

The Cooperative Threat Reduction Assistance to Russia

Cooperative Threat Reduction Program, Department of Defense January 16, 1997

Through the Cooperative Threat Reduction (CTR) Program, the United States and Russia have signed thirteen implementing agreements and one memorandum of understanding. Notifications to Congress regarding projects in Russia total \$753.8 million of which DoD has obligated \$581.8 million. The following provides a summary of each of the CTR projects being implemented in the Russian Federation.

Protective Armored Blankets

The project, initiated by a June 1992 agreement, was completed in June 1994, delivering 4,020 protective blankets at a cost of \$3.2 million. A successful Audit and Examination (A&E) was conducted during the week of 27 November 1995.

Railcar Enhancements

This up to \$21.5 million project assists Russia in safe and secure transportation of nuclear weapons in connection with dismantlement activities. By October 1994, the United States had delivered a prototype modified cargo railcar, all 1 00 cargo railcar modification kits, and all 1 5 guard railcar modification kits to Russia for installation on nuclear transport railcars. Two successful Audits and Exams (A&E) were conducted in May 1995 and August 1996. In April 1996, the Tver railcar facility completed the installation of all 1 1 5 railcar conversion kits. Per the Russian Ministry of Defense's request, Sandia National Labs (SNL) procured and sent to MOD replacement parts, printer paper, printer ribbons, and longer cables for use between railcars. SNL and Hughes Technical Support Company (HTSC) are providing logistics support.

Emergency Response Equipment and Training (7070)

Through this up to \$15 million project, the United States has provided equipment, training, and technical manuals to enhance MINATOM's capability to respond to accidents involving nuclear weapons during activities related to dismantlement.

Over \$12 million worth of equipment (1,400 items) has been purchased and delivered to Russia. Training on the delivered equipment has been conducted and refresher training may be conducted until the implementing agreement expires 17 June 1997. An Audit and Examination (A&E) was conducted 29 March - IO April 1996. Completion of upgrades to the portable command and control computer network are projected for 3rd Quarter FY 1997. Upon completion of the upgrade and repairs to the linear accelerator, this project will have met all currently identified requirements.

Fissile Material Storage Containers

Through an implementing agreement that extends to June 1999, the United States is providing the Russian Ministry of Atomic Energy (MINATOM) with containers for transport and storage of fissile materials from dismantled weapons, at a total cost not to exceed \$50 million. Sandia National Laboratories (SNL) was contracted by the Defense Special Weapons Agency (DSWA) in 1992. SNL responsibilities included: design of the container; fabricate and test container prototypes; modify the design as necessary;

and, develop processes, drawings, and specifications for container production. Further responsibilities included: qualify the container design through compliance testing and provide project support necessary during the production of the container.

A manufacturing contract was awarded to Engineered Products Department (EPD), Westinghouse Corporation (formerly Scientific Ecology Group, Inc., of Carlsbad, New Mexico) On 15 August 1995, DSWA granted EPD release to begin full-scale production of the containers. The full-compliance test sequence was completed in November 1995 and full-scale production of the containers commenced in October 1995. The Department of Energy (DOE) / Nuclear Explosive Safety Division's affirmation of the container design was issued on 11 January 1996. In February 1996, after reviewing the container design, test results and DOE's affirmation, MINATOM and VNIIEFF officials agreed that the design met all specified requirements and was ready for production.

Shipments to Russia to date total 12,588 FMCs and four spare parts kits. Production and shipments are being performed at a rate of 840 containers per month which is the rate required by the contract.

There is a possibility that the Japanese government- will provide funding to produce and deliver Fissile Material Containers to Russia under this program. Amount of Japanese funding and schedule for availability has yet to be determined.

Fissile Material Storage Facility

The United States Government (USG) has allocated up to \$99 million to assist the Russian Federation in the design, construction and equipping of a safe, secure, and ecologically sound storage facility. This storage facility is for fissile material derived from nuclear weapons in connection with their expeditious destruction and to assist in the prevention of weapons and fissile material proliferation.

The U. S. allocated approximately \$15 million of the \$99 million for technical design assistance, materials, services, and training for the Russian-led design effort. The original facility, planned for Tomsk, called for horizontal storage of fissile material containers. In November 1994, the Russian Federation notified the U.S. Government that the facility location had changed to Mayak and the concept now involved a vertical storage design. Technical experts from the U. S. and the Russian Federation continue to conduct periodic exchanges on the design. Target dates for the exchange of design materials are identified during these technical exchanges. The Department of Energy (DOE) provided MINATOM an additional \$1 million of DOE funds for design assistance, and DoD subsequently allocated an additional \$2.5 million of the \$75 million for a 35-percent level of design completion. The U.S. Army Corps of Engineers (USACE) successfully completed a contract with a U.S. architect and engineering firm which is using the Russian Design Authority, VNIPIET, as a subcontractor. VNIPIET has provided the documents for the 35 -percent level of design. A technical meeting with VNIPIET took place 2228 July 1996 in St. Petersburg, Russia to address the design status. Foundation construction by the Russians for the Phase I portion of the storage facility was completed in October 1996. Wall construction is in progress.

The remaining up to \$75 million portion of this effort is to provide material, training, and services in the form of construction, material, service, and equipment support for the storage facility. Technical experts from the United States and Russia conducted periodic exchanges to determine the specifications and types/models of construction equipment (i.e., bulldozers, excavators, cranes), specialized facility equipment (i.e., ma-

terial control and accounting items, blast doors), and generalized facility equipment (i.e., heating, ventilation, air conditioning, power generation equipment) required. Training programs have been, and others will be, established for the use of the provided equipment. An initial radiological survey was conducted in May 1995; the site was determined to be radiologically safe. Construction equipment is currently at Mayak and commissioning and training on this equipment is complete. USACE is in the process of procuring material handling equipment, special doors, and ventilation equipment for the storage facility.

In October 1995, the U.S. awarded a contract to a U.S. firm to procure approximately \$2 million in construction materials locally, including cement, rebar, and insulating material for the facility foundation. All construction materials were verified as delivered in June 1996 and the contract is being closed out. Also, the U.S. awarded a contract on 6 March 1996 to Bechtel, a U.S. firm, which will perform all U.S.-supported implementation activities relating to design, construction, and equipment support. USACE and Bechtel established an office at the Mayak construction site. The sixth meeting of the Joint Senior Implementing Group (JSIG) convened in Moscow, 13-14 June 1996, and discussed issues such as equipment technical safety and passports and certificates, taxes, and the joint on-site management office located near the Mayak storage facility. An implementing agreement outlining procedures for the on-site management office was signed at JSIG-6. In August 1996, \$20 million from the \$75 million FY 1994 funds were reprogrammed to the Defense Enterprise Fund (DEF). Also in August 1996 \$29 million of FY 1996 funding became available. JSIG-7 meeting took place 23-27 September 1996 in San Francisco. Issues discussed include taxes, project design, construction progress, budgets, schedule, implementing arrangement, site office, second facility, Japanese participation, equipment, fissile material containers, and the Gore/Chernomyrdin quarterly report. JSIG-8 take place 22-24 January 1997 in Moscow, Russia. Topics of discussion include construction, funding, site access, MC&A/transparency, IAEA, and taxes.

Material Control, Protection, and Accounting (MPC&A)

The objective of U.S. assistance under this project is to enhance MPC&A at facilities which use or store special nuclear material and strengthen Russia's national system of MPC&A. MC&A systems provide the capability to deter possible theft, diversion, or unauthorized use of nuclear material. Physical protection (PP) systems provide the capability to detect, delay and respond to possible theft, diversion, or unauthorized use of nuclear material. Building upon the existing Russian national MPC&A system, the U.S. assists Russia in upgrading MPC&A at facilities which use or store nuclear materials and provides training for Russian instructors, facility operators, and regulators. This support includes: installation and training on procedures and MPC&A equipment, development, and implementation.

The MPC&A Program for Russia began in 1993 as part of the CTR Program. At its inception, this program involved limited demonstrations, training, and minor upgrades at three facilities. Since that time, the scope of cooperation has expanded to include upgrades at numerous nuclear facilities across Russia. In Spring 1994, DOE initiated the Laboratory-to-Laboratory Program, a separate but complementary program of cooperation to use direct contacts between U.S. and Russian technical experts to improve Russian MPC&A. In May 1995, DoD transferred \$15 million from the MPC&A Program to DOE for its Laboratory-to-Laboratory Program. In September 1995, DOE was formally assigned executive agency for cooperative MPC&A efforts.

The MPC&A Program focuses on facilities which the Russian Federation Ministry of Atomic Energy (MINATOM) and DOE agree are in the most pressing need of upgrades. A number of successes can be attributed to the agreed-upon framework between DOE and MINATOM. The successful upgrades, training, and demonstrations at Elektrostal, Obninsk, and Mayak have led to full MPC&A upgrades at many facilities across Russia. The facilities currently included in the MPC&A Program are: Dmitrovgrad, IPPE, Luch, Elektrosal, Mayak, Novosibirsk, Beloyarsk NPP, Khlopin, Kurchatov, Automatics, Eleron, Bochvar, Arzamas-16, Tomsk-7, and Chelyabinsk-70. Also included in the MPC&A Program are: Beloyarsk, NIKIET, Moscow Institute of Theoretical Physics, St. Petersburg Central Design Bureau of Machine Building, Moscow NIKIET, Gatchina, Karpov, MEPHI, Dubna (JINR), Norilsk, Nickel, Tomsk (TPU), and Krasnoyarsk-45.

Industrial Partnerships

The U.S. - Russian Committee on the Conversion of Defense Industries, in the framework of the Joint U.S. - Russian Commission on Economic and Technology Cooperation, met on 16 December 1993 and signed the implementing agreements that defined the two defense conversion projects that have been initiated. The groupings of defense conversion projects are as follows:

a) Fast Four:

- 1. On 21 June 1994, a contract was awarded to the Double Cola Company, partnering with NPO Mashinostroyeniya, for \$5.13 million to establish a cola bottling factory. Double Cola was to contribute \$1 million in private capital. Double Cola and NPO Mashinostroyeniya signed a Memorandum of Understanding (MOU) on 26 May 1995 and a coordinated business plan on 19 October 1995. Unfortunately, the partners were unable to reach an agreement on renovation of the facilities. Double Cola elected to withdraw and the contract has been terminated.
- 2. Also on 21 June 1994, a contract was awarded to International American Products (IAP), partnering with Leninets, for \$1.95 million to produce dental chairs and supplies. IAP contributed \$1.9 million in private capital. IAP and Leninets formed a joint stock company called LESPA on 24 February 1995 to market and distribute dental chairs and related equipment, as well as manufacture bottles and solutions for infection control. LESPA has been selling dental chairs successfully; however, IAP was delayed in shipping the blow molding equipment for the bottling and infection control manufacturing portion. The blow molding equipment arrived in November 1996 and the joint venture (JV) is currently working on increasing its network of distributors. This contract is complete.
- 3. On 29 July 1994, a \$5.7 million contract was awarded to Hearing Aids International (HAI), partnering with ISTOK, for the design and manufacture of hearing aids. HAI is contributing \$1.8 million in private capital, bringing the total project value to \$7.5 million. Hearing Aids International and ISTOK formed a joint stock company called IAI in January 1995. IAI is currently in full production of the "Sonata" hearing aid, with two more sophisticated models entering production soon. Defense Special Weapons Agency (DSWA)-funded contract expired late January 1996 and the contract has been closed out. HAI has received U.S. Food and Drug Administration (FDA) certification for the "Sonata"

hearing aid and the product is being aggressively marketed in the U.S. and other world markets.

- 4. Also on 29 July 1994, Rockwell International, partnering with GosNIIAS, was awarded a \$4.10 million contract to provide air traffic management technology to GosNIIAS which allow them to compete in the Russian market. Rockwell is contributing \$650 thousand in private capital, bringing the total project value to \$4.75 million. Rockwell International and GosNIIAS have completed successful prototypes of a Global Positioning System (GPS) unit. They also developed collision avoidance systems for Far-East Air Traffic Management upgrades, though they did not win this contract. The partnership continues to bid for various Russian air traffic and avionics contracts, and Rockwell is planning on working with GosNIIAS for other efforts.

b) Defense Conversion/Housing Industry:

On 7 June 1995, a \$20 million contract was awarded to American Housing Technologies, Inc. (AHT) to develop a prefabricated housing industry and construct housing for demobilized Russian officers. AHT also contributed \$5 million in private capital, for a total of \$25 million.

AHT will work with Russian aerospace firms (NPO Mashinostroyeniya, Soyuz, and NPO Kompozit) to accomplish the following objectives: (1) form joint ventures between AHT, Mashinostroyeniya, Soyuz, and Kompozit; (2) convert portions of Mashinostroyeniya, Soyuz, and Kompozit to the production of prefabricated housing systems and related products; (3) establish a regional distribution system for building products; and (4) construct up to 475 prefabricated housing units for demobilized Russian officers within 24 months from contract award date. AHT has worked to form the required joint venture but continual interference by MOD has prevented this contract from moving forward. AHT has several times reached agreement for production lines but MOD has vetoed the proposed ventures. The Russians have requested that the program be restructured to emphasize conversion over production of houses. Negotiations of 9/10 January 1997 resulted in an agreement to restructure the contract to increase the amount of conversion. Privatization actions by MOD are pending and the contract is anticipated to restart in February 1997.

Strategic Offensive Arms Elimination (SOAE)

This is a \$231 million project to provide Russia with equipment, services, training, and logistic support to enable and expedite the elimination of strategic offensive arms pursuant to the Strategic Arms Reduction Talks (START) I Treaty and the START II treaty ratified by the U.S. but not yet ratified by Russia. Assistance provided to date is helping eliminate ICBMs, their silo launchers, submarine launched ballistic missiles and their launchers, heavy bombers, and missile propellant. The SOAE program also provided emergency response support equipment to deal with an accident involving missiles, missile fuel, or nuclear warhead material during transport or elimination. Audits and Examinations (A&E) are conducted to verify the assistance is used where and how the two governments planned. Successful A&Es have been completed at Bolshoi Kamen 12 December 1995, at the six liquid rocket propellant depots using intermodal tanks in June 1996, at the Engels bomber dismantlement base in July 1996, and at three ICBM bases in August 1996.

Since the 26 August 1993 signing of the SOAE implementing agreement between the Ministry of the Defense Industries (MDI) and DoD, DoD awarded procurement actions ranging from miscellaneous drilling/cutting equipment, a \$26 million contract for a general contractor to design, fabricate, test, and install equipment to dispose of all of Russia's liquid rocket fuel coming out of missiles to be dismantled. DoD began the first shipments of SOAE equipment to Russia in July 1994. Shipments have continued steadily ever since. DoD delivered approximately 95% (by value) of equipment contracted for as of the end of September 1996. Current plans call for continued SOAE support in areas already receiving assistance and new SOAE assistance in areas Russia is just now recognizing as problems. MDI requested and jointly with DoD, validated additional equipment for liquid rocket ICBM propellant transport and temporary storage. DoD recently completed delivery of additional flatbed railcars and additional intermodal tank containers in November 1996. This assistance is critical to the defueling of the SS-18 ICBMs and SLBM missile systems.

MDI and DoD are currently defining additional requirements for SLBM launcher dismantlement, specifically for the new area of volume reducing low-level radioactive waste, streamlining of SLBM launcher dismantlement, and use of a general contractor to operate the dismantlement activities. DoD is currently coordinating the requirements for this assistance. Procurement to satisfy new SLBM requirements to support the streamlining effort are ongoing, including conveyers for the automatic guillotine balers, rubber pads for the excavators, forklifts, and cable chopper. SOAE Russian assistance has also moved into the new area of actual missile dismantlement. A Request for Proposal for assistance to eliminate solid rocket motors from SS-24s, SS-25s, and SS-N-20s was issued in July 1996. Contract award of assistance for solid rocket motor elimination is projected for early FY 1997. DoD is procuring initial equipment urgently needed for Russia's existing heavy lift liquid propellant SS-18 neutralization and dismantlement facility, including industrial tools, cutting equipment, vehicles, and administrative equipment. DoD is beginning to define a much broader program to increase the throughput of the existing facility by 150 percent.

Chemical Weapons Destruction Support

The CTR Program is currently providing up to \$68 million in chemical weapons destruction support in accordance with an implementing agreement signed 30 July 1992 and amended in March 1994 and May 1996. This effort includes the execution of annual joint U.S./Russian Plans of Work and individual Project Plans to assist the Russian Federation in the safe, secure and ecologically sound destruction of chemical weapons (CW). A U.S. contractor, Bechtel National Incorporated (BNI), was selected on 18 May 1994 to assist the Russian Federation in preparing a Comprehensive Implementation Plan (CIP) for chemical weapons destruction. The CIP transitioned into a site specific planning document for a Russian pilot Chemical Weapons Destruction Facility (CWDF) to be built at Shchuch'ye, Kurgan Oblast and has been completed. Continued planning support, by the BNI team includes preparation of baseline data, engineering survey data, site feasibility studies, environmental impact assessment, and an emergency preparedness plan.

BNI also assisted in the Joint Evaluation (JE) of the Russian two-step chemical agent destruction process (neutralization followed by bituminization). Phase I of the JE, using nerve agents, was conducted at CBDCOM, Edgewood Area, Aberdeen Proving Ground, Maryland. Phase II, using Russian munitions grade nerve agents, was conducted at the Military Engineering School of Chemical Defense, Saratov, Russia. A final report was

jointly produced in March 1996 and evaluated by a Peer Review Committee in May 1996. Results indicate satisfactory agent destruction levels were achieved. Follow-on laboratory scale process optimization tests will refine and define the operating conditions to be used to design a bench scale reactor system for further testing and development of the destruction process equipment.

The DoD and the Russian Federation Ministry of Defense finalized an implementing arrangement on 17 July 1996. This agreement established the general principles, goals, and responsibilities to execute a joint project leading to the creation of a pilot chemical weapons destruction facility (CWDF) at Shchuch'ye, Kurgan Region. Planning is progressing for a Joint Equipment/Process Scale-Up and Facility Design Project that includes testing of the destruction process, munitions processing machine development, other technical studies, and the design work for the pilot CWDF. Procurement actions are also underway to obtain the services of a U.S. contractor to provide Engineering Management Support to Russia for the requirements of this joint project with contract award scheduled for first quarter FY 1997.

The U.S. also agreed to provide assistance and is currently engaged in preparatory efforts which will lead to the rehabilitation of a central CW destruction analytical laboratory (CAL) in Russia. The laboratory will provide a capability for developing analytical methods and quality control measures for the destruction program, for conducting environmental baseline studies at the destruction sites, and for training scientists and CW destruction technicians. The site for the CAL, as designated by the President's Committee on Conventional Problems of Chemical and Biological Weapons of the Russian Federation, is the Moscow State Scientific Research Institute of Organic Chemistry and Technology (GosNIIOKhT). Award of a contract for the design and construction of this laboratory is scheduled for first quarter FY 1997. Additionally three DoD procured Mobile Laboratories will be delivered to Russia in August 1997.

International Science and Technology Center (ISTC)

The International Science and Technology Center (ISTC) in Moscow is a multinational endeavor to which the United States has made commitments to provide up to \$49 million in CTR funds (the European Community has promised to provide up to \$25 million and Japan will provide up to \$17 million). After opening provisionally in March 1994, ISTC's Board of Governors has met quarterly, most recently in December 1996. Close to 200 projects have been approved in Russia for up to \$40.5 million in U.S. funding.

The Defense Enterprise Fund (DEF)

The U.S. National Science Foundation was provided \$10 million in FY 1994 CTR funds for the establishment and administration of a Russian R&D Foundation. The disbursement of funds is contingent upon the certification of matching funds, with the initial \$5 million matching funds provided by the Soros Foundation. The charter was created and agreed upon in June 1995 and official incorporation came in August 1995. The Board of Directors held its first meeting in September of that year.

The overall objectives of the R&D Foundation effort include: to provide productive research and development opportunities that offer scientists and engineers alternatives to emigration and help prevent proliferation of weapons technologies and the dissolution of the technological infrastructure. Other objectives include: to advance defense conversion by funding civilian collaborative research and development projects between scientists and engineers in the U.S. and in the FSU; and, to assist in the establishment of

a market economy in the former Soviet Union (FSU). R & D Foundation also strives to provide a mechanism for scientists, engineers, and entrepreneurs in the FSU to develop an understanding of commercial business practices by establishing linkages to U.S. scientists, engineers, and businessmen; and, to provide access for U.S. businesses to sophisticated new technologies, talented researchers, and potential new markets within the FSU.

Nuclear Weapons Storage Security (7070 for AICMS and PRP) (ASSESS 12 Mar 97)

This agreement, with two amendments, provides for up to \$28 million to assist the Russian MOD with enhancing the storage security of nuclear weapons awaiting distraction.

Computer hardware for Phase I of an automated inventory control and management system (AICMS) has been procured. DoD delivered the first 25 computers to Russia on 15 January 1996. Training of MoD experts on the hardware and software began in December 1995 and is ongoing. Phase IIA hardware and software has been procured to assist MoD in creating a prototype architecture for inventory management and was delivered in October 1996. Following the delivery of the Phase IIA equipment, a demonstration was presented to DoD and MOD officials and was followed by technical discussions between DoD and MOD representatives. Phase IIA, development and testing of a prototype architecture has begun. Technical discussions during the March 1997 NWSG meeting will help in further determining Phase IIB requirements.

Nuclear Weapons Security Group (NWSG) meetings conducted in December 1995, March 1996, June 1996, and October 1996 have developed consensus and agreement with the MOD on how to proceed with the Site Security Enhancements project. A joint DoD/MOD Technical Team was formed to manage the detailed planning and implementation of the project. The Technical Team met for the first time in Moscow 9-12 July. The meeting produced a project strategy that includes the following steps: 1) Conduct a feasibility study for a joint Technical Training Base to be located at Sergiev Posad in Russia. The Technical Training Base will provide the means for security equipment comparisons, tests, and integration and the training of MOD personnel. 2) Hire a joint U.S.-Russian contractor team to design, activate and operate the Technical Training Base, develop specific security enhancements, and recommend priorities for security improvements at sites throughout Russia in the mid- to long-term. 3) Concurrent with activities to procure the U.S.-Russian contractor team, initiate a separate action (called Quick Fix) to meet urgent, near-term security requirements for specific equipment. The Technical Training Base feasibility study will be completed by the end of January 1997. Award of the U.S.-Russian contract should occur by 1st quarter FY 1998. In the interim, related smaller projects, ASSESS and PRP support, are ongoing. Training of MOD personnel on the ASSESS computer model occurred during August 1996, February 1997. Additional training is scheduled for June 1997. ASSESS provides a capability to identify, evaluate, and quantify security vulnerabilities at specific locations. MOD has specified requirements for drug and alcohol abuse testing equipment, polygraph equipment, and stationary site drug analysis and testing capability to support their PRP program. Procurement actions have been initiated to meet MOD requests in this area. Contracts for procurement of the drug and alcohol testing equipment and for the polygraph equipment should be awarded by the end of March 1997. Finalization of the initial procurements for the stationary site capability are projected to be complete by 4th quarter FY 1997.

Nuclear Weapons Transportation Security (ESE 12 Mar 97)

This agreement provides up to \$46.5 million in assistance for enhancing security of nuclear weapons being transported in connection with their destruction and preventing proliferation of these nuclear weapons.

A May 1995 Nuclear Weapon Security Group (NWSG) delegation meeting was held to determine technical specifications, cost, and schedule for sub-projects, in order to begin procuring needed material, services, and related training for emergency support equipment and supercontainers. The emergency support equipment will assist the Russian side in responding to train accidents involving nuclear weapons. Supercontainers are used to provide enhanced ballistic, crash, and thermal protection during transport and interim storage pending dismantlement.

Approximately \$5 million of the \$46.5 million was used for the procurement of emergency support equipment including radiological survey equipment, communication equipment, emergency and rescue equipment, and diagnostic equipment. Also included were individual protective equipment, equipment for power generation, and transportation containers. The first mobile complex was delivered to MOD in September 1996, with the last one (fifth) scheduled for March 1997.

Approximately \$23 million of the \$46.5 million will be used for procuring and transporting 150 supercontainers to Russia. The supercontainers are of the same design as supercontainers previously provided to Russia by the United Kingdom (UK). In December 1995, DoD awarded a contract to Strachan and Henshaw (S&H) located in Bristol, UK to produce the supercontainers. Except for the manufacture of the composite armor, S&H assembled the same team that previously produced 225 of the 250 U.K. supercontainers. The first shipment, which contained 14 supercontainers, 19 ancillary toll kits and a spare parts kit, was transferred to the custody of the Russian Federation MOD during the period 11 - 13 February 1997. DoD has established a goal of completing the final shipment by mid-July 1997.

Subsequent to the award of the supercontainer production contract to S&H, MOD requested that certain improvements be made in the supercontainer design. These improvements affected ancillary items such as the lashing chain restraints (or tie-down chains), the tool boxes attached to each end of the supercontainer, etc. Timing made it impossible to work these improvements into the production line. Instead, DoD undertook a parallel approach and has developed improvement kits. These kits are being procured separately from the supercontainers and will be shipped to MOD so they can upgrade the supercontainers at the time and place of their choosing.

The NWSG met for the seventh time, 16-18 October 1996, in Moscow to discuss these and other issues. The next NWSG meeting is scheduled for 27 January 1997 in Moscow.

Civilian Research and Development Foundation (R&D Foundation)

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Expanded Defense and Military Contacts

The objective of this \$14.5 million project is to build professional ties between our defense establishments by encouraging service-to-service, CINC-to-CINC, and soldier-to-soldier contacts. It is also designed to help break down cold war suspicions and stereotypes. This rapidly expanding program supported more than 214 scheduled events to date and expects further expansion. Examples of events supported and scheduled include: Peacekeeper '94 at Totskye, Russia; Peacekeeper '95 at Ft. Riley, Kansas; and, Bosnia IFOR.

Export Control

This project, for up to \$2.26 million, is designed to involve the government of Russia in a series of conferences, training and information exchanges for the purpose of enhancing Russian participation in the international export control community. The first technical working group meeting was held in March 1995. Defense Special Weapons Agency (DSWA) will transfer funds to the Departments of Commerce, Energy, and to the U.S. Customs Service for the implementation of the balance of the project plan. The Department of Commerce held an Industry-Government Relations Forum on 21-28 October 1995; an Operation of the Russian Export Control System Workshop, 4-8 December 1995; an Enforcement Technical Workshop,

March 1996; and, a Legal and Regulatory Forum in April 1996. A follow-on exchange of the operation of the Russian Export Control System occurred in June 1996. Two additional workshops are planned to occur for the summer of 1997 and include an Operation of the U.S. Export Control System exchange and an Industry-Government exchange. The U.S. Customs services plans four technical exchanges during 1997. Two assessment visits are planned, one Moscow and the other to To Vladivostok. A border enforcement seminar is planned for June in Moscow and finally a "train the trainer" session is scheduled for September, also be held in Moscow.

Arctic Nuclear Waste Assessment

This program will provide up \$30 million for the investigation and analysis of nuclear waste disposal in the Arctic regions by the former Soviet Union (FSU). The U.S. Congress directed through P.L. 102-396, Section 91 10(b)(1), and Senate Report 102-408 that not less than \$10 million should be available for this effort. The project was implemented in Fiscal Year(FY) 1993, under the management of DSWA, and with execution by the Office of Naval Research (ONR). Preliminary reports were sent Congress in December 1993 and August 1995. Preliminary results and the potential significance of the

program led Congress, through P.L. 103- 139, Section 8006, and Senate Report 103-153, direct that the effort be continued and expanded in FY 1994, again at a level of \$ 1 0 million. The FY 1995 DoD Appropriations Act, P.L. 103 -3 3 5, required that an additional \$1 0 million be made available continue this effort.

The objectives of this project are : (1) provide a numerical modeling system which can be used for studying the transport of historical and future radionuclide contamination problems in the Arctic and marginal seas; (2) validate the model results via available data; and, (3) investigate performance enhancements possible through the application of finer scale wind forcing. Once the model system is developed, it will be used investigate the transport and fate of radionuclides entering the Arctic via river outflow, the transport of radionuclides via sea ice, and the contamination concentration in the Arctic from distant sources, particularly the Northern Pacific and the Sea of Japan.

The initial program, as well as its extension for FY 1994/95, was initiated by U.S. Senator Ted Stevens of Alaska as a result of his state's concerns about potential environmental damage humans and other species, the shore, and the \$3 billion fishing industry. These efforts are unilateral on the part of the U. S. Russian cooperation is required and actively sought, but formal agreements neither exist nor are planned.