

A *udit*



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COOPERATIVE THREAT REDUCTION PROGRAM

Report No. D-2001-074

March 9, 2001

Office of the Inspector General
Department of Defense

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Acronyms

CTR	Cooperative Threat Reduction
DTRA	Defense Threat Reduction Agency
FSU	Former Soviet Union
GPRA	Government Performance and Results Act
PDASD(STR)	Principal Deputy Assistant Secretary of Defense (Strategy and Threat Reduction)
SLBM	Submarine-Launched Ballistic Missile
SSBN	Nuclear-Powered Ballistic Missile Submarine
START	Strategic Arms Reduction Treaty
WMD	Weapons of Mass Destruction



**INSPECTOR GENERAL
DEPARTMENT OF DEFENSE
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ARLINGTON, VIRGINIA 22202-2884**

March 9, 2001

**MEMORANDUM FOR ASSISTANT SECRETARY OF DEFENSE (STRATEGY
AND THREAT REDUCTION)
DIRECTOR, DEFENSE THREAT REDUCTION AGENCY**

**SUBJECT: Audit Report on the Cooperative Threat Reduction Program
(Report No. D-2001-074)**

We are providing this report for review and comment. We considered comments from the Acting Principal Deputy Assistant Secretary of Defense (Strategy and Threat Reduction) and the Defense Threat Reduction Agency on a draft of this report when preparing the final report.

DoD Directive 7650.3 requires that all recommendations be resolved promptly. As a result of comments from the Acting Principal Deputy Assistant Secretary of Defense (Strategy and Threat Reduction), we deleted Recommendations A.1.a., A.1.b., and A.1.c. and revised and renumbered Recommendation A.1.d. As a result of comments from the Defense Threat Reduction Agency, we revised Recommendation B.2. We request that the Acting Principal Deputy Assistant Secretary of Defense (Strategy and Threat Reduction) provide additional comments on Recommendation A.1. and that the Director, Defense Threat Reduction Agency, provide additional comments on Recommendations A.2.b. and B.2. in response to the final report. We request that management provide comments by May 8, 2001.

We appreciate the courtesies extended to the audit staff. Questions on the audit should be directed to Ms. Evelyn R. Klemstine at (703) 604-9172 (DSN 664-9172) (eklemstine@dodig.osd.mil) or Mr. Donney J. Bibb at (703) 604-9613 (DSN 664-9613) (dbibb@dodig.osd.mil). See Appendix F for the report distribution. The audit team members are listed inside the back cover.

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Office of the Inspector General, DoD

Report No. D-2001-074

March 9, 2001

(Project No. D2000LG-0031.001)

Cooperative Threat Reduction Program

Executive Summary

Background. Congress enacted Public Law 102-228, the Soviet Nuclear Threat Reduction Act of 1991 (the Act), to reduce the threat posed by the weapons of mass destruction remaining in the territory of the former Soviet Union. Specific objectives of the Act are to help reduce strategic arms in the former Soviet Union to Strategic Arms Reduction Treaty levels or lower, enhance security over nuclear weapons and fissile material, assist the former Soviet Union to destroy and prevent proliferation of biological and chemical weapons, and encourage military reductions and reform. The Act designates DoD as the executive agent for what came to be called the Cooperative Threat Reduction (CTR) Program. From FY 1992 through FY 2000, Congress appropriated \$3.5 billion for the CTR Program.

Objectives. Our audit objective was to evaluate the policies and procedures for executing the CTR Program. We also reviewed the management control program as it related to the overall objective.

Results. Overall, the CTR Directorate, within the Defense Threat Reduction Agency (DTRA), has made steady and consistent progress in destroying weapons of mass destruction within former Soviet Union countries. Appendix D discusses program accomplishments. However, the following areas warrant management attention.

The CTR Directorate used more than \$64.5 million in program funds to facilitate the removal of weapons of mass destruction by enhancing the value of salvageable materials and developing commercial by-products for Russia and Ukraine. As a result of those U.S. efforts, Russia and Ukraine could generate revenue of about \$72.8 million without agreements on how the revenue should be used (finding A).

The CTR Directorate did not establish adequate performance goals for the CTR Program. As a result, DoD and DTRA managers could not successfully demonstrate that the CTR Directorate was executing the CTR Program efficiently and effectively or identifying opportunities to improve program effectiveness (finding B).

See Appendix A for details on our review of the management control program.

Summary of Recommendations. We recommend that the Assistant Secretary of Defense (Strategy and Threat Reduction) initiate action to address the monitoring and use of revenue generated from U.S.-funded activities. We also recommend that the

Director, CTR Directorate, prepare cost analyses of methods available to destroy weapons of mass destruction and monitor the use of revenue generated from U.S.-funded activities. In addition, we recommend that the Director, DTRA, continue efforts to improve the “Defense Threat Reduction Agency Strategic Plan 2000.”

Management Comments. The Acting Principal Deputy Assistant Secretary of Defense (Strategy and Threat Reduction) agreed to initiate action to address the monitoring and use of revenue generated from U.S.-funded activities. However, the Acting Principal Deputy disagreed with the amount of additional costs incurred by the United States and the amount of revenue generated for Russia and Ukraine as a result of U.S. efforts. Also, the Acting Principal Deputy stated that guidelines already exist that require DoD to provide assistance economically and efficiently. The Acting Principal Deputy also stated that identifying specific services in implementing agreements would affect the flexibility needed in the CTR Program and that Russian and Ukrainian responsibilities were already addressed in CTR umbrella and implementing agreements, the Strategic Arms Reduction Treaty, and the Lisbon Protocol and Chemical Weapons Convention.

DTRA expressed concern about draft recommendations that might constrain contract negotiations, but concurred that the CTR Directorate should prepare cost analyses of methods available to destroy weapons of mass destruction. DTRA agreed to expand its strategic plan to cover a 5-year period and include performance goals for the CTR Directorate. DTRA also stated that the CTR Annual Report to Congress is a more appropriate place than budget submissions to include overall objectives, strategies, and explanations of reality-based changes to the CTR Program.

A discussion of management comments is in the Finding section of the report and the complete text is in the Management Comments section.

Audit Response. Acting Principal Deputy Assistant Secretary of Defense (Strategy and Threat Reduction) comments were generally responsive. Based on those comments, we clarified how we determined additional U.S. costs and added qualifiers on the amount of revenue that Russia and Ukraine could receive as a result of U.S. efforts. We also deleted or revised draft recommendations to amend implementing agreements. The revised recommendation is for DoD to initiate action to address monitoring and use of revenue generated from U.S.-funded activities.

DTRA comments were generally responsive but lacked a completion date. Based on DTRA comments, we revised a recommendation to provide DTRA with the flexibility to identify performance goals and indicators in the CTR Annual Report to Congress.

We request that the Assistant Secretary of Defense (Strategy and Threat Reduction) and the Director, Defense Threat Reduction Agency, provide comments on this report by May 8, 2001.

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Background

Congress enacted Public Law 102-228 (22 U.S.C. 2551 (note)), the Soviet Nuclear Threat Reduction Act of 1991, to reduce the threat posed by the weapons of mass destruction (WMD) remaining in the territory of the former Soviet Union (FSU). That law designated DoD as the executive agent for what came to be called the Cooperative Threat Reduction (CTR) Program. Along with subsequent laws that continue to assist FSU countries in reducing their WMD, Public Law 102-228 is also commonly called the “Nunn-Lugar” legislation. From FY 1992 through FY 2000, Congress appropriated \$3.5 billion for the CTR Program. DoD has used those funds to provide assistance to Belarus, Georgia, Kazakhstan, Moldova, the Russian Federation (Russia), and Ukraine.

The Soviet Nuclear Threat Reduction Act of 1991 establishes overall parameters for the CTR Program. It states that the program can be used to destroy chemical, nuclear, and other weapons; transport, store, disable, and safeguard weapons in connection with their destruction; and establish verifiable safeguards against proliferation of WMD. Also, the Soviet Nuclear Threat Reduction Act of 1991 allows DoD to assist in planning and in resolving technical problems associated with weapons destruction and proliferation. In addition, it states that DoD can fund critical short-term requirements related to weapons destruction and should, to the extent feasible, draw upon U.S. technology and technicians. In annual National Defense Authorization acts and DoD Appropriations acts, Congress expresses its latest preferences for CTR Program expenditures.

CTR Program Objectives. The major objectives of the CTR Program are to help FSU countries accelerate the reduction of strategic (long-range) weapons to levels designated in the Strategic Arms Reduction Treaty (START) I and START II; enhance safety, control, and accounting for nuclear weapons and fissile material; destroy and prevent proliferation of biological and chemical weapons; and encourage military reductions and reform.

Program Management. The Office of the Assistant Secretary of Defense (Strategy and Threat Reduction), a component of the Office of the Under Secretary of Defense for Policy, develops, coordinates, and oversees implementation of policy for the CTR Program. Since October 1998, the CTR Directorate, Defense Threat Reduction Agency (DTRA), has managed day-to-day operations of the CTR Program. Before October 1998, the CTR Program was directed by the Under Secretary of Defense (Acquisition and Technology) and projects were managed by the Defense Nuclear Agency, which later became the Defense Special Weapons Agency.

Framework for Assistance. DoD provides assistance to FSU countries through umbrella agreements and implementing agreements. Umbrella agreements, signed by representatives of the United States and recipient countries, establish the overall framework under which the United States provides assistance. Implementing agreements, signed between DoD and designated executive agents of FSU countries, document the details on the

assistance to be provided and the total amount of assistance to be provided. Generally, the implementing agreements have been amended each year to increase the amount of assistance to be provided.

Program Evolution. Since the inception of the CTR Program in 1991, DoD has changed the level of assistance it provides to FSU countries. Initially, DoD provided equipment to FSU countries for use in destroying WMD and improving their infrastructure needed to destroy the WMD. In the mid-1990s, DoD began to hire U.S. companies to coordinate and integrate the destruction of WMD because FSU countries could no longer afford to destroy the weapons and work was falling behind schedule. For some projects, DoD contracts directly with Russian and Ukrainian companies because Russia and Ukraine are reluctant to allow U.S. companies daily access to their ship repair yards or missile facilities.

Projects Reviewed. The audit concentrated on projects managed under the Strategic Offensive Arms Elimination-Russia and Strategic Nuclear Arms Elimination-Ukraine programs. Russian projects selected for detailed review were the liquid propellant disposition and the submarine-launched ballistic missile (SLBM) launcher and nuclear-powered ballistic missile submarine (SSBN) destruction projects. The Ukrainian project selected for detailed review was the SS-24 ballistic missile system destruction project. As of August 2000, those projects represented \$636.2 million of the \$1,613.8 million that DoD expected to expend for Strategic Offensive Arms Elimination-Russia and Strategic Nuclear Arms Elimination-Ukraine programs through FY 2007.

Liquid Propellant Disposition. The CTR Directorate initiated the liquid propellant disposition project for Russia in FY 1995. The CTR Directorate planned to provide equipment and services to assist Russia in disposing of liquid fuel from SS-18 and SS-19 ballistic missiles and SLBMs in an economical, safe, and environmentally sound manner. The project provides 125 flatbed rail cars, 670 intermodal tank containers, and 7 cranes to transport and store the propellant; equipment and services to dispose of 30,000 metric tons¹ of propellant; and 123,000 metric tons of propellant oxidizer and inhibitors. The CTR Directorate expects the cost of building the liquid propellant disposition facility will be \$73.8 million. In addition, the CTR Directorate will fund operations at the facility but had not estimated operating costs.

SLBM Launcher and SSBN Destruction. The CTR Directorate began destroying SLBM launchers and SSBNs for Russia in 1998. Before 1998, the CTR Program provided equipment to Russia and renovated the infrastructure of Russian ship repair yards. As of 2000, the CTR Directorate was destroying SLBM launchers and SSBNs at four Russian ship repair yards. The SLBM launcher and SSBN destruction project includes upgrading infrastructure at the ship repair yards, repairing vessels that remove nuclear fuel from submarines, defueling the SSBNs, cutting out the reactor core and launch tubes from the SSBNs, processing low-level radioactive waste, and dismantling and cutting SSBN hulls into transportable and salvageable sizes. DoD expects the cost of

¹A metric ton equals 2204.6 pounds.

equipment, infrastructure, and destruction to total \$339.6 million from inception through FY 2005, when the CTR Directorate plans to complete the project. By then, DoD expects to have destroyed 472 SLBM launchers² from 31 SSBNs: 11 *Delta I*, 4 *Delta II*, 10 *Delta III*, 5 *Typhoon*, and 1 *Yankee*-class SSBNs. Through May 2000, DoD contracted with Russian ship repair yards to destroy 17 of the 31 SSBNs.

SS-24 Missile System Destruction. The CTR Directorate began destroying SS-24 missiles³ and their silos for Ukraine in September 1997. DoD expects to destroy 46 operational silos and 5 launch control centers, restore those sites, and disassemble and de-fuel 54.5⁴ missiles by FY 2005 at a total cost of \$222.8 million. The CTR Directorate divided the undertaking into three separate projects. The first project prepares silos for destruction, repairs railroads, transports missiles to temporary storage or to the dismantlement facility, destroys silos, and restores silo sites. The second project disassembles the missiles and stores them until the propellant can be removed. The third project involves building and operating a propellant disposition facility. At the disposition facility, propellant will be removed from the missiles using a high-pressure water washout system and mixed with other materials to convert it into a commercial mining explosive. The Ukrainian government intends to provide the commercial mining explosive to mine operators within Ukraine.

Objectives

The overall objective of this audit was to review the policies and procedures related to executing the CTR Program. Specific objectives were to determine whether the CTR Program was executed according to agreements made between the United States and the governments of FSU countries. We also reviewed the management control program as it related to the overall objective. See Appendix A for a discussion of the audit scope and methodology and our review of the management control program. See Appendix B for prior coverage related to the audit objectives.

²Although SLBM launchers are part of the SSBNs, SLBM launchers are accounted for separately because they are countable items under START I.

³The SS-24 missile warheads were deactivated and transferred to Russia between 1994 and 1996 under a separate project.

⁴The 54.5 missile count included the first stage of one SS-24 missile that was in the factory at the time it was identified for destruction.

A. Use of Program Funds and Revenue

The CTR Program used more than \$64.5 million in program funds to facilitate the removal of dismantled systems by enhancing the value of salvageable materials and developing commercial by-products for Russia and Ukraine. While the removal and enhancement decisions were approved at high levels, DoD did not adequately address the use of revenue generated from U.S.-funded activities with Russia and Ukraine or perform adequate cost analyses. As a result of U.S. efforts in the destruction of WMD, Russia and Ukraine could generate revenue of about \$72.8 million without specific agreements on how the revenue should be used.

Congressional Concerns

Public Law 106-65, National Defense Authorization Act for Fiscal Year 2000, requires that the Secretary of Defense submit a report to Congress explaining the DoD strategy for encouraging FSU countries to contribute to the threat reduction effort. That provision arose from concerns expressed by the House Committee on Armed Services in House Report 106-162, May 24, 1999, which accompanied House Report 1401, the National Defense Authorization Act for FY 2000. House Report 106-162 states that Congress has consistently supported the CTR Program since its inception. However, the report indicates that support has always been predicated on DoD assurances that destroying FSU weapons would be “cooperative in a fiscal as well as a practical sense—with costs being shared by the parties concerned and not borne exclusively by the United States.” The committee acknowledged the economic decline in FSU countries, but was concerned that the willingness of the United States to absorb additional costs might further reduce incentives for recipient countries to invest their own resources. Also, the committee was concerned that relieving Russia of its financial burden might allow Russia to devote its scarce resources to developing newer and more sophisticated strategic nuclear arms.

In a letter dated January 10, 2000, the Assistant Secretary of Defense (Strategy and Threat Reduction) responded that DoD continuously urges FSU countries to contribute their own funds and that DoD explores receipt of non-monetary contributions by recipient countries because of the extreme financial hardships experienced by those countries. Also, the Assistant Secretary of Defense stated that DoD had successfully obtained contributions of facilities, labor, materials, services, and supplies. However, he did not indicate whether DoD required or encouraged FSU countries to use revenue generated by U.S.-funded activities to destroy their own WMD.

CTR Program Services

The CTR Directorate used more than \$64.5 million in program funds to facilitate removal of dismantled systems by enhancing the value of salvageable materials and developing commercial by-products for Russia and Ukraine. The additional services included converting liquid and solid propellant into commercial by-products, cutting weapons into small pieces of scrap, and digging up underground cable. We were unable to quantify the costs for all of the additional services provided, but did quantify \$59.7 million for the liquid propellant disposition facility in Russia and \$4.8 million for solid propellant disposition in Ukraine.

Liquid Propellant Disposition. The CTR Directorate spent \$73.8 million to build a facility to convert 30,000 metric tons of liquid propellant from SS-18 and SS-19 missiles and SLBMs into two commercial by-products: fertilizer and industrial solvent. Although DoD considers the disposal of the liquid propellant as critical for Russia to meet its START requirements,⁵ the CTR Program could have incinerated the liquid propellant for \$14.1 million, \$59.7 million less than the cost just to build the facility, which does not include operating costs.

In addition to the increased costs, converting the liquid propellant into commercial by-products is estimated to take 6 years longer than if the CTR Directorate had incinerated the propellant. In April 1995, when the Defense Nuclear Agency⁶ awarded the liquid propellant disposition contract, the estimated completion date for the project was October 1999. However, 5 years after contract award, the CTR Directorate had not started to convert the liquid propellant into commercial by-products. The delay was partially caused by the inability of Russia to provide infrastructure to support the project. As of August 2000, the estimated project completion date was scheduled for the fourth quarter of FY 2006, about 7 years after the originally estimated completion date. In comparison, the fixed-price proposal to incinerate the liquid propellant had a schedule to dispose of that propellant by May 2000. Because the incineration proposal did not depend on support from Russia to improve infrastructure, we believe it may have been completed on time.

The decision to convert the liquid propellant into commercial by-products was based, in part, on an incomplete cost analysis. There were also political and environmental considerations.

SLBM Launcher and SSBN Destruction. The CTR Directorate estimated that it would spend about \$339.6 million to destroy 472 SLBM launchers and 31 SSBNs for Russia.

⁵Although disposing of liquid propellant is not a START requirement, it must be removed from missiles before removing the missiles from their silos or launch tubes. Also, because the liquid propellant is hazardous and highly volatile, it must be safely stored until rendered harmless.

⁶At that time, the Defense Nuclear Agency provided contracting support for the CTR project office.

The CTR Directorate might have performed additional effort beyond what was needed to economically destroy Russian SSBNs. A comparison between the size of salvageable materials produced by the CTR Program for Russia and that produced by the U.S. Navy when it destroys U.S. SSBNs showed that the CTR Program might have cut Russian submarines into smaller pieces than required. Contracts with ship repair yards in Russia specify that the ferrous metal and titanium from the SSBNs were to be cut into pieces ranging from 4.3 square feet to 8.1 square feet. Other metals, such as aluminum, copper, and nickel, were to be cut into 1.7-square-foot pieces, and copper cable was to be shredded. In comparison, an official from the Naval Sea Systems Command⁷ stated that the U.S. Navy cuts submarines into 120-square-foot pieces, at least 14.8 times larger than the metal salvaged by the CTR Program. Also, the U.S. Navy does not shred the copper cable salvaged from U.S. SSBNs. The Naval Sea Systems Command official stated that the U.S. Navy established salvage sizes for the U.S. SSBNs to avoid unnecessary cuts while maximizing the salvaged material that can be loaded onto barges. If sizes are too large, transportation costs increase because fewer pieces fit on each barge. Although cutting submarines into smaller pieces increases the value of the scrap, it also increases the destruction costs.

SS-24 Missile System Destruction. The CTR Directorate estimated that it would spend about \$222.8 million to destroy the SS-24 missile system in Ukraine, including \$4.8 million of ingredients that convert stabilized solid rocket propellant into mining explosives. The project includes the destruction of 46 silos, 5 launch control centers, and 54.5 SS-24 missiles containing 5.5 million kilograms of solid rocket propellant. Ukraine was receiving revenue from the sale of salvaged materials as the CTR Directorate destroyed the SS-24 infrastructure, missiles, and silos. Also, after the CTR Program starts to assist Ukraine in converting the SS-24 rocket propellant into mining explosives, Ukraine will receive the mining explosives.

The CTR Directorate performed work beyond what was required to economically destroy the SS-24 missile system. The CTR Directorate designed the project to salvage recoverable materials and prepare them for sale in order to generate revenue for Ukraine.

Silos. The contract for destroying the SS-24 missile system requires the contractor to cut SS-24 silos into pieces no larger than 8.1 square feet, remove and process 2,350 kilometers of underground cable,⁸ and provide physical security for the salvaged materials. In comparison, an official from the U.S. Army Corps of Engineers, which is destroying silos for the U.S. Air Force, stated that cable at U.S. silo sites is not removed because the removal costs would greatly exceed any potential revenues gained from the sale of salvaged cable. Furthermore, the U.S. Air Force has found that leaving the cable in the ground does not cause environmental hazards.

⁷The Naval Sea Systems Command manages destruction of U.S. SSBNs.

⁸According to the Director, CTR Directorate, the CTR Program was only removing cable that was readily accessible.

The contract for destroying the SS-24 missile system also requires the contractor to prepare shipments of salvaged materials for sale by providing binding, marketing, and pricing assistance, if needed.

Missiles. The contract for dismantling the SS-24 missile system requires the contractor to cut SS-24 missiles into pieces no larger than 5.2 square feet. In addition, the contract requires the contractor to extract precious metals from instruments and to sort the bolts, nuts, and other fasteners.

Propellant. As of September 2000, the CTR Directorate planned to start converting the solid propellant in SS-24 missiles into mining explosives in June 2003. Prior to conversion, the CTR Program will build and renovate the infrastructure, and test the process to ensure that the removal and conversion process is feasible and safe. The planned conversion process includes removing the solid propellant from the missiles, adding stabilizers to prevent combustion, and then adding ammonia nitrate and other ingredients to create mining explosives. Although the CTR Directorate estimated that the ammonia nitrate and other ingredients will cost the United States about \$4.8 million, Ukraine was not required to reimburse the United States for those value-added costs.

Addressing the Use of Revenue and Cost Analysis

While the removal and enhancement decisions were approved at high levels in DoD,⁹ DoD did not adequately address the use of revenue generated from U.S.-funded activities with Russia and Ukraine. Also, the cost analysis for destroying the liquid propellant in Russia was not complete and the CTR Directorate did not perform a cost analysis for destroying SSBNs in Russia. In addition, the CTR Directorate could not locate a cost analysis for destroying the SS-24 missile system in Ukraine.

Addressing Revenue With Russia. DoD had an opportunity to address the use of revenue in the initial implementing agreement with Russia, which was signed in August 1993, on eliminating Russian strategic offensive arms. The implementing agreement does not address the monitoring and use of revenue generated by Russia through assistance provided by the CTR Program.

The removal and enhancement decisions on WMD involved high level approval within DoD and Russia.¹⁰ Instead of modifying the implementing agreement to address specific services and use of funds generated, DoD and Russia used

⁹Approving officials included the Deputy Assistant Secretary of Defense (International Security Policy); the Deputy Assistant to the Secretary of Defense (Atomic Energy) for Defense Conversion; and the Deputy Assistant to the Secretary of Defense (Nuclear and Chemical and Biological Defense Programs) for Cooperative Threat Reduction.

¹⁰Russian officials included the First Deputy Minister of Defense, the Deputy Minister of Economics, and the Chief of the Main Directorate of Monitoring and Utilization of Weapons and Military Technology.

informal arrangements. For example, correspondence from the State Committee of the Russian Federation on the Military Industrial Complex to the Deputy Assistant Secretary of Defense (International Security Policy), DoD, dated April 11, 1995, states that Russia would use profit from liquid propellant conversion to destroy additional strategic offensive arms and resolve environmental problems connected with the destruction process. However, that correspondence does not address monitoring of revenue generated from U.S.-financed activities.

Addressing Revenue With Ukraine. DoD also had an opportunity to address the use of revenue in the initial implementing agreement with Ukraine, which was signed on December 5, 1993, on eliminating Ukrainian strategic nuclear arms. However, the implementing agreement did not address the use of revenue generated by Ukraine through assistance provided by the CTR Program. In addition, although DoD and Ukraine have amended the implementing agreement each year since 1993 to add funds, those amendments do not address the use of or monitoring of revenue generated from U.S.-financed activities.

In June 1995, DoD entered into an implementing arrangement with the Ministry of Defense of Ukraine. That arrangement required the Defense Nuclear Agency to select an integrating contractor to assist with eliminating WMD in Ukraine. The implementing arrangement included a provision that the Ministry of Defense of Ukraine would use its own resources and funds made available by weapons destruction assistance programs to resolve social security problems for members of its armed services who were released from duty because nuclear missiles were destroyed. The implementing arrangement, however, did not address the monitoring of revenue generated by Ukraine through assistance provided by the CTR Program.

Cost Analysis. The CTR Directorate did not prepare a complete cost analysis on the liquid propellant disposition project, did not perform a cost analysis to determine the most efficient way to destroy SLBM launchers and SSBNs in Russia, and could not locate a cost analysis supporting the SS-24 missile system destruction in Ukraine.

Liquid Propellant Disposition Project. DoD decided to convert the liquid propellant from SS-18 and SS-19 missiles and SLBMs into commercial by-products because, in part, Russia requested that DoD destroy the propellant through conversion and the CTR project office performed an incomplete analysis of competing contract proposals. The analysis performed by the CTR project office indicated that converting the liquid propellant was the most cost-effective way to destroy that propellant. For each contract proposal, the CTR project office totaled the expected cost to the United States and offset that cost against revenue that would be generated for Russia. However, the analysis was incomplete because it excluded costs that Russia was expected to incur. The cost analysis did not include Russian costs for equipment and infrastructure that Russia had initially agreed to pay as well as the cost of operating the liquid propellant disposition facility. Those costs should have been included in the analysis for the CTR project office to evaluate which disposition method was the most economical to the United States and Russia. In December 1995, Russia requested that DoD provide hydrogen and steam generators and concrete pads

for the disposition systems. In March 1997, Russia requested that DoD assist with installation of additional infrastructure at the disposition facility. DoD agreed to pay those costs, increasing the estimated cost to the United States by \$40.1 million, from \$26.1 million to \$66.2 million. The increase included \$29.8 million to acquire hydrogen and steam generators and concrete pads and \$10.3 million to improve the infrastructure. Other adjustments increased the cost of the disposition facility by \$7.6 million, from \$66.2 million to a cost of \$73.8 million. In addition, the CTR Directorate will spend additional funds to operate the facility but had not estimated the operating costs.

SLBM Launcher and SSBN Destruction Project. The CTR Directorate did not perform an analysis to determine the most economical method of destroying Russian SLBM launchers and SSBNs. That study would have determined the most economical size into which launch tubes and SSBNs should be cut. Although the Naval Sea Systems Command assisted the CTR Directorate in evaluating the reasonableness of the destruction approach proposed by the ship repair yards, officials from the Naval Sea Systems Command stated that they did not agree to the size into which the Russian SSBNs should be cut. Instead, the negotiated prices were based on destruction processes agreed upon by the CTR Directorate and Russian ship repair yards.

SS-24 Missile System Destruction. The CTR Directorate could not locate a cost analysis supporting the SS-24 missile system destruction in Ukraine. The CTR Directorate referred us to the DTRA Acquisition Management Directorate for the complete record of the project. The Acquisition Management Directorate provided contractor cost proposals for and selected independent reviews or audits of those proposals. However, the Acquisition Management Directorate could not locate a cost analysis to show that the scrap sizes, removal and processing of underground cable, and provision of physical security for salvaged materials were economical. The CTR Directorate suggested that it provided additional services to Ukraine as an appropriate reward for Ukraine “getting out of the nuclear business.”

Political, Economic, and Environmental Considerations

The CTR Directorate did not always base decisions on cost analyses. Instead, DTRA officials explained that the overarching U.S. objective in negotiating with FSU countries was to eliminate the threat from WMD as quickly as possible. Therefore, CTR Program removal and enhancement decisions were based, in part, on political, economic, and environmental considerations. DTRA officials also explained that the FSU countries are interested in reducing their forces and meeting treaty obligations but take a more conservative approach to reducing their forces. FSU countries take that approach, according to DTRA officials, because WMD systems symbolize a major element of their claims to being significant players on the world political stage; were a major past investment; and provide large segments of their populations employment opportunities for which there are no readily apparent alternatives. CTR Program officials also stated that DoD tried to create employment and provide more revenue from the salvageable materials because of the weak economies in Russia and Ukraine.

Other decisions, such as the conversion of solid rocket fuel into mining explosives in Ukraine, were made for environmental reasons. Nevertheless, when there is a choice of options, a cost analysis should be performed and provided to decision-makers so that they can make an informed decision.

Revenue Generated From Salvaged Materials

For the projects reviewed, Russia and Ukraine could generate about \$72.8 million¹¹ in revenue from CTR Program efforts without an agreement on how they would use that revenue.

Liquid Propellant Disposition. Based on prices in the European chemical market in September 2000, Russia could generate revenue of about \$14.1 million when it sells the commercial by-products produced by liquid propellant disposition. That includes \$12.9 million from 22,500 metric tons of industrial solvent and \$1.2 million from 8,490 metric tons of fertilizer. Although Russia had no commitments to DoD on how it would use the revenue, Russian officials told DoD officials in the April 11, 1995, correspondence that they would use any profit for “the further development of projects for destruction of strategic offensive arms and for the resolution of environmental problems connected to the destruction process.” However, no agreement was developed to solidify that statement and the CTR Directorate had not developed controls to monitor how Russia will use the revenue.

SLBM Launcher and SSBN Destruction. Based on the price of clean scrap metal in Europe and the United States, Russia could generate revenue of about \$41.7 million when it sells over 192,900 metric tons of salvaged metal from the 31 SSBNs.¹² That includes \$23.2 million from 17 SSBNs that the CTR Directorate has already contracted to destroy and \$18.5 million from 14 SSBNs that the CTR Directorate plans to contract to destroy. Officials from the Naval Sea Systems Command stated that the U.S. Government sells the salvaged metal from each U.S. SSBN that it destroys for about \$600,000. Each U.S. SSBN yields between 3,000 tons and 3,500 tons of salvaged metal. However, Russian SSBNs yield more salvaged metal and are cut into smaller pieces. Specifically, a *Delta I*-class SSBN yields 4,251 metric tons, *Delta II*-class and *Delta III*-class SSBNs each yield 5,205 metric tons, a *Typhoon*-class SSBN yields 13,838.5 metric tons, and a *Yankee*-class SSBN yields 4,114 metric tons of salvageable metal. In addition to ferrous metals, the

¹¹Possible shipping costs and fluctuating prices could affect the net revenue that Russia and Ukraine receive from the sale of commercial by-products and scrap metal.

¹²The estimated revenue does not include 21,245 metric tons of metal that would be salvaged from the five *Typhoon*-class submarines that DTRA plans to destroy because DTRA could not identify the types of metals on those SSBNs.

CTR Program salvages tons of aluminum, copper, nickel, and titanium from each Russian submarine. Appendix C provides details on the amount and value of the metals for each class of Russian SSBN.

In addition, DoD and the Department of Energy are looking at the possibility of destroying general-purpose submarines. According to the program manager in the CTR Directorate for Strategic Offensive Arms Elimination-Russia, the United States would assist Russia in destroying between 100 and 200 general-purpose submarines at an estimated cost of \$1 billion to \$2 billion. The metals salvaged from those submarines could also provide revenue to Russia that DoD would need to address in an agreement.

SS-24 Missile System Destruction. Ukraine will generate revenue of about \$17 million from the dismantlement of the SS-24 missile system. That includes \$4.6 million from selling scrap metal and \$12.4 million worth of mining explosives. The program manager in the CTR Directorate for Strategic Nuclear Arms Elimination-Ukraine stated that Ukraine will use a portion of the revenue from salvaged material to finance housing for those members of its armed forces released from active duty because nuclear missiles were destroyed.¹³ However, he had no visibility over how much revenue Ukraine will allocate to housing or other purposes.

Silos and Missiles. Ukraine was generating revenue from the sale of salvaged metals in SS-24 silos and could generate revenue from salvaged materials in the SS-24 missiles. The silos contained 22,603 metric tons of salvageable metal, including aluminum, copper, lead, and steel from the silos and their associated launch control centers, valued at \$4.6 million. In addition, when Ukraine starts to destroy the SS-24 missiles, it could generate revenue from 352 metric tons of metal and other materials salvaged from the missiles.

Propellant. The program manager for Ukraine stated that after SS-24 propellant is converted into mining explosives, Ukraine intends to give all \$12.4 million worth of the mining explosives to a Ukrainian mine. The CTR Directorate did not request that Ukraine use the \$12.4 million market value of the explosives to destroy its own WMD or to compensate DoD for the value added to convert the propellant to mining explosives. Furthermore, officials in the CTR Directorate did not know who owns the mine, what the mine produces, or the amount of profit the mine would make from the donated explosives.

Conclusion

Russia and Ukraine could generate about \$72.8 million of revenue from the by-products and salvageable materials produced by U.S.-funded activities related to the three CTR projects discussed in this report. Revenue generating

¹³Public Law 104-201, National Defense Authorization Act for Fiscal Year 1997, states that DoD cannot use CTR funds to provide housing to FSU countries. Before FY 1997, CTR funds were used to provide housing.

activities from other CTR projects could also increase the amount of revenue available for CTR Program goals. However, the CTR Program did not adequately address the use of revenue generated by Russia and Ukraine through CTR Program efforts. An agreement with safeguards to require the use of revenue generated through U.S.-funded activities to further destroy WMD could improve the cooperative nature of the CTR Program and ensure the costs are not exclusively borne by the United States. Further, before the CTR Program enhances the value of salvageable materials or develops commercial by-products, the CTR Directorate should perform a complete cost analysis to provide decision-makers with better information for making decisions, even when there are political and environmental considerations.

Management Comments on the Finding and Audit Response

Assistant Secretary of Defense (Strategy and Threat Reduction). The Acting Principal Deputy Assistant Secretary of Defense (Strategy and Threat Reduction) (PDASD[STR]) stated that although WMD holdings in FSU countries are a threat to the United States, WMD is only an inconvenience to those countries. Further, the CTR Program uses the benefits that accrue to FSU countries from destroying WMD as leverage to reach agreements with FSU countries.

The PDASD(STR) questioned amounts cited as additional costs to the United States and revenue generated for FSU countries. She questioned methods used to develop estimates that the CTR Program spent an additional \$64.5 million over what was needed to destroy WMD and that FSU countries will receive \$72.8 million in revenue from selling the scrap. The Acting PDASD(STR) stated that the estimates do not account for all relevant factors and require clarification.

The PDASD(STR) stated that her office had extensive correspondence with executive agents of recipient countries pledging that revenues will be employed to further develop work to eliminate WMD and stated that DoD had the necessary authority within existing agreements to change monitoring and use of revenue procedures.

The PDASD(STR) provided comments on each project reviewed. For the liquid propellant disposition project, she stated that the contract was awarded to the lowest bidder and Russia was initially responsible for operating the liquid propellant conversion system. Also, Russian officials assured DoD that any profits would be used to eliminate WMD. For the SLBM and SSBN destruction project, the PDASD(STR) stated that DoD determined that disposing of metal scrap would ensure that scrap did not accumulate in the shipyards and delay the destruction of SSBNs. Also, Russia agreed that revenues from sale of the scrap would be used to purchase fuel, electricity, oxygen, and cutting gases to destroy SLBMs and SSBNs. However, the PDASD(STR) stated that the scrap revenue was insignificant compared with the cost of destroying the SLBMs and SSBNs. For the SS-24 missile system destruction project, the PDASD(STR) stated that the main reason for assistance with scrap sizing was to reduce scrap

accumulation that could delay destruction of SS-24 systems and that she was satisfied with the arrangement with Ukraine. The PDASD(STR) also stated that converting solid fuel to mining explosives is a pilot program and if successful CTR officials will address the use of revenue from the sale of explosives and other by-products.

Audit Response. Based on PDASD(STR) comments, we clarified the report to show where the CTR Directorate spent the additional \$64.5 million, to show that revenue from commercial by-products and scrap metal is subject to price fluctuations, and that factors such as shipping costs could affect the actual revenue that Russia and Ukraine may generate. After analysis of management comments, we deleted draft recommendations to amend the implementing agreements and modified the report accordingly.

Regarding the liquid propellant disposition project, although DoD determined that the contractor offering to convert liquid propellant was the lowest bidder, that was only because DoD reduced bid costs by the estimated revenue that Russia was to receive when it sold the converted product, and excluded infrastructure and operating costs. Also, although Russian officials assured DoD officials that profits would be used to destroy WMD, there is no mechanism to ensure revenues are used to destroy WMD.

Regarding the SLBM and SSBN destruction project, because proposals from Russian shipyards included the cost of fuel, electricity, oxygen, and cutting gases, revenue from the sale of scrap metal is no longer needed to pay those costs.

Regarding the SS-24 missile system destruction project, the PDASD(STR) did not provide evidence showing that cutting scrap into smaller pieces prevented delays in destroying the SS-24 missile systems. Performing a cost analysis should assist DoD in determining the best method of destroying WMD.

Defense Threat Reduction Agency Comments on Eliminating WMD. DTRA stated that insistence on using economical methods to destroy WMD would constrain contract negotiations with FSU countries and prevent or delay mission accomplishment. DTRA referred to insistence on the use of economical methods as a “minimalist approach” and stated that the overarching U.S. objective in negotiating with FSU countries was to eliminate the threat from WMD as quickly as possible. DTRA explained that FSU countries are interested in reducing their forces and meeting their treaty obligations, but they have their own negotiation constraints and take a more conservative approach to reducing their forces. DTRA also explained that WMD systems symbolize a major element of their claims to being significant players on the world political stage; were a major past investment; and employ large parts of their populations, which do not have readily apparent alternatives for making a minimal living.

Audit Response. To the extent possible, the CTR Program should be cooperative in both an economical and a practical sense. Congress has supported the CTR Program because of DoD assurances to Congress and the U.S. taxpayers that assistance would be cooperative, with costs shared by the

parties concerned and not borne entirely by the United States. Although DTRA stated that using economical methods to destroy WMD would constrain contract negotiations and delay mission accomplishment, previous contract negotiations have not always led to the most timely destruction of WMD. For example, DoD negotiated with Russia to destroy liquid propellant by converting it into commercial by-products; however, we believe that decision may have increased the estimated destruction time by 6 years. The CTR Directorate should use more complete cost analyses in determining the most economical and effective methods of destroying WMD, in addition to considering political objectives.

Recommendations, Management Comments, and Audit Response

Deleted, Renumbered, and Revised Recommendations. As a result of comments from the Acting PDASD(STR), we deleted Recommendations A.1.a., A.1.b., and A.1.c. and renumbered and revised Recommendation A.1.d. as Recommendation A.1.

A.1. We recommend that the Assistant Secretary of Defense (Strategy and Threat Reduction) initiate action to address in agreements with Russia and Ukraine the monitoring and use of revenue generated from U.S.-funded activities.

Management Comments. The Acting Principal Deputy Assistant Secretary of Defense (Strategy and Threat Reduction) stated that DoD will address or readdress with executive agents from recipient countries the use of current or possible future revenues generated from U.S.-funded activities. The PDASD(STR) also stated that, for individual projects, DoD will assess the economies of monitoring the use of revenue received by FSU countries.

Audit Response. PDASD(STR) comments are responsive to the recommendation on addressing the use of revenue. However, the comments on monitoring revenue need clarification. In response to the final report, we request that the PDASD(STR) clarify the guidelines for determining when it is economical to monitor the use of revenue received by FSU countries.

A.2. We recommend that the Director, Cooperative Threat Reduction Directorate:

a. Prepare cost analyses of methods available to destroy weapons of mass destruction to provide decision-makers with information needed for an informed decision.

Management Comments. DTRA concurred and stated that it would expand its cost analysis efforts to provide decision-makers with information needed to make informed decisions.

b. Monitor the use of revenue generated from activities funded by the United States.

Management Comments. DTRA deferred concurrence until the Under Secretary of Defense for Policy establishes a requirement that the revenues be monitored.

Audit Response. After the PDASD(STR) clarifies DoD policy on monitoring revenue, we request that DTRA provide additional comments on Recommendation A.2.b.

B. Evaluating Program Performance

The CTR Directorate did not establish adequate performance goals for the CTR Program. That occurred because DTRA did not fully implement requirements of the Government Performance and Results Act (GPRA) for the CTR Program. As a result, DoD and DTRA managers could not successfully demonstrate that the CTR Directorate was executing the CTR Program efficiently and effectively or identifying opportunities to improve program effectiveness.

Requirements for Evaluating Program Performance

Public Law 101-576, “Chief Financial Officers Act of 1990.” Public Law 101-576, “Chief Financial Officers Act of 1990,” as amended, requires Federal organizations to develop and report cost information and to systematically measure performance. As a result of those requirements, the Federal Accounting Standards Advisory Board issued Statement of Federal Financial Accounting Standards No. 4, “Managerial Cost Accounting Standards,” (the Accounting Standard) July 31, 1995. The Accounting Standard, which became effective for fiscal periods beginning after September 30, 1996, requires that Federal agencies develop performance measures to report on the efficiency, effectiveness, and results of their programs.

Public Law 103-62, “Government Performance and Results Act of 1993.” GPRA was enacted to hold Federal agencies accountable for achieving program results and to improve program effectiveness. Specifically, starting in September 1997, GPRA required agencies to submit to the director of the Office of Management and Budget and to Congress a strategic plan for program activities. Among other requirements, the strategic plan should contain general program goals and objectives, describe how the agency will achieve the goals and objectives, and identify external factors that could affect achieving the goals and objectives. The strategic plan should cover a 5-year period.

Starting with the FY 1999 budget, GPRA requires agencies to prepare and submit performance plans each year to the director of the Office of Management and Budget and to Congress. The performance plan should contain quantifiable

performance goals and performance indicators and a basis for comparing results against the performance goals. Section 4 of GPRA defines a performance goal as a:

. . . target level of performance expressed as a tangible, measurable objective, against which actual achievement can be compared, including a goal expressed as a quantitative standard, value, or rate.

Also, Section 4 of GPRA defines a performance indicator as:

. . . a particular value or characteristic used to measure output or outcome.

No later than March 31, 2000, Federal agencies were to submit a performance report to the President and Congress that compared program performance for the previous fiscal year against goals. For performance goals not met, agencies were to provide an explanation.

DoD Plan for Implementing GPRA. The Acting Under Secretary of Defense (Comptroller) issued “Government Performance and Results Act Implementation,” October 16, 1997, outlining the DoD plan for implementing GPRA. That memorandum states that DoD will implement GPRA at multiple levels through the Planning, Programming, and Budgeting System. The memorandum states that all DoD officials should develop performance goals and quantifiable measures of performance and success, and perform program outcome evaluations.

Establishing Performance Goals

The CTR Directorate did not establish adequate performance goals and performance indicators. The CTR Directorate documented its performance goals through the Planning, Programming, and Budgeting System by including those performance goals in its budget submissions. However, the performance goals were inadequately defined and were inconsistent among budget submissions. Often, budget submissions merely stated that the CTR Directorate would “continue work” on a project. Also, the budget submissions did not define other performance goals, such as time frames for completing projects, unit prices for destroying WMD, or efforts to improve performance. For projects under the Strategic Offensive Arms Elimination-Russia program, Table 1 illustrates how the CTR Directorate defined and changed performance goals for FY 1999 funds. For projects under the Strategic Nuclear Arms Elimination-Ukraine program, Table 2 illustrates how the CTR Directorate defined and changed performance goals for FY 1999 funds. Because CTR Program funds can be obligated over a 3-year period, the tables identify performance goals for FY 1999 funds included in FY 1999, FY 2000, and FY 2001 budget submissions.

Table 1. Proposed Use of FY 1999 CTR Funds as Presented in Budget Submissions for FYs 1999-2001

Strategic Offensive Arms Elimination-Russia

<u>Program Objective</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>
SLBM launchers and their SSBNs	108	106	144
ICBMs* (liquid fueled)	134	39	Start to destroy liquid-fueled ICBMs and launchers
Solid rocket motors	100	Not addressed	Not addressed
SS-18 silos	10	Not addressed	6

*Intercontinental ballistic missile.

Although the FY 1999 budget submission for Strategic Offensive Arms Elimination-Russia stated that FY 1999 funds would destroy 10 SS-18 missile silos, the FY 2000 budget submission did not address using FY 1999 funds to destroy SS-18 missile silos, and the FY 2001 budget submission stated that FY 1999 funds would destroy 6 SS-18 missile silos. Furthermore, the FY 2000 and FY 2001 budget submissions did not explain why those changes occurred.

Table 2. Proposed Use of FY 1999 CTR Funds as Presented in Budget Submissions for FYs 1999-2001

Strategic Nuclear Arms Elimination-Ukraine

<u>Program Objective</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>
SS-24 silos	10	Continue destroying 46 SS-24 silos	11 ¹
Strategic bombers	Begin destroying strategic bombers and ALCMs ²	Continue destroying 44 strategic bombers and 1,068 ALCMs	11
SS-24 storage	Not addressed	36	26
SS-24 disassembly	Begin disassembling SS-24 missiles at Pavlograd	Continue disassembling 55 SS-24 missiles	20
Solid propellant disposition facility	Not addressed	Continue construction	Begin construction

¹Includes one launch control center.

²Air-launched cruise missile.

Likewise, the FY 1999 budget submission for Strategic Nuclear Arms Elimination-Ukraine did not state how many strategic bombers the CTR Directorate planned to destroy. Also, the FY 2001 budget submission did not explain why the CTR Directorate would start to construct a solid propellant disposition facility with FY 1999 funds although the FY 2000 budget submission indicates that FY 1999 funds would be used to continue construction of that facility.

Implementation of GPRA

The CTR Directorate did not establish adequate performance goals because DTRA did not fully implement requirements of GPRA. Specifically, DTRA did not have a strategic plan establishing general goals for the CTR Directorate to use as a basis for establishing quantifiable performance goals and performance indicators. Although DTRA published an undated strategic plan during the audit, "Defense Threat Reduction Agency Strategic Plan 2000," that plan did not provide a sufficient baseline to allow DTRA to measure performance of the CTR Program. According to CTR Directorate officials, DTRA was in the process of updating its strategic plan and continuing its efforts to fully implement GPRA.

DTRA Strategic Plan. The DTRA strategic plan presents the vision, mission, objectives, and strategies to guide DTRA actions. However, the strategic plan only covers a 2-year period, instead of 5 years as required by GPRA. In the strategic plan, the mission of the CTR Program was covered under the DTRA objective of reducing the present threat. Although the strategic plan states how the CTR Program will help DTRA to achieve that objective, the strategic plan does not describe the effort that the CTR Directorate would provide over a specified period of time or identify external factors that could affect achievement of the objectives. For the CTR Program, the DTRA strategic plan identified the following goals:

Continue elimination of former Soviet strategic nuclear systems consistent with Strategic Arms Reduction Treaty requirements.

Assist former Soviet countries to reduce WMD proliferation threats.

The strategic plan should have identified overall performance goals for the CTR Program, such as completing the destruction of WMD in Ukraine by the end of FY 2005. A performance indicator for that goal would be the percentage of WMD destroyed.

Evaluating the CTR Program

Because the CTR Directorate did not establish adequate performance goals and indicators, managers in DoD and DTRA could not successfully evaluate whether the CTR Directorate was executing the CTR Program efficiently and effectively or identifying opportunities to improve program effectiveness. The CTR Directorate continually changed performance goals for its projects in its budget submissions. As a result, there was no assurance that funding requests were only to finance new projects or destruction of additional WMD. For example, the CTR Directorate originally stated it would use FY 1999 funds in Russia to destroy 134 liquid-fueled missiles, but reduced the goal to 39 missiles in the FY 2000 budget. However, in the CTR Program FY 2000 budget submission, the CTR Directorate stated that it would use FY 2000 funds to eliminate 68 liquid-fueled missiles. It cannot be determined whether the 68 missiles were included as part of the 134 missiles identified in the FY 1999 budget submission.

In addition, because the budget submissions did not provide unit costs or time frames for destroying WMD, DoD and DTRA managers did not know whether unit costs were increasing or whether weapons were being destroyed on time. That information would allow Congress and managers in DoD and DTRA to evaluate whether the CTR Directorate was destroying WMD efficiently and effectively. It would also allow managers to identify opportunities to improve program effectiveness and quantify how external factors and management decisions impact the program. Furthermore, results were not compared against the original performance goals; the goals were revised. Therefore, the CTR Directorate was not fully accountable for achieving results or improving its program effectiveness.

Management Actions

As of February 2001, DTRA was continuing its effort to implement the Chief Financial Officers Act of 1990 and GPRA. That effort included conducting a strategic planning conference with the CTR Directorate in November 2000 to evaluate the strategy for executing the CTR Program. Also, the CTR Directorate was developing an annex to the DTRA strategic plan and designing a program to reach the general goals listed in the DTRA strategic plan. In developing that annex, the CTR Directorate was developing performance goals and indicators using worksheets that include performance goals, performance measures, priorities, time frames for satisfying customer requirements, and methods for improving processes and capacities. If properly implemented, the completed worksheets should allow the CTR Directorate to develop an annex that will allow managers in the CTR Directorate, DTRA, and DoD to evaluate management of the CTR Program.

Conclusion

Although Appendix D identifies many CTR Program accomplishments, there is no basis for determining whether those accomplishments met performance goals. Budget submissions for the CTR Program identified performance goals, but the goals were not adequately defined and were continually changed without explanation. Therefore, DTRA and DoD managers could not measure accomplishments against consistent performance goals. Without consistent performance goals, DoD management did not have information necessary to evaluate whether the CTR Program had been operated economically and efficiently. Without a method to measure success, managers in the CTR Directorate were not fully accountable for achieving results. Ongoing DTRA efforts to develop better metrics should enhance future program management and evaluation.

Recommendations, Management Comments, and Audit Response

Revised Recommendation. As a result of comments from DTRA, we revised Recommendation B.2.

B. We recommend that the Director, Defense Threat Reduction Agency:

1. Continue efforts to improve the “Defense Threat Reduction Agency Strategic Plan 2000” by:

a. Increasing the period covered by the strategic plan from 2 years to 5 years.

b. Including performance goals for the Cooperative Threat Reduction Directorate.

Management Comments. DTRA concurred, stating that it was building a 5-year strategic plan and that the CTR Directorate was taking steps to include performance goals in its annex to the DTRA strategic plan.

Audit Response. DTRA comments were responsive; however, in responding to this report, we request that DTRA provide the estimated completion date of its actions.

2. Develop and publish goals and quantifiable measures that:

a. Are consistent from year to year.

b. Include time frames and unit prices for destroying weapons of mass destruction and address efforts to improve performance through cost and time reductions.

Management Comments. DTRA partially concurred with the draft recommendation. DTRA agreed that the CTR Program needs goals that are consistent from year to year, but stated that the goals should be in the new CTR Annual Report to Congress instead of in the budget submission, as we originally recommended, because of the amount of detail required. DTRA did not concur with including time frames and unit prices and addressing efforts to improve performance in budget submissions. DTRA stated that the CTR Annual Report to Congress meets the intent of the recommendation. DTRA stated that CTR budget submissions are a forecast of expenditures 2 to 3 years in the future that involves external uncertainties that DTRA cannot control. Those uncertainties include situations within FSU countries and time lags in processes related to the budget, Secretary of State certification of FSU countries, DoD notification to Congress, and signing of implementing agreements.

Audit Response. DTRA comments on Recommendation B.2.a. are responsive. DTRA comments on B.2.b. are partially responsive. We revised the overall recommendation to provide DTRA the flexibility to include performance goals and performance indicators in the CTR Annual Report to Congress. However, the response from DTRA did not clearly state whether the CTR Annual Report to Congress will include time frames and unit prices for destroying WMD and will address efforts to improve performance through cost and time reductions.

We recognize that there are several factors beyond the control of DTRA that affect whether the CTR Directorate can meet its goals and that affect its performance and success. DTRA should identify and discuss key external factors in its strategic plan. Also, DTRA should monitor those external factors and attempt to identify actions that could reduce the potential impact of external factors.

In response to the final report, we request that DTRA provide additional comments on Recommendation B.2.b., including whether or not it will include time frames, unit prices, and efforts to improve performance in the CTR Annual Report to Congress.

Appendix A. Audit Process

Scope

We reviewed DoD methods and policies used to administer the CTR Program, which included program, project, and financial management. The review included an evaluation of DTRA compliance with selected provisions of the Nunn-Lugar legislation, international agreements, and DoD directives and instructions. We also verified that accomplishments included in the June 15, 2000, "CTR Scorecard"¹ were accurate and supported. The documentation reviewed covered the period from December 1991 through October 2000. Contracts for the CTR Program that were included in the review are in the following table.

CTR Program Contracts Reviewed		
<u>Contract Number</u>	<u>Date</u>	<u>Subject</u>
DTRA01-00-C-0051	June 30, 2000	Propellant Disposition Facility
DTRA01-99-C-0207	September 27, 1999	Missile Disassembly
DTRA01-99-C-0092	September 10, 1999	SLBM/SSBN Dismantlement
DTRA01-99-C-0093	September 8, 1999	SLBM/SSBN Dismantlement
DTRA01-99-C-0091	September 3, 1999	SLBM/SSBN Dismantlement
DTRA01-99-C-0094	September 2, 1999	SLBM/SSBN Dismantlement
DSWA01-98-C-0123	June 12, 1998	SLBM/SSBN Dismantlement
DSWA01-98-C-0112	June 12, 1998	Silo Launcher Dismantlement and Site Technical Restoration
DSWA01-98-C-0108	May 29, 1998	SLBM/SSBN Dismantlement
DSWA01-98-C-0104	May 27, 1998	SLBM/SSBN Dismantlement
DSWA01-98-C-0036	March 7, 1998	SLBM/SSBN Dismantlement
DNA001-95-C-0066	April 17, 1995	Russian Ballistic Missile Liquid Propellant Disposition

We conducted interviews with officials from the Office of the Assistant Secretary of Defense (Strategy and Threat Reduction), DTRA, Naval Sea Systems Command, Air Staff, Air Force Space Command, Air Force Materiel Command, Air Combat Command, and Army Corps of Engineers. We also

¹The CTR Scorecard shows how many strategic weapons, by weapon type, the CTR Program helped to destroy. The CTR Scorecard is provided to Congress, when requested, to demonstrate accomplishments of the CTR Program, but does not demonstrate the efficiency or effectiveness of the CTR Program.

visited project sites in Russia and Ukraine to speak with government and contracting representatives. In addition, we observed CTR Directorate personnel reviewing their projects at sites within Russia and Ukraine.

DoD-Wide Corporate Level GPRA Coverage. In response to GPRA, the Secretary of Defense annually establishes DoD-wide corporate level goals, subordinate performance goals, and performance measures. This report pertains to achievement of the following goal and subordinate performance goal.

FY 2000 DoD Corporate Level Goal 1: Shape the international environment and respond to the full spectrum of crises by providing appropriately sized, positioned, and mobile forces. **(00-DoD-1)**

FY 2000 Subordinate Performance Goal 1.1: Support U.S. regional security alliances through military-to-military contacts and the routine presence of ready forces overseas, maintained at force levels determined by the Quadrennial Defense Review. **(00-DoD-1.1)**

Methodology

We evaluated the ability of DoD to efficiently and effectively manage the CTR Program. Specifically, we identified and analyzed requirements, policy, and guidance established and implemented by DoD and CTR Directorate officials to provide assistance to FSU countries.

- We evaluated processes used by the Office of the Assistant Secretary of Defense (Strategy and Threat Reduction) and DTRA for developing umbrella agreements, developing implementing agreements, defining project requirements, and contracting.
- We examined DTRA managerial oversight of the CTR Program.
- We researched the value of salvaged materials and commercial by-products produced by destroying WMD.
- We identified how the United States destroys its own WMD.
- We reviewed procedures for validating obligations.

Use of Computer-Processed Data. We did not evaluate the general and application controls of the Centralized Accounting and Financial Resource Management System, which accounts for funds obligated by DTRA. We relied on data produced by that system to support the memorandum we submitted to the Director, DTRA, April 18, 2000, which stated that DTRA was not performing periodic reviews to validate obligations (Appendix E). We did not evaluate the controls because that was outside the scope of our review. Not evaluating the controls did not affect the results of the audit.

Universe and Sample. We performed reviews using judgmental samples of CTR Program projects and the CTR Scorecard. Also, to identify outstanding obligations that had no financial activity, we obtained populations of outstanding obligations from the Centralized Accounting and Financial Resource Management System.

CTR Programs and Projects Selected for Review. To select CTR programs and projects for review, we first selected programs and then chose individual projects. We selected Strategic Offensive Arms Elimination-Russia and Strategic Nuclear Arms Elimination-Ukraine because those programs assisted Russia and Ukraine in meeting their START requirements and had high funding levels for FY 1999.² Within the Strategic Offensive Arms Elimination-Russia program, the SLBM launcher and SSBN destruction project was selected based on the high dollar value of FY 1999 actual obligations and FY 2000 and FY 2001 budget estimates. Selection of the liquid propellant disposition project in Russia was based on a suggestion made by the program manager for the Strategic Offensive Arms Elimination-Russia. Within the Strategic Nuclear Arms Elimination-Ukraine program, the SS-24 silo destruction; SS-24 missile disassembly, storage and destruction; and SS-24 propellant disposition facility projects were selected based on the high dollar value of FY 1999 actual obligations and FY 2000 and FY 2001 budget estimates.

CTR Outstanding Obligations Reviewed. To identify outstanding obligations that had no recent disbursement activity, we obtained populations of outstanding obligations for the CTR Program from the Centralized Accounting and Financial Resource Management System at DTRA. The population of contract obligations consisted of obligations in the accounting system as of February 7, 2000. Each contract obligation initially exceeded \$500,000 and had no disbursements since June 30, 1999. The population of outstanding obligations for interagency agreements and military interdepartmental purchase requests consisted of obligations in the accounting system as of February 15, 2000. Those obligations had no disbursements since June 30, 1999. The population of outstanding travel obligations consisted of obligations in the accounting system as of February 28, 2000. Those obligations had no disbursements in at least 500 days.

Accuracy of the CTR Scorecard. To test the accuracy of accomplishments listed in the CTR Scorecard, we judgmentally selected 9 of the 36 strategic weapon categories listed on the CTR Scorecard Breakdown. Those categories included 120 SS-18 missiles, 22 SS-24 missiles, 144 SLBM launchers on *Delta-I* SSBNs, 64 SLBM launchers on *Delta II*-class SSBNs, 2 *Yankee*-class SSBNs, 9 *Delta I*-class SSBNs, 6 *Blackjack* bombers, 1 *Bear H-6* bomber, and 6 *Bear H-16* bombers. We traced those accomplishments to DD Form 250s, "Material Inspection and Receiving Reports," status reports from U.S. contractors, and Department of State records.

²Although the Chemical Weapons Destruction-Russia and Fissile Material Storage Facility-Russia had higher funding levels than the Ukrainian program, we did not review those programs because the General Accounting Office issued a report on those programs during FY 1999 (GAO Report No. NSIAD-99-76).

Audit Type, Dates, and Standards. We performed this program audit from January through October 2000 in accordance with auditing standards issued by the Comptroller General of the United States, as implemented by the Inspector General, DoD. Accordingly, we included tests of management controls considered necessary.

Contacts During the Audit. We visited or contacted individuals and organizations within DoD; Russia and Ukrainian government officials; and contractors from Russia, Ukraine, and the United States. Further details are available on request.

Management Control Program Review

DoD Directive 5010.38, "Management Control (MC) Program," August 26, 1996, and DoD Instruction 5010.40, "Management Control (MC) Program Procedures," August 28, 1996, require DoD organizations to implement a comprehensive system of management controls that provides reasonable assurance that programs are operating as intended and to evaluate the adequacy of the controls.

Scope of the Review of the Management Control Program. We reviewed the adequacy of management controls within the CTR Program. Specifically, we reviewed management controls over the use of CTR Program funds. We also reviewed management's self-evaluation applicable to those controls.

Adequacy of Management Controls. We identified material management control weaknesses within the CTR Program as defined by DoD Instruction 5010.40. Although the CTR Directorate had many accomplishments, DTRA did not have a basis for determining how well the CTR Directorate achieved those accomplishments and whether those accomplishments met performance goals. Recommendations B.1. and B.2., if implemented, will allow DTRA to evaluate the performance of the CTR Program. A copy of the report will be provided to the senior official responsible for management controls in DTRA.

Adequacy of Management's Self-Evaluation. DTRA officials did not identify all significant operations and mission responsibilities. DTRA had established management controls for travel funds, export controls, and International Merchant Authorization Cards. DTRA did not include management of the CTR Program as an assessable unit and, therefore, did not identify or report the material management control weaknesses identified by the audit.

Appendix B. Prior Coverage

The General Accounting Office and the Inspector General, DoD, have conducted multiple reviews related to the CTR Program. General Accounting Office reports can be accessed over the Internet at <http://www.gao.gov>. Inspector General, DoD, reports can be accessed over the Internet at <http://www.dodig.osd.mil/audit/reports>. The following previous reports are of particular relevance to the subject matter in this report.

General Accounting Office

GAO Report No. NSIAD-00-40 (OSD Case No. 1942), “Cooperative Threat Reduction: DoD’s 1997-98 Reports on Accounting for Assistance Were Late and Incomplete,” March 15, 2000

GAO Report No. RCED/NSIAD-00-82, “Nuclear Nonproliferation: Limited Progress in Improving Nuclear Material Security in Russia and the Newly Independent States,” March 6, 2000

GAO Report No. NSIAD-99-76 (OSD Case No. 1756), “Weapons of Mass Destruction: Effort to Reduce Russian Arsenals May Cost More, Achieve Less Than Planned,” April 13, 1999

GAO Report No. NSIAD-97-218 (OSD Case No. 1414), “Cooperative Threat Reduction: Review of DoD’s June 1997 Report on Assistance Provided,” September 5, 1997

GAO Report No. NSIAD-97-101 (OSD Case No. 1308), “Cooperative Threat Reduction: Status of Defense Conversion Efforts in the Former Soviet Union,” April 11, 1997

GAO Report No. NSIAD-97-84 (OSD Case No. 1290), “Weapons of Mass Destruction: DoD Reporting on Cooperative Threat Reduction Assistance Has Improved,” February 27, 1997

GAO Report No. NSIAD-96-222 (OSD Case No. 1207), “Weapons of Mass Destruction: Status of the Cooperative Threat Reduction Program,” September 27, 1996

Inspector General, DoD

Inspector General, DoD, Report No. D-2000-176, “Defense Enterprise Fund,” August 15, 2000

Appendix C. Salvage Value of Submarine Scrap Material

The CTR Program contracted to destroy 17 Russian SSBNs and planned to destroy 14 additional SSBNs. Based on the amount and types of scrap metal in the SSBNs, Russia could sell the scrap for about \$41.7 million. The scrap material to be salvaged from the *Delta*-class SSBNs is worth approximately \$36.2 million, including \$15.1 million from the *Delta I*-class, \$6 million from the *Delta II*-class and \$15.1 million from the *Delta III*-class. Destruction of the *Typhoon*-class SSBNs could provide about \$4.4 million in revenue from the sale of scrap; however, DTRA did not have complete data on the types and quantities of metals in those submarines. There was also one *Yankee*-class SSBN that produced approximately \$1 million worth of salvaged metal when it was destroyed.

The following tables summarize the types, quantities, and values of the scrap material by submarine class. Prices were obtained from Mill Prices, London Metal Exchange, Metalprices.com, RecycleNet Scrap Metals Index, and USA Specialty Scrap Processor on specific days between May and June 2000. Because metal prices fluctuate, the proceeds from selling the scrap would depend on market conditions at the time of sale. Also, net proceeds could be affected by shipping costs. Values in the tables were calculated using precise weights and unit prices. Because of rounding, multiplying metric tons and price per metric ton may not result in the precise value shown in the tables. Details can be provided on request.

Table C-1. Scrap Value of *Delta I*-Class SSBNs

Scrap Item	Metric Tons (MT)	Price Per MT	Value
Aluminum alloy	64	\$1,145	\$ 73,280
Brass	44	617	27,161
Bronze	42	617	25,926
Copper	79	1,724	136,157
Copper cable	132	1,724	227,502
Copper-nickel	40	2,404	96,178
Ferrous metal	3,570	92	330,211
Melchior*	30	3,109	93,265
Stainless steel	130	215	27,958
Titanium alloy	120	2,756	330,690
Total per submarine	4,251		\$ 1,368,328
Submarines dismantled	10		\$13,683,280
Submarines to dismantle	1		1,368,328
Total	11		\$15,051,608

*Contains 80 percent copper, 20 percent nickel.

Table C-2. Scrap Value of *Delta II*-Class SSBNs

Scrap Item	Metric	Price	Value
	Tons (MT)	Per MT	
Aluminum alloy	70	\$1,145	\$ 80,150
Brass	50	617	30,864
Bronze	48	617	29,630
Copper	91	1,724	156,839
Copper cable	176	1,724	303,336
Copper-nickel	40	2,404	96,178
Ferrous metal	4580	92	423,632
German silver*	36	2,079	74,847
Titanium alloy	114	2,756	314,156
Total per submarine	5,205		\$ 1,509,632
Submarines dismantled	3		\$ 4,528,896
Submarines to dismantle	1		1,509,632
Total	4		\$ 6,038,528

*Contains 60 percent copper, 20 percent nickel, 20 percent zinc.

Table C-3. Scrap Value of *Delta III*-Class SSBNs

Scrap Item	Metric	Price	Value
	Tons (MT)	Per MT	
Aluminum alloy	70	\$1,145	\$ 80,150
Brass	50	617	30,864
Bronze	48	617	29,630
Copper	91	1,724	156,839
Copper cable	176	1,724	303,336
Copper-nickel	40	2,404	96,178
Ferrous metal	4,580	92	423,632
German silver*	36	2,079	74,847
Titanium alloy	114	2,756	314,156
Total per submarine	5,205		\$ 1,509,632
Submarines dismantled	2		\$ 3,019,264
Submarines to dismantle	8		12,077,056
Total	10		\$ 15,096,320

*Contains 60 percent copper, 20 percent nickel, 20 percent zinc.

Table C-4. Scrap Value of *Typhoon* -Class SSBNs

<u>Scrap Item</u>	<u>Metric Tons (MT)</u>	<u>Price Per MT</u>	<u>Value</u>
Ferrous metal	9,554	\$ 92	\$ 883,670
Unidentified metals	4,285	-	-
Total per submarine	13,839		\$ 883,670
Submarines dismantled	1		\$ 883,670
Submarines to dismantle	4		3,534,680
Total	5		\$ 4,418,350

Table C-5. Scrap Value of *Yankee* -Class SSBNs

<u>Scrap Item</u>	<u>Metric Tons (MT)</u>	<u>Price Per MT</u>	<u>Value</u>
Aluminum alloy	26	\$ 1,145	\$ 29,656
Copper cable	59	1,724	101,687
Copper-nickel	235	2,404	566,008
Ferrous metal	3780	92	349,635
Unidentified metals	14	-	-
Total per submarine	4,114		\$1,046,986
Submarines dismantled	1		\$1,046,986
Submarines to dismantle	0		0
Total	1		\$1,046,986

Appendix D. Program Accomplishments

The destruction of WMD in FSU countries is an important element of the DoD security strategy for the 21st century. The CTR Program has helped FSU countries to destroy significant amounts of WMD and provided other assistance to those countries. CTR Program efforts have made Belarus, Kazakhstan, and Ukraine nuclear-free countries. * The CTR Program has provided equipment to FSU countries and directly assisted them in destroying various WMD. The CTR Directorate maintains a CTR Scorecard of WMD that it has destroyed, showing program accomplishments. For the June 15, 2000, scorecard, we tested the accuracy and support for CTR Program accomplishments. Those accomplishments were accurate and supported. The following table shows the number of weapons that FSU countries declared and the number destroyed with assistance from the CTR Program.

<u>Weapons</u>	<u>Total Weapons Declared by FSU Countries</u>	<u>Weapons Eliminated¹</u>	<u>FSU Weapons Remaining to Eliminate²</u>
Bombers	146	62	33
ICBM ³ mobile launchers	390	0	299
ICBM silos	798	365	135
ICBMs	1,445	394	609
Long-range nuclear ALCMs ⁴	493	66	427
Nuclear test tunnels	194	193	1
SLBM launchers	728	256	280
SLBMs	936	123	546
SSBNs	48	13	23
Warheads	13,300	5,014	4,282

¹As of June 15, 2000.
²The number of weapons that need to be destroyed to meet START II requirements.
³Intercontinental ballistic missile.
⁴Air-launched cruise missiles.

In addition to the accomplishments shown in the table, the CTR Directorate performed preparatory work needed to eliminate WMD. For example, the CTR Directorate repaired railroad lines; purchased railcars and special

*All nuclear warheads have been deactivated in Belarus, Kazakhstan, and Ukraine, and transferred to Russia.

containers to transport missiles, warheads, and propellant; and repaired vessels used to remove fuel from SSBNs. The CTR Program also improved the security over nuclear warheads and fissile material; dismantled infrastructure used to produce biological weapons; supported employment of former weapons scientists; and purchased WMD. Security for nuclear warheads and fissile material was improved by purchasing about 33,000 fissile material containers and constructing a facility to store those containers; providing an inventory control system; and improving perimeter security. Infrastructure of facilities used to produce biological weapons was dismantled at Stepnogorsk, Kazakhstan. Employment of 15,000 weapon scientists was supported through peaceful research projects and establishing a foundation to help scientists pursue peaceful research opportunities. The CTR Directorate also purchased 21 MiG-29 fighter aircraft and 500 air-to-air missiles from Moldova to prevent other countries from purchasing those weapons.

Appendix E. Monitoring Budget Obligations

On April 18, 2000, the Assistant Inspector General for Auditing, DoD, issued a memorandum to the Director, DTRA, pertaining to management of CTR Program obligations. Specifically, DTRA was not reviewing outstanding obligations for the CTR Program tri-annually, as required by a memorandum from the Under Secretary of Defense (Comptroller), "Quarterly Reviews of Commitments and Obligations," May 14, 1996. As a result, the CTR Directorate did not know whether its outstanding obligations were still valid. The Director, DTRA, responded to the memorandum on June 29, 2000. He stated that DTRA was reviewing the unliquidated obligations for the CTR Program and that DTRA would integrate DoD requirements into the DTRA joint review program. According to DTRA officials, DTRA performed a joint review in May 2000. That review, which was limited to FY 1999 and FY 2000 funds, did not identify any invalid obligations. As of February 2001, DTRA had not completed an evaluation of the validity of FY 1994 through FY 1998 obligations. The April 18, 2000, memorandum from the Assistant Inspector General for Auditing, DoD, and the June 29, 2000, response from the Director, DTRA, follow.



INSPECTOR GENERAL
DEPARTMENT OF DEFENSE
400 ARMY NAVY DRIVE
ARLINGTON, VIRGINIA 22202-2885

APR 18 2000

MEMORANDUM FOR DIRECTOR, DEFENSE THREAT REDUCTION AGENCY

SUBJECT: Financial Management Issues Identified During the Audit of the
Cooperative Threat Reduction Program (Project No. 0LG-5105)

This is to bring a financial management issue in the Cooperative Threat Reduction (CTR) program to your attention. During our ongoing audit of the CTR program, we identified a need for the Defense Threat Reduction Agency to develop procedures for reviewing its outstanding obligations. Prompt attention is requested to ensure that the Defense Threat Reduction Agency is properly managing the financial condition of the CTR program.

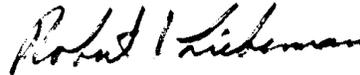
The Defense Threat Reduction Agency had not performed periodic reviews of its outstanding obligations under the CTR program. An Under Secretary of Defense (Comptroller) memorandum, "Quarterly Reviews of Commitments and Obligations," May 14, 1996, requires DoD Components to review their outstanding obligations tri-annually. As of February 1, 2000, the CTR program had outstanding obligations totaling \$654.5 million, including \$92.5 million that had no disbursements for an extended time period, including:

- 41 contracts (with initial obligations over \$500,000) with unobligated balances of \$22.7 million had no disbursements in at least 6 months,
- 25 Interagency Cost Reimbursable Orders with unobligated balances of \$1.2 million had no disbursements in at least 6 months,
- 103 Military Interdepartmental Purchase Requests with unobligated balances of \$68.3 million had no disbursements in at least 6 months, and
- 141 travel orders with unobligated balances of \$309,000 had no disbursements in at least 500 days.

The Defense Threat Reduction Agency CTR Directorate did not know whether those obligations were still valid because it had not periodically reviewed outstanding obligations. Although the CTR Directorate initiated a review of its outstanding obligations in November 1999 when the Defense Threat Reduction Agency received requests for payment from the Department of State for services rendered in FY 1994 and FY 1995, that review, which was still ongoing as of April 12, 2000, focused on outstanding obligations from FY 1994 and FY 1995. We suggest that the CTR

Directorate expand its review to include all outstanding obligations and that the Defense Threat Reduction Agency conduct tri-annual reviews as required by the Under Secretary of Defense (Comptroller) memorandum. Performing tri-annual reviews should ensure that Defense Threat Reduction Agency obligations are valid.

We are providing you with the results of this issue in this form because prompt attention is needed to ensure that outstanding obligations are properly managed. We will issue a report upon completion of the audit that will include a copy of this memorandum and a summary of corrective actions taken by the Defense Threat Reduction Agency. Accordingly, we request that you inform us in writing within 60 days of the date of this memorandum of your planned actions. Questions should be directed to Ms. Evelyn R. Klemstine at (703) 604-9172 (DSN 664-9172) (eklemstine@dodig.osd.mil) or Ms. Catherine M. Schneiter at (703) 604-9614 (DSN 664-9614) (cschneiter@dodig.osd.mil).



Robert J. Lieberman
Assistant Inspector General
for Auditing



Defense Threat Reduction Agency

45045 Aviation Drive
Dulles, VA 20166-7517

JUN 29 2000

MEMORANDUM FOR INSPECTOR GENERAL, DEPARTMENT OF DEFENSE

SUBJECT: Financial Management Issues Identified During the Audit
of the Cooperative Threat Reduction Program
(Project No. OLG-5105)

This is in response to your April 18, 2000 memorandum addressing the need for the Defense Threat Reduction Agency (DTRA) to develop procedures for reviewing outstanding obligations of the CTR program.

The CTR program's current unliquidated obligations and unobligated commitments are under review as part of our joint review process. In summary, program analysts and budget analysts conduct the reviews, verify outstanding commitments and obligations and provide documentation to support requisite adjustments.

The CTR program directorate received the initial report of outstanding unliquidated obligations and commitments on June 7, 2000. The first analysis of these transactions will occur during the months of June and July. The remainder of the fiscal year will be dedicated to inputting adjustments and resolving outstanding issues identified during the first review. The CTR program will be fully integrated into the DTRA joint review program in subsequent years.

The Defense Finance and Accounting Service (DFAS) is the accounting station for CTR funding years prior to FY99. DTRA is currently working with DFAS to resolve uncleared disbursements residing at DFAS.

My point of contact for this matter is Lieutenant Colonel Susan Beausoleil, (703) 810-4552.


Jay Davis
Director

Appendix F. Report Distribution

Office of the Secretary of Defense

Under Secretary of Defense for Acquisition, Technology, and Logistics
Under Secretary of Defense for Policy
 Assistant Secretary of Defense (Strategy and Threat Reduction)
 Deputy Assistant Secretary of Defense (Threat Reduction Policy)
 Director, Cooperative Threat Reduction Policy
Under Secretary of Defense (Comptroller)
 Deputy Chief Financial Officer
 Deputy Comptroller (Program/Budget)

Department of the Army

Auditor General, Department of the Army

Department of the Navy

Naval Inspector General
Auditor General, Department of the Navy
Inspector General, Naval Sea Systems Command

Department of the Air Force

Assistant Secretary of the Air Force (Financial Management and Comptroller)
Auditor General, Department of the Air Force

Other Defense Organizations

Director, Defense Threat Reduction Agency

Non-Defense Federal Organizations and Individuals

Office of Management and Budget
Department of State
 Coordinator of U.S. Assistance to the New Independent States

Congressional Committees and Subcommittees, Chairman and Ranking Minority Member

Senate Committee on Appropriations
Senate Subcommittee on Defense, Committee on Appropriations
Senate Committee on Armed Services
Senate Committee on Governmental Affairs
House Committee on Appropriations
House Subcommittee on Defense, Committee on Appropriations
House Committee on Armed Services
House Committee on Government Reform
House Subcommittee on Government Efficiency, Financial Management, and Intergovernmental Relations, Committee on Government Reform
House Subcommittee on National Security, Veterans Affairs, and International Relations, Committee on Government Reform
House Subcommittee on Technology and Procurement Policy, Committee on Government Reform
House Committee on International Relations
House Subcommittee on International Economic Policy and Trade, Committee on International Relations

Assistant Secretary of Defense for Strategy and Threat Reduction Comments



STRATEGY
AND
THREAT REDUCTION

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
2900 DEFENSE PENTAGON
WASHINGTON, D.C. 20301-2900



In reply refer to:
I-01/001728-CTR

MEMORANDUM FOR: DEPARTMENT OF DEFENSE INSPECTOR GENERAL, ATTN:
DIRECTOR, READINESS AND LOGISTICS SUPPORT
DIRECTORATE

FROM: PRINCIPAL DEPUTY ASSISTANT SECRETARY OF
DEFENSE FOR STRATEGY AND THREAT REDUCTION
(ACTING) *A. Rock*
16 Feb 01

SUBJECT: DOD Inspector General Discussion Draft of a Proposed Report, Project No.
D2000LG-0031.01 (Cooperative Threat Reduction Program)

My staff and I have reviewed the subject Department of Defense Inspector General (DOD/IG) Draft Proposed Report. I have provided our comments and stated the actions we will be taking. I am confident that we can complete the review of the current projects by April 27, 2001. We will work with DTRA to develop a time line for contract changes that are necessitated by the review.

GENERAL COMMENTS:

The report correctly identifies the Cooperative Threat Reduction (CTR) Program goal as, "... to reduce the threat posed by the weapons of mass destruction remaining in the territory of the former Soviet Union." We believe it is important to emphasize that CTR is not an assistance program and that:

1. First and foremost, it is in the best interest of the United States to reduce the threat posed by former Soviet Union (FSU) weapons of mass destruction (WMD). While WMD reductions may *coincide* with the interests of FSU nations, their WMD holdings are a *threat* to the US but only an *inconvenience* to the FSU states.
2. The CTR program is intended to improve the security of the United States and its allies. The fact that eliminating WMD capabilities in the FSU also benefits those states is used as leverage to obtain agreements to eliminate systems that threaten US national security. It is not an objective.

COMMENTS ON SECTION "A" FINDINGS:

CONGRESSIONAL CONCERNS

Our January 10, 2000 response to Congress may not have indicated whether DoD required or encouraged FSU countries to use revenue generated by CTR-funded activities to destroy their

WMD. However, our extensive correspondence with the recipient country executive agents pursuant to CTR agreements supports the fact that we have required the recipient country executive agents to pledge that revenues will be employed to further develop work to eliminate WMD. We would be pleased to share this correspondence with you.

CTR PROGRAM SERVICES

We do not agree with the DOD/IG's conclusion that, "... the Cooperative Threat Reduction Directorate used more than \$64.5 million in program funds to facilitate the removal of weapons of mass destruction by enhancing the value of salvageable materials and developing commercial by-products for Russia and Ukraine ... Russia and Ukraine could generate revenue of at least \$72.8 million without agreements on how the revenue should be used." We question DOD/IG methodology in developing the estimates and find the estimates do not account for all relevant factors in determining the \$64.5 million or the \$72.8 million numbers. These values require further clarification. There is correspondence with recipient country executive agents pursuant to CTR agreements that describes how revenue from elimination of WMD is to be used. We would be pleased to share this correspondence with you.

The following comments are intended to clarify the CTR policy and programmatic approach in its conduct of business with the Russian Federation and Ukraine for the specific projects reviewed by the DOD/IG.

Liquid Propellant Disposition.

Russia agreed to abide by the results of an open competition for disposition of liquid propellant. A total of three contractors bid; two bid to incinerate and one bid to convert. The contract was awarded to the lowest bidder. At the time of this agreement, Russia was responsible for operating the system. The resulting by-products are Russia's responsibility also and can be sold to offset the Russian's infrastructure costs for this system or other Russian costs to facilitate offensive strategic nuclear weapons elimination including operation of the provided systems. The conversion systems are not yet operational.

DOD addressed the question of revenues with the Russians and, in a memorandum dated April 11, 1995, from N. I. Shumkov, State Committee of the Russian Federation on the Defense Sector, to DASD Duffy, DOD, they assured DOD that, "... profit will be employed to further develop work to eliminate offensive strategic nuclear weapons" N. I. Shumkov currently is the designated executive agent for Russia for this and other projects to eliminate strategic launcher complexes in Russia. In 1999, DOD agreed to defuel liquid fuel missiles, transport the propellant to the converter, and operate the converter. In light of this decision, we will engage the Russian executive agent on the use of future revenues from the sale of by-products from propellant conversion.

SLBM Launcher and SSBN Destruction.

DOD determined that disposing of metal scrap from SSBNs would ensure that scrap did not accumulate and delay the central task of destroying the SSBNs as quickly as possible. In 1993 DOD purchased shears to size the scrap to facilitate its transport. Russia agreed that the

revenues from the sale of scrap would be used to purchase the supplies of fuel, electricity, oxygen and cutting gases for the elimination and dismantlement effort. However, scrap revenue is insignificant compared to the cost of the supplies and labor to eliminate SSBN launchers and dismantle SSBNs.

Due to economic factors the Russian Federation was unable to provide additional funds to eliminate SLBMs and dismantle SSBNs after the equipment to reduce the size of the scrap was installed in 1994-1995. Following a detailed analysis of the SLBM eliminations required for Russia to meet strategic nuclear force reductions required by START I, DOD undertook detailed discussions and visits to the shipyards in 1996 to develop streamlined procedures for the process of SLBM launcher elimination and SSBN dismantlement. Following an interagency review and cost-benefit acquisition assessment, a decision was taken to contract directly with the Russian shipyards for the SLBM launcher and SSBN dismantlement beginning in 1998.

To meet the US government objectives of increasing US national security by accelerating strategic arms reductions to START levels, DOD negotiated fixed price contracts with payment following task completion for the SLBM launcher eliminations and SSBN dismantlement. The contracts place limits on what metal handling will be funded by the CTR program during SLBM launcher elimination and SSBN dismantlement. More broadly, the cost of these contracts was reduced because of the availability of the streamlined metal handling processes installed at the three START I designated Russian shipyards. Nevertheless, we will readdress with the Russian executive agent the use of revenue from the sale of the by-products from the SLBM launcher elimination and the SSBN dismantlement contracts.

SS-24 Missile System Destruction.

We have comments on two aspects of this portion of your report. The first aspect is the sizing of scrap from SS-24 launch complexes. The main reason for assistance with scrap sizing was to reduce accumulation that could delay destruction of SS-24 systems. We are satisfied with the arrangement developed at the beginning. However, we will follow up on the annual reports on Ukrainian revenues and procurements from the scrap proceeds requested by DTRA/CT from Deputy Minister for Defense, General-Colonel Mikhtyuk. The second aspect concerns the SS-24 missiles with solid propellant. Converting solid fuel to mining explosives is a pilot project. If the pilot project is successful, but before we begin to remove the propellant and stabilize it for mining explosives or convert it to some other valuable by-product, CTR will readdress with the Ukrainian executive agent the use of revenue from the sale of those explosives or by-products.

CTR IMPLEMENTING AGREEMENT AND COST ANALYSIS

To the extent a project with a recipient country is funded with CTR appropriations, we have the final decision on what technical assistance will be provided within each of the CTR implementing agreements. Likewise, it is a U.S. decision, promulgated through this office, whether or not the anticipated by-products of the elimination or disposition activity funded by CTR are to be recovered or provided to the recipient country. As discussed above, we do hold the relevant executive agent for the recipient country responsible for ensuring any revenue is used to further develop work to eliminate offensive strategic nuclear weapons. Although we have discussed with the representatives of the relevant executive agencies the uses made of the

revenues, we have not in the past verified these disclosures. In the case of the Ministry of Defense of Ukraine, we have requirements for annual written disclosure of the uses made of the revenues, but as with the other executive agents, we have not verified the Ministry's responses.

POLITICAL, ECONOMIC AND ENVIRONMENTAL CONSIDERATIONS

All decisions concerning the CTR program derive from assessment of the benefits to the national security of the United States. As your report brings to light, circumstances have changed since some of the decisions were taken regarding what should be done with the by-products from CTR contracted activities. We appreciate this fact and will review each CTR activity to determine the best solution for the United States and the Department of Defense.

REVENUE GENERATED FROM SALVAGED MATERIALS

As discussed above, we disagree with your estimate of the revenue from salvaged material. These values require further clarification. In addition, the current agreements with the recipient countries provide the necessary authorities for the U.S. and this office to control the by-products from CTR funded activities and any revenues from their sale. Based on the review of each project and its generation of by-products or its potential to generate by-products in the future, appropriate action will be taken.

COMMENTS ON THE RECOMMENDATIONS

A.1. We recommend that the Assistant Secretary of Defense (Strategy and Threat Reduction) amend implementing agreements with Russia and Ukraine to:

A.1.a. Indicate that DOD assistance will be performed economically and efficiently.

RESPONSE: We do not agree with this recommendation because it is unnecessary. All of the Government-to-Government Agreements for CTR (referred to as Umbrella Agreements) specify that, "In the event that a Party awards contracts for the acquisition of articles and services, including construction, to implement this Agreement, such contracts shall be awarded in accordance with the laws and regulations of that Party." Further, each of the implementing agreements states that this "... Agreement and all activities undertaken pursuant to this Agreement shall be subject to the provisions of the (appropriate Umbrella Agreement)". The DoD CTR program has used U.S. law and the Federal Acquisition Regulations for all of its acquisitions. Except for one exception that was approved by the Secretary of Defense and two defense conversion grants, all acquisitions have been through contracts. Economical and efficient operations are de facto requirements in all US government contracting and other business transactions. The open bid process, which has been used in the CTR program where applicable, assures the program is operated economically and efficiently within US statutory requirements.

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A.1.b. Identify the types of services that DOD will provide.

RESPONSE: We do not agree with this recommendation. Effective and efficient program management requires the flexibility to alter specific project elements without requiring time consuming amendments to the agreements. The CTR program has a rigorous process for defining what services to provide. As the Executive Agent for the DoD, we review any recipient nations' request for assistance and in concert, as required, with the interagency, decide the policy for and the scope of the assistance DoD will provide. These decisions are linked to the agreements and communicated to the recipient countries executive agent for that program area by letter. These letters also provide policy and scope of work guidance to the implementing organization, currently the DTRA. DTRA develops the contracts. The CTR program only provides services through U.S. law and contracts governed by U.S. contracting regulations.

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A.1.c. Address the responsibilities of Russia and Ukraine in destroying weapons.

RESPONSE: We do not agree with this recommendation as the subject is fully covered in the relevant existing CTR umbrella agreements, implementing agreements and contracts, as well as in the governing START I Treaty and Lisbon Protocol and Chemical Weapons Convention.

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A.1.d. Address the tracking and use of revenue generated from US funded activities.

RESPONSE: We will address or readdress with the appropriate recipient country executive agents the use of current or possible future revenues from CTR funded activities. We have the necessary authorities within existing agreements to change tracking and use of revenue procedures that are needed.

Revised and
Re-number
A.1.

A.2.b. Monitor the use of revenue generated from activities funded by the United States.

RESPONSE: As stated in our response to A.1.d above, we will address or readdress the use of current or potential revenues from CTR funded activities with the recipient nations. Based on the outcome of those discussions we will determine whether or not the recipient country will receive the by-products. Monitoring is very difficult, however the most important principle is getting what we pay for. If it is inappropriate for them to receive the by-products, then we will assess the economics of monitoring the use of the revenue.

The Defense Threat Reduction Agency has provided responses to the DOD/IG recommendations most relevant to their responsibilities and therefore we are not commenting on those.

Should you have further questions, please contact Jim Reid at (703) 695-5012 or me at (703) 697-7728.

Defense Threat Reduction Agency Comments

Final Report
Reference



Defense Threat Reduction Agency

45045 Aviation Drive
Dulles, VA 20166-7517

25 January 2001

MEMORANDUM FOR DOD INSPECTOR GENERAL

SUBJECT: Audit Report on the Cooperative Threat Reduction Program
(Project No. D2000LG-0031.001)

Thank you for the opportunity to review and comment on the draft audit of the Cooperative Threat Reduction (CTR) Program.

Finding A states that the CTR Directorate expended more funds than would otherwise have been necessary to destroy liquid rocket fuel and dismantle military systems by enhancing the value of salvageable materials and developing commercial by-products for Russia and Ukraine. As a result of these actions, you concluded that Russia and Ukraine could generate revenue of at least \$72.8 million without agreements on how the revenue should be used.

Since four of the six recommendations that follow from this finding are directed to the Assistant Secretary of Defense (Strategy and Threat Reduction) [ASD(S&TR)], and one of the two remaining recommendations depends on policy guidance, DTRA must defer to OSD Policy to concur or non-concur with Finding A. However, were it our place to do so, we would non-concur with Finding A. Here's why.

The preferred approach to threat reduction is that the owning nation take full responsibility for eliminating its own systems in a timely manner. Unfortunately, the countries of the former Soviet Union have not had enough resources to even provide for their own legitimate defense needs let alone the expensive process of eliminating aging and treaty limited WMD. As the IG report recognizes, this is why the CTR program was begun and why the level of US involvement was increased after the severe economic failures in the FSU countries in the late 1990s.

Once a joint program of cooperation is initiated, the parties must agree to negotiated details before implementation is possible. These negotiated agreements begin at the political level with general agreements on the scope and legal framework for cooperation. The negotiations ultimately result in specific contracts on a project-by-project basis. During all levels of negotiations, the overarching US objective is to get the threat eliminated as fast as possible. The US starting position is always the least cost approach to the US taxpayer consistent with US laws and standards of safety and environmental protection. Our negotiators try to accomplish this objective in a fair way with as few US taxpayer resources as possible. Our cooperation partners, while they are clearly interested in reducing their forces and meeting their treaty obligations, have their own negotiating constraints. For example, these weapon systems symbolize a major

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(Page 9)

element of their claims to be significant players on the world political stage. These systems also constitute a major past investment of their national treasure, and employ a large part of their populations that don't have readily apparent alternatives to making a minimum living. In general, these constraints tend to drive the Russians and Ukrainians to take a more conservative approach to force reductions.

The end result of the negotiating process is an agreement or a contract that in the end, as the IG points out, may not be the lowest possible cost to the taxpayer. However, the chances of successful implementation of these agreements are enhanced significantly if both sides to the negotiations interpret the agreement to be win-win. For certain, cooperation is essential to mission success (i.e., reduce the threat to US security).

Overall, we have a serious concern with the draft report—the report is too narrowly focused. The minimalist approach recommended by the IG would unduly constrain DTRA contract negotiations and prevent, or at least delay, mission accomplishment.

Turning to the two specific recommendations in Section A addressed to the Director, Cooperative Threat Reduction Directorate:

DoD IG Recommendation A.2.a: We recommend that the Director, Cooperative Threat Reduction Directorate, prepare cost analyses of methods available to destroy weapons of mass destruction to provide decision-makers with information needed for an informed decision. DTRA Response: DTRA concurs. DTRA will expand its cost analysis efforts so as to be able to provide decision-makers with the information needed to make informed decisions.

DoD IG Recommendation A.2.b: We recommend that the Director, Cooperative Threat Reduction Directorate, monitor the use of revenue generated from US funded activities. DTRA Response: The decision to monitor the revenues generated from activities funded by the US is one that will be made in OSD Policy. Tracking revenue or products generated in a fledgling capitalist economy will be very difficult and we do not presently have a sound solution to the problem. Because our role in this area depends on policy guidance beyond our authority, we defer to OSD Policy to concur or non-concur with this recommendation.

Finding B states that the Cooperative Threat Reduction Directorate did not establish adequate performance goals for the CTR Program. DTRA concurs. The Agency is already moving forward to incorporate Government Performance and Results Act (GPRA) principles into our management practices.

Under the Director's guidance, DTRA's leadership developed a strategic plan, which was completed in January 2000. This plan had several unique features as a result of the requirement to prioritize the actions required to complete the merger and at the same time accomplish the agency mission.

The plan included broad overarching objectives and outlined strategies to accomplish each objective. Each directorate then identified a number of specific tasks that had to be accomplished to carry out the strategies and achieve the objectives. Those tasks were to be incorporated into each directorate's annexes to the DTRA Strategic Plan. A limited number of those tasks were included in sidebar text in the published plan to be illustrative of the specific tasks performed by the Agency that would be of primary focus to begin to shape the organization.

Each directorate, to include CTR, is developing their directorate unique annex, which will include the type of very specific quantifiable goals and measures envisioned by the GPRA. Hopefully, these steps will effectively implement the thrust of the IG's recommendations in this area.

Turning to your specific recommendations in Section B:

DoD IG Recommendation B.1.a: We recommend that the Director, Defense Threat Reduction Agency, continue efforts to improve the "Defense Threat Reduction Agency Strategic Plan 2000" by increasing the period covered by the strategic plan from 2 years to 5 years. DTRA Response: DTRA concurs. The Agency is already in the process of building a 5-year strategic plan.

DoD IG Recommendation B.1.b: We recommend that the Director, Defense Threat Reduction Agency, continue efforts to improve the "Defense Threat Reduction Agency Strategic Plan 2000" by including performance goals for the Cooperative Threat Reduction Directorate. DTRA Response: DTRA concurs. The CTR Directorate is taking steps to include performance goals in its annex to the strategic plan.

DoD IG Recommendation B.2.a: We recommend that the Director, Defense Threat Reduction Agency, include goals in budget submissions that are consistent from year to year. DTRA Response: DTRA concurs. However, CTR's strategic goals are designated as objectives. These objectives are broken out at the program and project level and are included in the budget submissions and other program planning and budget management system documents. Additionally, Public Law 103-337 required the Secretary of Defense to submit to Congress a multi-year plan for the CTR program at the time of the transmission to Congress of the budget justification materials. This requirement started in fiscal year 1996. The multi-year plan includes an estimate of the total amount required to be expended by the United States in order to achieve the objectives of the CTR Program. An updated version is submitted to Congress each year. Public Law 106-398 consolidated the requirement with two additional reports, and is now referred to as the CTR Annual Report to Congress. The multi-year plan projects plans and requirements throughout the Future Years Defense Plan, and has a significant level of detail not included in the budget submission. Included in this report are the objectives of each project, funding, current status, future milestones, changes from the last report, what was accomplished in the last fiscal year, and what steps were taken to insure the assistance went for the intended purpose.

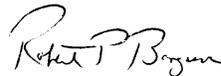
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While the overarching objectives rarely change, the yearly plan changes because we are working in a dynamic political and economic environment that affects our sovereign cooperation partners as well as the United States. These project level changes appear in the budget submission. They vary from year to year to reflect reality, as required by the budget submission process. Subsequent year submissions of yearly plans will highlight changes from the prior year and the reasons for these changes.

The Annual Report's level of detail, accounting and planning, greatly exceeds the requirements of the DoD budget submission, and is rarely matched by any DoD program from any source of funds. This congressionally required report gives CTR the opportunity to explain any reality-based changes from year to year. Thus, the appropriate place for implementing the recommendation is in the multi-year plan, as this is the best document to show the continuity, changes and details recommended by the DoD IG.

DoD IG Recommendation B.2.b: We recommend that the Director, Defense Threat Reduction Agency, include goals in budget submissions that include time frames and unit prices for destroying weapons of mass destruction and address efforts to improve performance through cost and time reductions. DTRA Response: DTRA non-concurs. While the Annual Report to Congress covers the intent of the IG recommendation, the degree of detail suggested by the IG cannot be included with the budget submission. This is because the budget submission is a forecast of future expenditures two to three years in the future, and involves great uncertainty in our cooperation partners' sovereign nations--their societies and economies are in constant flux. Before we can act, the budget must be submitted, approved, and appropriated by Congress. Then, the Secretary of State must certify the recipient nations are in compliance with requirements of Section 211 (b) of the Soviet Nuclear Threat Reduction Act of 1991. In addition, the Secretary of Defense must notify Congress of the Department's intent to obligate CTR funds. Finally, the Department must negotiate and sign an implementing agreement with the recipient country. Only at this point can CTR undertake the technical discussions, site visits, detailed costing estimates, and acquisition actions needed to develop time frames and unit prices for destroying weapons of mass destruction and address efforts to improve performance through cost and time reductions. Frequently, these determinations of cost and schedule must be adjusted as our cooperation partners actually release systems for elimination. Their scheduled releases often change for their own political or security reasons.

Thank you again for the opportunity to comment on this draft report. I would ask that you consider our responses before publishing the final report.


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