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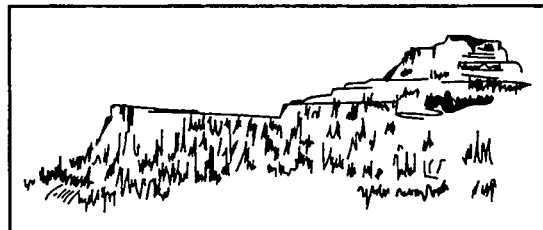
*The Nuclear Warhead Dismantling
Assistance Initiative:
The Nunn-Lugar Initiative*

David B. Thomson

LOS ALAMOS NATIONAL LABORATORY



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CNSS

Center for National Security Studies
Los Alamos National Laboratory

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CNSS BRIEFINGS

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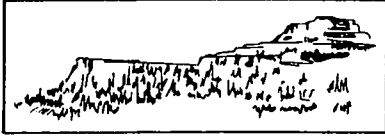
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The Nuclear Warhead Dismantling Assistance Initiative: The Nunn-Lugar Initiative

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BACKGROUND

Under terms of the START I treaty,¹ signed July 31, 1991, the states of the former Soviet Union (FSU) are pledged to eliminate strategic delivery systems that carry about 5,000 strategic nuclear warheads. As a result of the Bush-Gorbachev reciprocal-unilateral measures of September-October 1991, the Russians will also be dismantling about 15,000 tactical nuclear warheads,² and these weapons were reportedly withdrawn from the non-Russian republics prior to July 1, 1992. Under START II, signed by the United States and Russia on January 1, 1993, the two parties would each eliminate systems with an additional 3,000 strategic nuclear warheads.^{3,4} The nuclear warheads removed from these delivery systems will need to be stored safely or dismantled.⁵

In the fall of 1991, President Mikhail Gorbachev (of the former USSR) requested Western help in dismantling nuclear weapons, and President George Bush proposed U.S. cooperation on the storage, transportation, dismantling, and destruction of nuclear weapons.

In December 1991, the USSR broke up and was replaced by twelve independent republics. The territories of four of these—Russia, Byelarus, Ukraine, and Kazakhstan—contained START-

related nuclear deployments and facilities. There was great concern in the West about the control of the nuclear weapons and delivery systems in these four states. In May 1992, these states, together with the United States, signed a protocol at Lisbon, Portugal, which bound the five parties to the START I treaty and provided for the four former Soviet states to assume the obligations of the USSR under START I. The Lisbon protocol⁶ pledges Byelarus, Ukraine, and Kazakhstan to become nonnuclear states under the Treaty on the Nonproliferation of Nuclear Weapons (NPT) and calls for Russia to assume the obligations of the FSU as a nuclear weapons state. But concern for the implementation of these nuclear treaty obligations, and concern for control of the warheads themselves, has continued because of political uncertainties throughout the FSU.

As the USSR began to break up in late 1991, concern was also expressed⁷ as to the fate of the top Soviet nuclear weapons designers, estimated to number 1,000-2,000. An additional 3,000-5,000 individuals were believed to have had access to sensitive information about the design and operation of uranium and plutonium production. The possibility that some of these individuals might be tempted to sell their information to countries trying to develop nuclear weapons, such as Iraq, Iran, and North Korea, raised a very serious additional nuclear proliferation question.

THE NUNN-LUGAR INITIATIVE

In November 1991, in response to their concern over control of nuclear warheads within the emerging independent republics of the Soviet Union, Senators Sam Nunn (D), Chairman of the Senate Armed Services Committee (SASC), and Richard Lugar (R), Senate Foreign Relations Committee (SFRC), initiated legislative action⁸ resulting in an amendment to H.R. 3807 dealing with the North Atlantic Treaty Organization (NATO) and the Conventional Forces in Europe (CFE) treaty, which created the "Nuclear Threat Reduction Act of 1991." This action provided a fund of \$400 million (in FY92) to aid the former Soviets in dismantling their nuclear weapons. These funds came through presidential transfers from other designated Department of Defense (DoD) accounts.

The Nuclear Threat Reduction Act states that it is in the national interest to facilitate the transportation, storage, safeguarding, and destruction of nuclear and other weapons in the republics of the former Soviet Union and to assist in the prevention of weapons proliferation. U.S. assistance under this act is contingent on the recipient's commitment (1) to make a substantial investment of its own resources for dismantling such weapons, (2) to forego any modernization or replacement program that exceeds legitimate defense requirements, (3) to forego any use in new nuclear weapons of fissionable materials and other components from destroyed nuclear weapons, (4) to facilitate U.S. verification of weapons destruction carried out under the act, (5) to comply with all relevant arms control agreements, and (6) to observe internationally recognized human rights.

The program under this act provides for U.S. cooperation with the former Soviet Union and its republics to (1) destroy nuclear, chemical, and other weapons; (2) to transport, store, and safeguard such weapons in connection with their destruction; and (3) to establish verifiable safeguards against the proliferation of such weapons. Such cooperation may include assistance in planning and resolving technical problems associated with such weapons destruction, may involve funding for critical short-term requirements, and

should as feasible utilize U.S. technology and personnel.

Senators Nunn and Lugar made several trips to Moscow, Kiev, and other locations in the former Soviet Union during 1992⁹ and early 1993 to obtain information for the Congress about the effectiveness of the dismantlement assistance program and related agreements and treaties. During the course of these visits the senators encouraged appropriate leaders in the republics to abide by and to ratify the START treaty.

In the fall of 1992, the Congress made available an additional \$400 million (FY93) for safety, security, and dismantlement (SSD) of former Soviet warheads, and in April 1993, Secretary of Defense Les Aspin announced that an additional \$400 million for this purpose was in the DoD budget request for FY94. This would bring the total available for the Nunn-Lugar program to \$1.2 billion.

SAFETY, SECURITY, AND DISMANTLEMENT AGREEMENTS

In late 1991, then Under Secretary of State Reginald Bartholomew began negotiations with the FSU on warhead issues. In February 1992, General William Burns (a former director of the Arms Control and Disarmament Agency, ACDA) was appointed the chief SSD negotiator.¹⁰

While the Department of State is the head agency for the negotiations, the DoD has been delegated by Congress to be the executive agent for negotiating and implementing specific agreements under the Nunn-Lugar Act.

In early 1993, newly elected President Bill Clinton and his Secretary of State Warren Christopher designated Strobe Talbott to be the Ambassador-at-Large to the new states of the former Soviet Union. Talbott oversees all negotiations with these states. In March 1993, James Goodby was named the SSD negotiator.¹¹ Dr. Harold Smith became the Assistant Secretary of Defense for Atomic Energy (ATSD/AE), and Dr. John Birely (Deputy ATSD/AE) was named to head the Cooperative Threat Reduction Office¹² to

implement execution of the Nunn-Lugar agreements. Most recently, Dr. Ashton B. Carter has become Assistant Secretary of Defense for Nuclear Security and Counterproliferation and will deal with SSD negotiating policy.

SSD Negotiations

In July 1992, General Burns along with his deputies, Dr. John Birely, DoD, and Dr. James Turner, Department of Energy (DOE), testified before the Senate Foreign Relations Committee as to the status of the SSD agreements.¹³ Burns noted that at the just concluded June 1992 (Bush/Yeltsin) Washington Summit, the SSD capstone agreement (an umbrella agreement establishing a legal basis for provision of assistance under the act) had been signed with Russia, along with implementing agreements for provision of armored blankets, fissile material containers, and accident response equipment and training. He identified areas where additional agreements were being negotiated, including rail car upgrades (for nuclear safety and security) and the design of a major storage facility for long-term safe and secure storage of fissile materials. Issues then still to be resolved included the control and accounting procedures to be imposed on nuclear materials in Russia and the other three former Soviet states on whose soil nuclear weapons are still located. He noted the exchange visits of U.S. and Russian experts concerning these and related topics that had taken place and were planned during the summer. He also reported that SSD discussions with Ukraine, Byelarus, and Kazakhstan had begun with more planned for August and September of 1992.

Burns reported that signed agreements, proposed agreements, and specific requests received had at that point exceeded the first \$400 million Nunn-Lugar allocation. He further noted that the UK, France, Germany, and Italy had each made commitments or were in the process of making commitments to assist Russia in its dismantlement efforts.

In November 1992, Dr. John Birely, Acting Assistant to the Secretary of Defense for Atomic Energy, reported that additional agreements had

been signed with Russia for chemical weapons destruction (\$25 million), nuclear transport rail car upgrade assistance, and for design assistance for the Russian nuclear material storage facility.¹⁴ An umbrella agreement had been signed with Byelarus as well as implementing agreements on emergency response equipment and on export controls. A positive opening of talks on SSD had begun with Kazakhstan.

In addition, the Nunn-Lugar initiative had been expanded to include assistance to former Soviet nuclear scientific personnel to reduce the threat of nuclear proliferation of nuclear weapons information.¹⁵ For this purpose, Birely reported that \$25 million had been allocated to implement an agreement signed with Russia to establish an International Science and Technology Center (ISTC) in Moscow.¹⁶ A similar endeavor, the Science and Technology Center in Ukraine (STCU) was being negotiated for which \$10 million in Nunn-Lugar funds had been allocated. Birely concluded with an expression of expectation of further agreements to reduce the risks of proliferation of weapons of mass destruction.

During the recent U.S./Russian summit meeting between Presidents Bill Clinton and Boris Yeltsin, held April 4, 1993, in Vancouver, Canada, it was announced that three additional SSD agreements had been initialed in Moscow.¹⁷ These were

- \$130 million to assist Russia in the elimination of SNDVs (strategic nuclear delivery vehicles)
- \$75 million for procurements for the nuclear materials storage facility
- \$10 million for assistance in civil nuclear material control, accountability, and security.

Russian Government Crisis

Following the political crises of September and October 1993, President Yeltsin appears to be in control of the Russian government and has scheduled new elections for parliament and some regional offices for December 1993. It is too early to tell how this crisis will finally play out, but it

can be expected to greatly affect (place in jeopardy or perhaps expedite) the implementation of the Nunn-Lugar agreements and the START treaties themselves.

PROBLEMS AND ISSUES

Even though the initial Nunn-Lugar authorization occurred less than four months after Presidents Bush and Gorbachev had signed START I, and less than two months after they agreed in 1991 to unilaterally withdraw their tactical nuclear weapons, as recently as March 30, 1993, Secretary of Defense Les Aspin told Congress that less than \$31 million had actually been spent even though more than \$400 million in projects had been identified during the first nine months of the program.¹⁸

The greatest impediment to signing and implementing Nunn-Lugar agreements has been the breakup of the USSR and the changing nature of the political landscape within the FSU.^{19,20} Though Ukraine and Kazakhstan initially pledged to become nonnuclear states, recent months have found the Ukrainian Parliament delaying its ratification of START I and showing second thoughts about adhering to the NPT. Kazakhstan has appeared to be following Ukraine's lead so far as the NPT is concerned. In Russia, Boris Yeltsin has been faced by members of parliament who have opposed his policies in both economic and disarmament areas. In addition, some new governments of the FSU, such as that of Ukraine, are not experienced in the complex issues involved in control of nuclear arms or the general mechanisms of making things happen in highly technical regimes. Thus, negotiating specific SSD agreements that meet the conditions of the original legislation has often been a difficult and painstaking process.

Most of the Nunn-Lugar agreements (see compilation below) so far signed with the Ukraine, and many signed with Russia, are still awaiting ratification by their respective parliaments. This has delayed implementation.

A second difficulty has been caused by the fact that the first \$400 million of Nunn-Lugar funds

was authorized late in the FY92 congressional budget cycle and utilized (in hopes of expediting the process) the transfer or reprogramming of existing funds within the DoD. This is reported to have led (not surprisingly) to some disagreements within the DoD as to which programs the actual allocations were to come from. Sorting this out in the face of declining budgets would be difficult. In addition, the application of competitive bidding procedures within the DoD system has also been reported to have slowed the process.

To improve the process the DoD announced in June 1993 that the Nunn-Lugar program would be expedited by several organizational shifts, including the creation of the new Cooperative Threat Reduction Office under the Assistant Secretary of Defense for Atomic Energy, ATSD/AE (Dr. Harold Smith).²¹ The office, headed by Dr. John Birely (Deputy ATSD/AE), is responsible for execution and acquisition strategy for all Nunn-Lugar funded projects. Also, the Defense Nuclear Agency (DNA) and the On-Site Inspection Agency (OISA) have been moved under ATSD/AE so that they may work more closely with dismantlement assistance implementation and also share their experience in dealing with industry for specific contracts. In addition, the DoD in its FY94 Budget Request to Congress included the Nunn-Lugar funds as a separate designated line item so that budget transfers (reprogramming) would not be necessary to acquire the funds.

Factors Involving the Individual Agreements

Byelarus. Byelarus ratified START I and acceded to the NPT in February 1993. The United States subsequently outlined an assistance package (in Minsk, April 28, 1993) that included the \$65 million in Nunn-Lugar funds outlined in the Byelarus proposals listed below.

Kazakhstan. Though it has ratified START I, Kazakhstan has not yet acceded to the NPT. Opening talks on Nunn-Lugar proposals did not begin until January 1993. An umbrella agree-

ment had not been signed as of May 1993, to authorize and provide a legal basis for the more detailed and specific funded agreements. Nearly \$15 million has been committed by the United States including the four projects listed below, and the United States has reportedly told Alma Ata that it is prepared to provide a larger sum to assist in dismantling the SS-18 missiles and silos after it accedes to the NPT.

Ukraine. As of June 1993, the United States and Ukraine had negotiated nearly \$30 million in specific Nunn-Lugar funded projects, but these agreements were awaiting formal approval by the Ukrainian government. Also, the two parties had not yet signed an umbrella authorizing agreement. The United States has pledged an additional \$145 million to go towards dismantling SS-19 and SS-24 missiles and silos on Ukrainian territory, but these funds have been contingent on Ukrainian ratification of START I and accession to the NPT. Here Nunn-Lugar assistance has clearly been used as an incentive to get Ukraine to live up to its pledges concerning START I and the Lisbon Protocol. Very recently, however, the United States has dropped its demand that Ukraine ratify START I and the NPT prior to receiving any Nunn-Lugar funds.²² Technical experts from the United States and Ukraine have been meeting to develop the details of the assistance once the basic agreements have been achieved.

Russia. At issue with Russian nuclear specialists (and hard liners) has been their concern that our assistance with their warhead dismantlement will lead to the compromise of Russian nuclear weapons design data and other information they consider sensitive. A U.S. concern is that money agreed and allocated for a specific purpose (i.e., removal and storage of nuclear components from specified warheads) was indeed used for that purpose. For this reason, the language implementing the general agreements reached by Presidents Clinton and Yeltsin at the Vancouver Summit to aid the construction of the nuclear materials storage facility (\$75 million) and to aid in the elimination (\$130 million) of SNDVs as required by START, and other similar agreements, may be closely scrutinized by the Russian government.

SPECIFIC SSD AGREEMENTS AND PROJECTS

The present compilation^{23,24} of specific SSD agreements is listed and summarized here. Table I shows a summary of Nunn-Lugar program funds as presently allocated.

Agreements with Russia Being Implemented

1. *Overall Authorizing Agreement between U.S. and Russia on SSD.* This agreement (umbrella agreement) provides the legal basis for the more detailed implementing agreements by which the United States may assist the Russian Federation in achieving the destruction of nuclear, chemical, and other weapons and provide for the safe and secure transportation and storage of these weapons. Necessary administrative procedures for implementing contracts are provided. Provision is made for U.S. inspection of use of materials and related documents at relevant sites during the agreement and for three years thereafter.

2. *Armored Blankets.* The U.S. DoD will provide MINATOM (Russian Ministry of Atomic Energy) armored blankets and training to augment the protective capability of nuclear weapons containers and vehicles carrying nuclear weapons to elimination or storage facilities. Costs to the United States are not to exceed \$5 million. Deliverables include nylon blankets (200 sets) and soft armored blankets (250 sets). These have been delivered to Moscow within one year of entry-into-force (EIF). Additional specifications are provided. An additional 2,500 armored blankets are being procured.

3. *Emergency Response Equipment and Training.* The U.S. DoD will provide MINATOM the emergency nuclear weapon accident response equipment. U.S. costs are not to exceed \$15 million. Technical liaison representatives are designated, and material and training delivery will begin within eight months of EIF. The DoD may examine (not more than three times per year) any materials or training services at sites of their

use. Manuals and operator training and program review phases are provided. The agreement will remain in force for no more than two years unless extended. Ten sets of "jaws of life" remote handling equipment, 820 protective suits, and 200 polyurethane foam kits have been delivered so far. Communications, survey, radiographic, video, and computer systems are among the types of equipment to be included in the assistance.

4. *Fissile Material Storage Containers.* The DoD will provide to MINATOM up to 10,000 fissile material containers, with training, at a cost not to exceed \$50 million. The specifications are provided prior to delivery by DoD and confirmed by MINATOM at delivery of the containers. The DoD may examine any material delivered up to three times per year at the locations of their use. The agreement will remain in force for four years after EIF.

5. *Design of Nuclear Material Storage Facility.* This agreement allocates \$15 million for the United States to provide technical assistance in the design of a fissile material storage facility. This work is nearly complete.

6. *Railcar Transport.* This agreement provides \$20 million for the United States to supply safety and security upgrade kits to be installed in Russian nuclear weapons rail cars. Such a rail car has been in Albuquerque for an upgrade demonstration. By 1994, 100 cargo-car upgrade kits are to be sent to Russia, along with 15 guard-car kits. These kits are to be installed by Russians.

Agreements with Russia Ready for Implementation

(The next three agreements were initiated by the Presidents at the Vancouver Summit and by September 1993 were ready for implementation.²⁵)

1. *Nuclear Material Storage Facility Construction and Operation (\$75 million).* This agreement is to assist Russia in the safe and secure storage of fissile material derived from nuclear weapons. The United States will provide

material, training, and services needed for the construction of the facility.

2. *National System for Fissile Material Control and Accountability (\$10 million).* Twenty four Russian experts visited the United States in April 1993 to exchange information. Technical expertise, materials, and services will be provided by the United States through this agreement.

3. *SNDV Elimination, START Treaties (\$130 million).* Provides assistance to Russia to facilitate the expeditious dismantlement of their SNDVs covered by the START treaties. The assistance will include a wide variety of equipment, including fuel incinerators, tanker rail cars, and emergency response equipment. The aid will include spare parts, maintenance support, and training for the equipment furnished. It will include special equipment to destroy missile airframes and other treaty-related items.

Other Projects with Russia

1. *Chemical Weapons Destruction (\$25 million agreed; \$30 million planned).* This assistance is provided under an agreement signed July 30, 1992, between the U.S. DoD and the Russian Federation Committee on Problems of CBW. The assistance will include materials, training, and services. The U.S. Army Chemical Material Destruction Agency (USACMDA) will provide technical assistance. A Moscow field office is planned, and the U.S. On-Site Inspection Agency (OSIA) will assist with Russian visits to the United States.

2. *Export Control Assistance (\$2.26 million).* Discussions are underway to establish an implementing agreement between the DoD and the Russian Federation to enable provision of assistance by the United States for improving the Russian export control system for preventing nuclear weapons proliferation. The assistance will include equipment, technology, and expertise.

Agreements with Byelarus Being Implemented

1. *Emergency Response Equipment (\$5 million)*. The assistance will facilitate the expansion of their emergency response capabilities involved in the removal of nuclear weapons and delivery systems from Byelarus.

2. *Communications Link (\$2.3 million)*. This assistance is to help create a communications link [similar to the Nuclear Risk Reduction Centers (NRRCs) used by the United States and Russia for the START, INF, and other treaties] to transmit and receive the many types of notifications required by these treaties. Technical assistance and equipment will be provided. A temporary system is expected to operate in 1993.

3. *Export Control Assistance (\$2.26 million)*. This will provide assistance in establishing the Byelarus export control system to help prevent nuclear weapons proliferation. The assistance will include equipment, technology, and expertise. A program plan has been completed by the United States and Byelarus.

Proposals by Byelarus Include Additional Assistance (\$65 million) for

1. Export Control
2. Site Restoration, Decontamination
3. Defense Conversion
4. Housing and Training
5. Emergency Response Equipment.

Agreements Now Being Negotiated with Kazakhstan

Formal talks did not begin until January 1993. An umbrella agreement is needed to provide the legal basis for the more detailed implementing agreements. Discussions were held this spring on the following:

1. *Provision of Emergency Response Equipment (\$5 million)*. This would provide assistance

with nuclear weapons accident response (similar to the Byelarus agreement).

2. *Provision of Government-to-Government Communication Link Equipment (\$2.3 million)*. This agreement would provide assistance in communication links (NRRC-type) to transmit notifications required for the START and INF treaties. Materials, training, and services will be provided.

3. *Provision of Assistance in Nuclear Material Control, Accounting, and Physical Protection (\$5 million)*. This agreement will provide assistance that will include equipment, supplies, systems, training, and services.

4. *Export Control Assistance (\$2.26 million)*. To assist Kazakhstan in their national export control system to control the export of materials and technologies that might add to the proliferation of weapons of mass destruction.

The U.S. has just begun discussions with Kazakhstan as to how we may help them dismantle SS-18 silos.²⁶

Agreements Now Being Negotiated with Ukraine

1. *Provision of Emergency Response Equipment (\$5 million)*. This is to assist Ukraine in their emergency response capability to respond to accident during removal of nuclear warheads from Ukraine and elimination of ICBMs. The assistance will include equipment, training, and manuals.

2. *Provision of Government-to-Government Communications Link Equipment (\$2.4 million)*. This assistance is to provide an NRRC for START and INF treaty notifications, as with Byelarus and Kazakhstan.

3. *Provision of Assistance in Nuclear Material Control, Accounting, and Physical Protection (\$7.5 million)*. Discussions are underway on the creation of a national system for the prevention of nuclear proliferations through control, accounting, and protection of civil nuclear material. The DoD would assist by providing equipment and services.

4. *Provision of Assistance in Export Control* (\$2.26 million). This assistance will be similar to that provided for Russia, Byelarus, and Kazakhstan.

A core agreement to provide \$135 million to aid dismantlement of SNDVs on Ukrainian territory has been reached²⁷ and is being reviewed in Kiev.

Overall, the United States has offered \$175 million in Nunn-Lugar funds for Ukraine. An authorizing umbrella agreement has been needed for Ukraine and discussions are underway to achieve this. More negotiations will be needed for the additional specific implementing agreements.

SCIENCE CENTERS

International Science and Technology Center (ISTC), Moscow (pending approval by Russia)

The ISTC is being established through an international agreement among Russia, the United States, the E.C., and Japan. It will serve as a clearinghouse for proposals to engage weapons scientists and engineers in the former Soviet Union in peaceful civilian work. The ISTC staff will have a technical staff of 20-25 experts to approve and monitor projects. The ISTC will include a governing board and a scientific advisory committee. Proposals may be submitted by individuals and institutions. The project proposal process has begun through U.S. State Department. Total funding (in millions) pledged to date includes:

U.S.	\$25
E.C.	25
Japan	17
Sweden	4
Canada	2.5
Switzerland	2

Russia will provide a rent-free facility in Moscow with utilities, maintenance, and security.

Science & Technology Center in Ukraine (STCU), Kiev (pending approval by Ukraine)

The STCU is being established through an agreement among Ukraine, the United States, Canada, and Sweden to serve as a clearinghouse for projects for weapons scientists and engineers in Ukraine to help redirect their talents to peaceful civilian work. The STCU will have an international staff of 20-25 experts who will facilitate development, approval, and monitoring the projects. The governing board will include a representative from each of the four founding countries plus other states which accede to the agreement. The board will review, approve, and fund projects. Project proposals may be submitted by individuals and institutions.

Funding (in millions) pledged to date includes	
U.S.	\$10
Canada	2
Sweden	1

Ukraine will provide a rent-free facility, maintenance, utilities, and security.

Other governments and institutions may provide funds for either the ISTC or the STCU, if needed.

ADDITIONAL PROPOSALS FOR NUNN-LUGAR FUNDING

Arctic Nuclear Waste (\$10 million). The SSD authorizing legislation provided funds (\$10 million) to be used for assessment of FSU nuclear waste disposal. Oak Ridge has been designated to implement this study which will investigate contamination in the Barents/Kara Seas and will assess threats to Arctic ecosystems.

Defense and Military Contacts, FSU (\$15 million). Active U.S. military contacts in the FSU will be expanded to assist military downsizing and restructuring. Draft agreements are being prepared.

Assessment Administrative Costs (\$10 million). SSD funds are used for the purpose of assessing

the feasibility of proposals and supporting the development of specific programs established under the SSD legislation. Funds are obligated for the developmental and support costs of the overall effort and in the initial stages of each project until the project is identified and reported to Congress. These funds support new initiatives, delegation visits, and technical exchanges.

Future negotiations will include added assistance for strategic weapons dismantlement, assistance for CW disposal, and conversion of defense industry to civilian use.²⁸

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Table 1. Nunn-Lugar Projects by Republic.*

	PROJECT	NOTIFIED TO** CONGRESS	AGREEMENTS**		
			SIGNED	TABLED	TOTAL
BYELARUS					
	Emergency Response	\$5.00	\$5.00	\$0.00	\$5.00
	Export Controls	\$2.26	\$2.26	\$0.00	\$2.26
	Continuous Communications Link	\$2.30	\$2.30	\$0.00	\$2.30
	Defense/Military Contacts	\$1.50	\$0.00	\$0.00	\$0.00
		<u>\$11.06</u>	<u>\$9.56</u>	<u>\$0.00</u>	<u>\$9.56</u>
KAZAKHSTAN					
	Material Control & Acc't	\$5.00	\$0.00	\$5.00	\$5.00
	Gov't to Gov't Communications Link	\$2.30	\$0.00	\$2.30	\$2.30
	Export Controls	\$2.26	\$0.00	\$2.26	\$2.26
	Emergency Response	\$5.00	\$0.00	\$5.00	\$5.00
	Defense/Military Contacts	\$0.40	\$0.00	\$0.00	\$0.00
		<u>\$14.96</u>	<u>\$0.00</u>	<u>\$14.56</u>	<u>\$14.56</u>
RUSSIA					
	Emergency Response	\$15.00	\$15.00	\$0.00	\$15.00
	Armored Blankets	\$5.00	\$5.00	\$0.00	\$5.00
	Fissile Material Containers	\$50.00	\$50.00	\$0.00	\$50.00
	Fissile Material Transport Railcars	\$20.00	\$20.00	\$0.00	\$20.00
	Int'l Science & Technology Center	\$25.00	\$25.00	\$0.00	\$25.00
	Material Control & Accounting	\$10.00	\$0.00	\$10.00	\$10.00
	Chemical Weapons Destruction	\$25.00	\$25.00	\$0.00	\$25.00
	Storage Facility Design	\$15.00	\$15.00	\$0.00	\$15.00
	Export Controls	\$2.26	\$0.00	\$2.26	\$2.26
	Storage Facility Equipment	\$75.00	\$0.00	\$75.00	\$75.00
	Strategic Offensive Arms Elimination	\$130.00	\$0.00	\$130.00	\$130.00
	Arctic Nuclear Waste Assessment	\$10.00	\$0.00	\$0.00	\$0.00
	Defense/Military Contacts	\$9.20	\$0.00	\$0.00	\$0.00
	Chemical Destruction Analytical Lab***	\$30.00	\$0.00	\$0.00	\$0.00
		<u>\$421.46</u>	<u>\$155.00</u>	<u>\$217.26</u>	<u>\$372.26</u>
UKRAINE					
	Science & Technology Center Ukraine	\$10.00	\$0.00	\$10.00	\$10.00
	Material Control & Accounting	\$7.50	\$0.00	\$7.50	\$7.50
	Emergency Response	\$5.00	\$0.00	\$5.00	\$5.00
	Gov't to Gov't Communications Link	\$2.40	\$0.00	\$2.40	\$2.40
	Export Controls	\$2.26	\$0.00	\$2.26	\$2.26
	Defense/Military Contacts	\$3.90	\$0.00	\$0.00	\$0.00
		<u>\$31.06</u>	<u>\$0.00</u>	<u>\$27.16</u>	<u>\$27.16</u>
	Working Account	\$10.00			\$0.00
	TOTAL	\$488.54	\$164.56	\$258.98	\$423.54

*Table taken from Reference 11.

**As of September 1993, roughly \$700 million of the \$800 million (FY92, FY93) funds have been committed by the United States (testimony of Dr. Ashton B. Carter, September 21, 1993). All figures shown are in millions of U.S. dollars.

***Identification of funding source pending.

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