of converted HEU to the United States. U.S. and Russian agencies will attempt to negotiate such a contract within 6 months.

---

<sup>7</sup>The overall agreement between Russia and the United States on the safe and secure transportation, storage, and destruction of weapons and prevention of proliferation states that the United States "shall have the right to examine the use of any material, training, or other services" that it may provide.

<sup>8</sup>While burning mixed plutonium and uranium fuel in power reactors is a technically established option, such fuel is more expensive than uranium fuel.

<sup>9</sup>USEC, which has yet to begin operating, will eventually take over DOE's enrichment operations.

The agreement itself does not specify a price and instead indicates that the price of any purchase will be negotiated later. According to the Department of State, the United States has emphasized that funds paid to Russia are to be shared with Ukraine, Belarus, and Kazakhstan.

The agreement indicates that the HEU will be converted in Russia.<sup>10</sup> As envisioned by a senior DOE official, Russia would sell USEC the resulting low enriched uranium. USEC would then sell the low enriched uranium to its long-term customers for reactor fuel. The customers would continue to supply the Corporation with natural uranium for enrichment. This arrangement would lower USEC's uranium enrichment costs. The savings would be used to finance the purchase of Russian HEU.

At least four private firms have indicated an interest in assisting Russia in taking part in the HEU sale. However, their prospective roles cannot be determined until the two governments conclude their discussions.

The Department of Commerce has signed agreements with Russia, Ukraine, Kazakhstan, and three other former Soviet republics to prevent them from selling uranium in the United States at less than fair value. However, these agreements would not restrict the proposed Russian sale to the United States of fuel made from HEU from dismantled nuclear weapons.<sup>11</sup>

Additional information concerning the potential terms of the proposed HEU sale will be included in our classified statement.

#### CONCLUSIONS

As I noted at the outset of my statement, significant gaps remain in our nation's understanding of how best to deal with the former Soviet Union's nuclear weapons. Russia's refusal to permit direct U.S. involvement in its dismantlement process appears to seriously constrain U.S. options for accelerating the rate at which Russia is dismantling former Soviet nuclear weapons. Uncertainties remain concerning Russia's storage facility, the ultimate disposition of Russia's plutonium, and other matters.

Such uncertainties may be acceptable, given the historic opportunities open to the United States in the wake of the Cold War. Congress should nonetheless be aware of them as the United

---

<sup>10</sup>A Russian official has stated that Russia can convert 20 metric tons of HEU annually.

<sup>11</sup>A more detailed description of the anti-dumping agreements is attached to my statement.

States prepares to commit hundreds of millions of dollars towards realizing the objectives of the Soviet Nuclear Threat Reduction Act.

This concludes my statement. I will be happy to address any questions that you may have.

SOVIET NUCLEAR THREAT REDUCTION PROJECTS

| Recipient nation | Project            | Obligations proposed as of Jan. 30, 1993 | Obligations (actual) as of Dec. 31, 1992 |
|------------------|--------------------|--|--|
| Russia           | Armored blankets   | \$ 5,000,000                             | \$ 2,691,000                             |
|                  | Railcar security   | 20,000,000                               | 3,080,000                                |
|                  | Emergency response | 15,000,000                               | 8,168,000                                |
|                  | Material controls  | 10,000,000                               | 0  |
|                  | Storage containers | 50,000,000                               | 600,000                                  |
|                  | Facility design    | 15,000,000                               | 3,363,000                                |
|                  | Facility support   | 75,000,000                               | 0  |
|                  | Export controls    | 2,260,000                                | 0  |
|                  | Science center     | 25,000,000                               | 150,000                                  |
|                  | Chemical weapons   | 25,000,000                               | 1,553,000                                |
| <b>Subtotal</b>  |                    | <b>\$242,260,000</b>                     | <b>\$ 19,605,000</b>                     |
| Ukraine          | Emergency response | 5,000,000                                | 0  |
|                  | Communications     | 2,400,000                                | 0  |
|                  | Export controls    | 2,260,000                                | 0  |
|                  | Material controls  | 7,500,000                                | 0  |
|                  | Science center     | 10,000,000                               | 0  |
| <b>Subtotal</b>  |                    | <b>\$ 27,160,000</b>                     | <b>0</b>                                 |
| Belarus          | Emergency response | 5,000,000                                | 0  |
|                  | Communications     | 2,300,000                                | 0  |
|                  | Export controls    | 2,260,000                                | 0  |
| <b>Subtotal</b>  |                    | <b>\$ 9,560,000</b>                      | <b>0</b>                                 |
| Kazakhstan       | Emergency response | \$ 5,000,000                             | 0  |
|                  | Communications     | 2,300,000                                | 0  |
|                  | Export controls    | 2,260,000                                | 0  |
|                  | Material controls  | 5,000,000                                | 0  |
| <b>Subtotal</b>  |                    | <b>\$ 14,560,000</b>                     | <b>0</b>                                 |
| General          | Support/assessment | \$ 10,000,000                            | \$ 778,000                               |
| <b>Total</b>     |                    | <b>\$303,540,000</b>                     | <b>\$ 20,383,000</b>                     |

U.S. ANTI-DUMPING ACTIONS AGAINST  
FORMER SOVIET REPUBLICS

In November 1991 U.S. uranium miners filed an anti-dumping petition with the International Trade Commission (ITC) and the Department of Commerce's International Trade Administration (ITA). The miners claimed that they had been injured by imports of Soviet uranium and related enrichment services at less than fair market value.

In December 1991, ITC made a preliminary determination that the U.S. uranium industry could be materially injured or threatened with material injury by such imports. In May 1992, following the dissolution of the Soviet Union, ITA announced a preliminary determination that six former Soviet republics--Russia, Kazakhstan, Ukraine, Kyrgyzstan, Uzbekistan, and Tajikistan--were selling, or were likely to sell, uranium products at less than their fair market value in the United States. Final determinations from both ITC and ITA would be needed before dumping fees could be imposed on the former Soviet republics.

On October 16, 1992, the Department of Commerce signed separate uranium anti-dumping suspension agreements with the six former Soviet republics. These agreements suspend the anti-dumping investigation. The investigation may resume if any of these agreements are violated or a signatory gives notice of termination. If this occurs, the Department of Commerce may decide to continue its investigation and make a final determination of dumping fees against the nation that violated the agreement or gave notice of termination. ITC would then make a determination regarding material injury to the U.S. uranium industry. If ITC finds injury or threat of injury by reason of the imports, the Department will issue a final dumping order. If ITC finds that injury has not occurred, the investigation ends, and all previous findings and agreements are rendered moot.

The suspension agreements are intended to protect the U.S. uranium industry by preventing any of the six former republics from selling uranium in the United States at less than fair value. They span 10 years and limit imports of uranium from Russia, Kazakhstan, Ukraine, and Uzbekistan by means of a price quota allocation system<sup>1</sup> through October 15, 2000, followed by a 2 year period in which imports will be monitored closely. The Department of Commerce sets prices at 6 month intervals, based on the weighted average of spot market and long-term contract prices for the preceding 6 months. The Department's current price is \$7.95 per pound of uranium oxide (U<sub>3</sub>O<sub>8</sub>) equivalent. If the price remains below \$13, imports from Russia, Kazakhstan, Ukraine, and Uzbekistan

---

<sup>1</sup>The suspension agreements do not allow any imports from Kyrgyzstan and Tajikistan because neither has uranium mines. Both have uranium processing facilities.

are barred.<sup>2</sup> If prices rise above \$13, the four nations can export increasing quantities to the United States, depending on the price level. Limits on the volume of uranium imported from Ukraine, Kazakhstan, and Uzbekistan are lifted if the price rises above \$21. Imports from Russia are limited to an annual total of 10 to 12 percent of the U.S. demand for low enriched uranium, regardless of how high the price rises.

The suspension agreements do not restrict sales of highly enriched uranium (HEU) product that result from an agreement between the United States and Russia for the long-term purchase of HEU from dismantled Russian nuclear weapons. The suspension agreements also allow Russia to sell up to 4.1 million pounds of  $U_3O_8$  equivalent to the Department of Energy (DOE), or its agent, through December 31, 1994. Such sales are to be "market-neutral," that is no uranium will be released into the U.S. market that could suppress or undercut prices of U.S. uranium products. The suspension agreements also grandfather long-term contracts signed with U.S. utilities before March 5, 1992.

It is too early to accurately predict the long-term impact, if any, that the suspension agreements may have on uranium prices and the U.S. uranium industry.

(467385)

---

<sup>2</sup>If the price remains below \$13 for an extended time period, the agreement requires the Department and each of the four former republics to review the market situation and consider adjusting the quota.

---

---

**Ordering Information**

**The first copy of each GAO report and testimony is free. Additional copies are \$2 each. Orders should be sent to the following address, accompanied by a check or money order made out to the Superintendent of Documents, when necessary. Orders for 100 or more copies to be mailed to a single address are discounted 25 percent.**

**Orders by mail:**

**U.S. General Accounting Office  
P.O. Box 6015  
Gaithersburg, MD 20884-6015**

**or visit:**

**Room 1000  
700 4th St. NW (corner of 4th and G Sts. NW)  
U.S. General Accounting Office  
Washington, DC**

**Orders may also be placed by calling (202) 512-6000  
or by using fax number (301) 258-4066.**

---

**United States  
General Accounting Office  
Washington, D.C. 20548**

**Official Business  
Penalty for Private Use \$300**

**First-Class Mail  
Postage & Fees Paid  
GAO  
Permit No. G100**

---