

June 2005

COOPERATIVE THREAT REDUCTION

DOD Has Improved Its Management and Internal Controls, but Challenges Remain



G A O

Accountability * Integrity * Reliability

Highlights of [GAO-05-329](#), a report to congressional committees

Why GAO Did This Study

Section 3611 of the National Defense Authorization Act for Fiscal Year 2004 mandates that GAO assess the Department of Defense's (DOD) internal controls for the Cooperative Threat Reduction (CTR) program and their effect on the program's execution. In addressing the mandate, we assessed DOD's management and internal controls over implementing CTR projects since 2003 by using the control standards for the federal government as criteria. In response to the mandate, we focused on those management and internal control areas considered most relevant to CTR project implementation: (1) building a management structure, (2) risk assessments, (3) performance measures, (4) program reviews, (5) communications, and (6) project monitoring. The Congress also mandated that GAO describe the status of DOD's implementation of legislative mandates covering the CTR program.

What GAO Recommends

GAO recommends that the Secretary of Defense conduct performance reviews of CTR projects upon their completion. Such reviews would provide a mechanism to document lessons learned and apply them to future project planning and implementation. DOD concurred with our recommendation.

www.gao.gov/cgi-bin/getrpt?GAO-05-329.

To view the full product, including the scope and methodology, click on the link above. For more information, contact Joseph Christoff at (202) 512-8979 or christoffj@gao.gov.

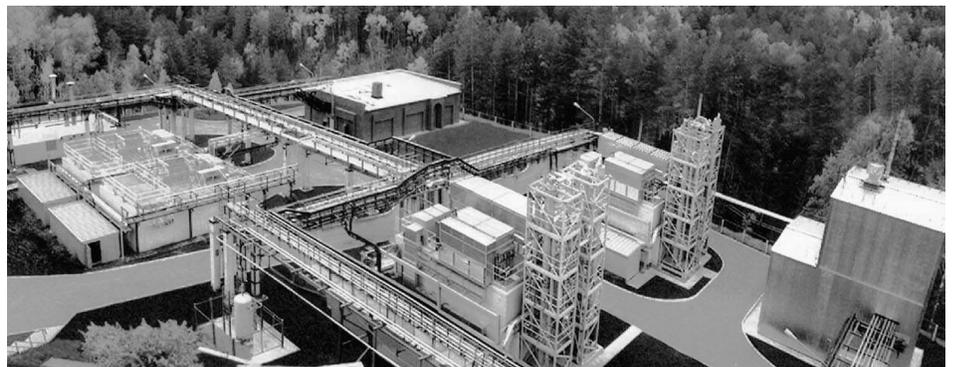
COOPERATIVE THREAT REDUCTION

DOD Has Improved Its Management and Internal Controls, but Challenges Remain

What GAO Found

Through the CTR program, DOD provides assistance to help the former states of the Soviet Union secure and eliminate their weapons of mass destruction. Since 2003, DOD has improved its management and internal controls over the CTR program. Prior to 2003, DOD had problems managing the program and ensuring that the program was meeting its objectives. These inadequacies became apparent in 2003 following two project failures in Russia that cost the CTR program almost \$200 million, including the never used liquid rocket fuel disposition facility. Following these incidents, DOD implemented a more structured approach to managing the CTR program. In July 2003, DOD filled vacancies in the office responsible for managing the program, providing a level of leadership and oversight that did not previously exist. Once in place the new leadership made important improvements to the program's internal controls in the areas of organizational structure, risk assessments, performance measures, program reviews, and communication. For example, DOD now assesses and balances risks with project requirements and measures project performance at each phase. DOD also conducts semi-annual meetings to review commitments and responsibilities of CTR-recipient governments and to minimize risk. Although enhancing its internal controls helps mitigate the risks that stem from having to rely on the cooperation of CTR-recipient governments, DOD can never fully eliminate the project risks associated with recipient governments' cooperation. Furthermore, while DOD's enhancements are an improvement over previous internal controls, current mechanisms do not include a separate review of CTR projects upon their completion. As such, DOD lacks a system for evaluating projects upon their completion and applying lessons learned to future projects.

Facility to Destroy Liquid Rocket Fuel Cost \$95 Million but Was Never Used



Source: Department of Defense.

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Abbreviations

AT&L	Office of the Under Secretary of Defense for Acquisition, Technology, and Logistics
CT	Cooperative Threat Reduction Directorate
CTR	Cooperative Threat Reduction program
DOD	Department of Defense
DTRA	Defense Threat Reduction Agency
GAO	Government Accountability Office
IG	Inspector General
JRIP	Joint Requirements and Implementation Plans
MDA	Milestone Decision Authority
TRSC	Threat Reduction Support Center

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United States Government Accountability Office
Washington, D.C. 20548

June 30, 2005

The Honorable John Warner
Chairman
The Honorable Carl Levin
Ranking Minority Member
Committee on Armed Services
United States Senate

The Honorable Duncan Hunter
Chairman
The Honorable Ike Skelton
Ranking Minority Member
Committee on Armed Services
House of Representatives

Since 1992, Congress has authorized the Department of Defense (DOD) to provide more than \$5 billion for the Cooperative Threat Reduction (CTR) program to help the former states of the Soviet Union¹ secure and eliminate their weapons of mass destruction and prevent their proliferation. Through the CTR program, the United States has supported activities such as eliminating nuclear missiles, building storage facilities for nuclear materials, eliminating chemical weapons, securing biological pathogens, and employing former weapons scientists. Recent project failures in Russia, however, have raised congressional concerns about the program's management. Specifically, from 1993 through 2003, DOD spent nearly \$200 million to construct a liquid rocket fuel disposition facility that was never used and to design a solid rocket motor elimination facility that was never constructed. In 2003, as a result of these incidents, DOD began to revise its management and internal controls over the CTR program. (For more detailed information on these CTR project failures, see app. I.)

The Deputy Assistant to the Secretary of Defense for Chemical Demilitarization and Threat Reduction within the Office of the Under

¹CTR recipient states of the former Soviet Union include Russia, Ukraine, Belarus, Kazakhstan, Uzbekistan, Azerbaijan, Moldova, and Georgia.

Secretary of Defense for Acquisition, Technology, and Logistics (AT&L)² is responsible for developing CTR implementation plans and making sure that CTR contractual obligations are met. Concurrently, the CTR Policy Office, within the Office of the Under Secretary of Defense for Policy, is responsible for developing and coordinating CTR policy guidance and defining CTR program objectives. The Defense Threat Reduction Agency (DTRA) reports to the Deputy Assistant to the Secretary of Defense for Chemical Demilitarization and Threat Reduction and oversees the execution of CTR projects on a daily basis.

Section 3611 of the National Defense Authorization Act for Fiscal Year 2004 mandates that GAO assess DOD internal controls for the CTR program and their effect on the program's execution.³ The mandate specifies that our analysis focus on controls intended to ensure that projects are being executed consistent with the program's objectives. In addressing the mandate, we evaluated DOD's management and internal controls for implementing CTR projects since 2003 by using the applicable control standards for the federal government.⁴ To respond to the mandate, we identified those management and internal control areas most relevant to CTR project implementation: (1) program management, (2) risk assessments, (3) performance measurement, (4) program reviews, (5) communications, and (6) project monitoring. Congress also mandated that we describe the status of DOD's implementation of legislative mandates covering the CTR program. (See app. II for information on CTR legislative mandates.)

In reviewing DOD's management and internal controls for implementing the CTR program, we collected and analyzed DOD documents and developed a semi-structured interview guide and questioned 30 DOD

²For the purposes of this report, we are using the acronym AT&L to refer to the office of the Deputy Assistant to the Secretary of Defense for Chemical Demilitarization and Threat Reduction within the Office of the Under Secretary of Defense for Acquisition, Technology, and Logistics.

³Public Law 108-136 also requires GAO to assess the management and coordination activities of the threat reduction and nonproliferation programs of the Departments of Defense and Energy. See GAO, *Weapons of Mass Destruction: Nonproliferation Programs Need Better Integration*, [GAO-05-157](#) (Washington, D.C.: Jan. 28, 2005). GAO is also assessing the Department of Energy's management of its nonproliferation programs.

⁴GAO, *Standards for Internal Control in the Federal Government*, [GAO/AIMD-00-21.3.1](#) (Washington, D.C.: Nov. 1999); and *Internal Control Management and Evaluation Tool*, [GAO-01-1008G](#) (Washington, D.C.: Aug. 2001).

officials responsible for managing and implementing the CTR program. We met with other DOD officials, reviewed DOD documents including DOD acquisition management guidance, and analyzed legislation. In addition, we traveled to Russia and Kazakhstan to observe CTR project implementation and to obtain information from American, Russian, and Kazakhstani government officials and contractor personnel. To determine the reliability of the data we used in this report, we reviewed relevant agency documents and obtained information from agency officials to ensure that the data used are sufficiently reliable for our work. We performed our work from April 2004 through May 2005 in accordance with generally accepted government auditing standards. (See app. III for more details on our scope and methodology.)

Results in Brief

Since 2003, DOD has improved its management and internal controls over the CTR program. Previously, DOD had problems managing the CTR program and ensuring that CTR program objectives were being met. Following two project failures in Russia, DOD implemented a series of new measures in 2003 that provided a more structured approach to managing the CTR program. DOD's goal is to mitigate risks to an appropriate level. Despite the introduction of new and revised management approaches and controls, DOD cannot fully mitigate the risks involved in cooperating with CTR recipient governments. In addition, DOD's current procedures and controls do not include final reviews of CTR projects upon their completion. Therefore, DOD has no systematic or formal mechanism to document and apply the lessons learned from such evaluations to new and ongoing projects.

To improve management of the CTR program, DOD has addressed five key areas.

- **Program management.** DOD's original management plan for the CTR program called for AT&L to oversee planning, issue written guidance on how projects should be implemented, and develop processes to ensure that projects were meeting objectives. However, DOD did not have officials in key positions in this office from 1998 through 2003. CTR policy and DTRA officials attempted to fill this void but lacked expertise and training in acquisition and project management. In July 2003, following the heptyl and Votkinsk project failures, DOD filled these vacancies within AT&L. AT&L officials now actively participate in program risk assessments, performance measurement, ongoing

program reviews, and regular communication regarding details on project status.

- **Risk assessments.** DOD uses several new methods to assess and mitigate the risks associated with CTR projects. DOD designates one official with overall management responsibility to balance the requirements of each project with potential risks. DOD divides CTR projects into three phases and requires management approval that the project is on track to meet its objectives before the project enters its next phase and additional funds are obligated. DOD also instituted periodic meetings with stakeholders⁵ to evaluate and minimize risk associated with CTR projects. With these new methods in place, all stakeholders are now cognizant of CTR project risks and managers are required to develop concrete strategies for addressing identified risks.
- **Performance measurement.** DOD devised and implemented new written guidelines on developing and reporting CTR project objectives, schedules, and cost estimates. In a new training course required for all CTR program and project managers, managers are instructed on developing measures for how, when, in what sequence, and at what cost, specific project tasks will be completed. According to CTR project managers, the current guidance on performance measurement is clearer and more consistent than in the past and helps with the review of ongoing projects.
- **Ongoing program reviews.** DOD introduced a new process to more systematically and consistently review CTR projects. In quarterly and other meetings, a designated manager, in consultation with all stakeholders, oversees the project's performance measures including cost, schedule, and performance objectives, and determines whether the project proceeds to its next phase or whether corrective actions need to be taken. According to CTR managers, the new program review system has resulted in more consistently conducted program evaluations that provide management with significant project details not previously included in program reviews.

⁵Stakeholders include all CTR management, acquisition, and policy decision makers as well as other government agency officials who are involved with implementing a particular CTR project.

-
- **Communication.** Communication among the DOD offices involved in the CTR program is more structured. All stakeholders communicate project issues and problems through daily email, weekly reports, and quarterly meetings. Through ongoing program reviews and new reporting requirements stakeholders and managers now have regular opportunities to learn about project developments and provide input on project implementation. DOD has also improved its external communications with CTR-recipient countries by more clearly defining the responsibilities and expectations of all parties, including the recipient countries involved in each project. These controls provide assurance that each party is held accountable for its responsibilities.

Despite the introduction of new and revised internal controls, DOD continues to face the challenge of gaining the cooperation of CTR-recipient governments to jointly implement projects and ensure that assistance is used to meet program objectives. Successful projects require signed agreements between DOD and CTR recipient countries, as well as U.S. access to sites to ensure that program goals are being achieved. However, reaching agreement on project issues and obtaining necessary access can involve lengthy negotiations. For example, after more than 10 years of discussion, Russia and DOD have yet to negotiate an agreement that would allow U.S. personnel access to monitor the loading of the CTR-funded fissile material storage facility at Mayak. Such an agreement would assure DOD that the facility is being used as intended.

DOD also lacks internal controls that would provide a system for monitoring projects upon their completion and applying lessons learned to future projects. According to internal control standards, monitoring includes assessing both ongoing activities and separate evaluations of completed activities and should assess the quality of performance over time. By conducting final reviews of completed CTR projects and addressing the findings of such reviews, DOD can further improve its current and future management of the program.

To further improve DOD internal controls for the CTR program, we are recommending that the Secretary of Defense conduct final reviews of CTR projects at their completion to evaluate whether projects were conducted in an efficient manner or were effectively meeting the objectives of the program. Such reviews would provide a mechanism for documenting lessons learned and applying them to future project planning and implementation.

DOD concurred with our recommendation to conduct evaluations of CTR projects upon their completion. DOD also provided technical comments that we incorporated as appropriate.

Background

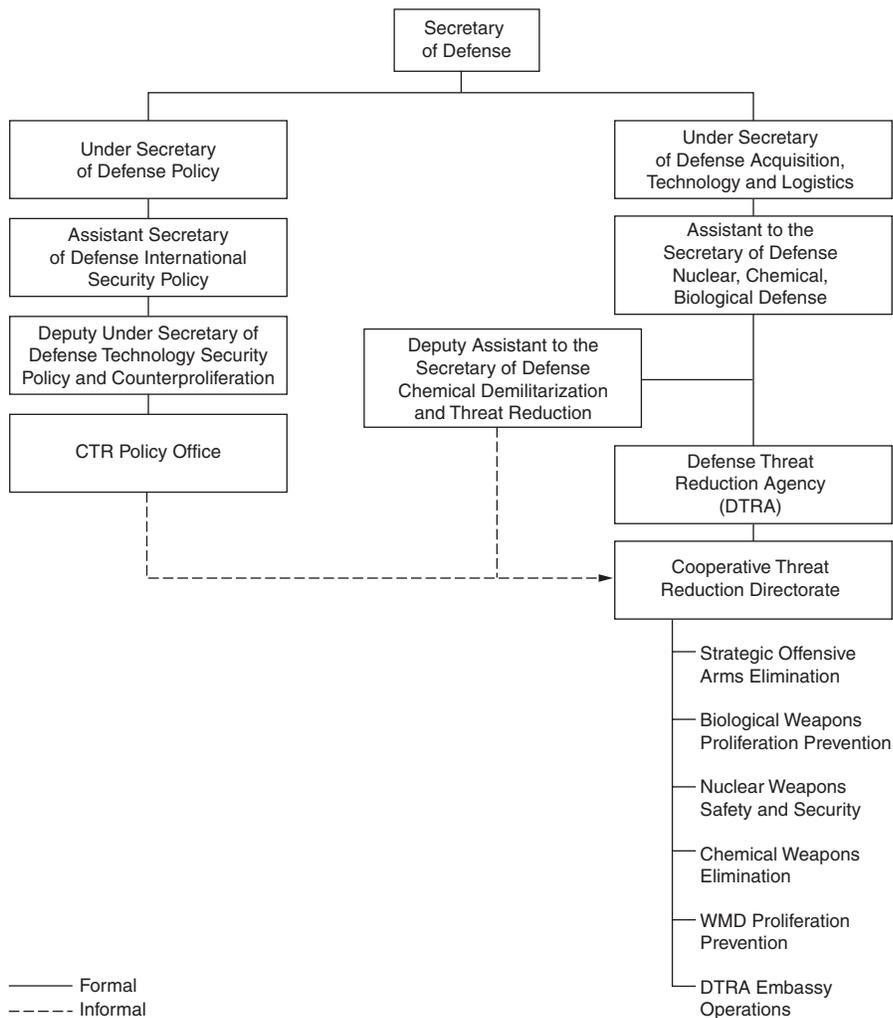
Congress created the CTR program in 1991 to help the states of the former Soviet Union secure and eliminate their weapons of mass destruction and prevent their proliferation. Through the CTR program, the United States has supported activities to eliminate nuclear missiles, build a storage facility for nuclear materials, eliminate chemical weapons, secure biological pathogens, and employ former weapons scientists. As of January 2005, the CTR program has assisted in the elimination of about 570 intercontinental ballistic missiles and nearly 30 nuclear powered ballistic missile submarines. In 2004, Congress authorized DOD to expand the scope of the CTR program to countries outside the former Soviet Union. For example, beginning in 2005, CTR assistance will help Albania destroy its chemical weapons stockpile.

Figure 1 shows the DOD management structure for the CTR program. Within the Office of the Under Secretary of Defense for Policy, the CTR Policy Office is responsible for developing and coordinating policy guidance, defining program objectives for the CTR program, and negotiating agreements with CTR recipients. The CTR Policy Office works with the office of the Under Secretary of Defense for Acquisition, Technology, and Logistics through the Deputy Assistant to the Secretary of Defense for Chemical Demilitarization and Threat Reduction. DTRA reports to the Assistant to the Secretary of Defense for Nuclear and Chemical and Biological Defense Programs. The Deputy Assistant to the Secretary of Defense for Chemical Demilitarization and Threat Reduction provides strategic implementation guidance on and oversight of CTR projects, and interacts daily with DTRA on CTR matters. Within DTRA, the Cooperative Threat Reduction (CT) directorate manages the program's daily operations. The directorate is organized into five program areas: Biological Weapons Proliferation Prevention, Chemical Weapons Elimination, Nuclear Weapons Safety and Security, Strategic Offensive Arms Elimination, and Weapons of Mass Destruction (WMD) Proliferation Prevention.⁶ (For a more detailed description of these program areas, see app. IV.) The directorate is located at Ft. Belvoir, Virginia, and several

⁶The CT directorate also has a program integration component and an executive language service to support program implementation.

DTRA offices throughout the former Soviet Union provide in-country support for CTR program implementation.⁷

Figure 1: DOD Management Structure for the CTR Program



Source: DOD.

⁷Currently, the CTR program has offices in Moscow, Russia; and Kiev, Ukraine; and has plans to establish permanent offices in Tashkent, Uzbekistan; Almaty, Kazakhstan; Baku, Azerbaijan; and Tbilisi, Georgia.

At the beginning of the program in 1992, DOD primarily purchased and provided equipment such as cranes, cutting tools, and vehicles to recipient countries. As the program matured, CTR assistance provided more services, such as hiring U.S. contractors who helped recipient countries dismantle nuclear delivery systems and missiles. Currently, CTR provides most assistance to recipient countries through contracts with American firms. DOD executes, manages, and reviews the contracts according to DOD and federal acquisition requirements. Specifically, in 2001, the CTR program began using special contracts with prime contractors who, with their teams of supporting subcontractors, implement the majority of CTR projects in the recipient countries. These five contractors are known as CTR Integrating Contractors.⁸ DTRA has also contracted with the Science Applications International Corporation's Threat Reduction Support Center (TRSC). TRSC staff provide support to CTR program and project managers in the areas of operations, logistics, engineering, financial, and program management.

DOD Has Improved Its Management and Internal Controls over the CTR Program

Since 2003, DOD has improved its management and internal controls over the CTR program. Prior to 2003, DOD's internal controls over the program were limited and did not ensure that CTR program objectives were being met. Following two project failures in Russia, DOD implemented a series of new measures in 2003 that provided a more structured approach to managing the CTR program. Most importantly, in July 2003, DOD filled vacancies within AT&L, the office responsible for ensuring that DTRA's implementation of CTR projects was meeting cost, schedule, and performance goals. After DOD filled these positions, the new leadership worked closely with DTRA officials to introduce important enhancements to the program's internal controls. For example, DOD adopted several new methods to assess and mitigate the risks involved in cooperating with CTR-recipient governments. Although these methods attempt to reduce risk to an acceptable level, DOD cannot fully mitigate the risks involved in working jointly with CTR-recipient governments. While DOD's enhancements are an improvement over the previous management and internal controls for the program, CTR procedures do not include final reviews of CTR projects upon their completion. As such, DOD has no

⁸The five CTRIC contractors are Parsons Delaware, Inc.; Bechtel National, Inc.; Raytheon Technical Services Company; Kellogg, Brown, & Root; and Washington Group International, Inc.

mechanism for assessing the success of completed projects and applying lessons learned to future projects.

Improved Program Management and Internal Controls Allow for Improved Implementation of CTR Program

Beginning in 2003, DOD implemented several new and enhanced management processes to allow program managers to better assess the progress of CTR projects and address program implementation weaknesses to reduce the risk of program failures. For example, DOD filled vacant AT&L positions; developed specific guidance for project managers on reporting objectives, schedules, and cost estimates; and improved communication within the program and with recipient countries. (For a comparison of DOD's CTR internal controls with selected control standards for the federal government, see app. V.) DOD developed a training course that all CTR project and program managers are required to complete, which provides detailed instruction on incorporating the new requirements of the internal control framework into all CTR projects. According to 24 of the 30 CTR program, policy, and acquisition officials responding to our structured interview, the new framework has helped improve CTR project implementation. For example, CTR officials stated that now the program management review system is more rigorous and project managers know what is expected of them in reporting on the cost, schedule, and performance of their projects.

Key Leadership and Oversight Vacancies Filled for CTR Program

In July 2003, DOD filled AT&L vacancies, closing a critical gap in the department's ability to ensure that the CTR program was meeting cost, schedule, and performance goals. Previously, DOD had not been carrying out its own management plans for ensuring that CTR projects were meeting stated goals. Specifically, in May 1994, the Deputy Secretary of Defense approved a plan to strengthen the implementation of CTR projects. Under this plan, the CTR policy office was responsible for negotiating agreements with recipient countries, establishing policy guidance, working on the CTR budget, and notifying Congress of developments in the program. After CTR policy approved a project and signed an agreement to begin work, AT&L was responsible for developing detailed implementation plans, monitoring ongoing work, and ensuring that work was meeting cost, schedule, and performance goals. However, DOD left several AT&L positions vacant until 2003, leaving a critical gap in oversight over the CTR program. The CTR policy office began managing daily CTR project activities to fill this leadership gap. However, according to the director of the policy office, staff in that office were not qualified to manage the activities of the program because they were not familiar with DOD acquisition guidelines nor did they have the technical expertise necessary to manage CTR programs.

According to a 2004 DOD Inspector General (IG) report on the management of the CTR program, if the AT&L positions had been filled, those officials might have identified some of the risks involved in the two failed CTR projects that cost DOD nearly \$200 million.

Since the AT&L positions were filled in July 2003, the office now participates in CTR program planning and review, overseeing program review meetings, and providing guidance on issues such as performance measurement and reporting requirements. The Deputy Assistant Secretary of Defense for Chemical Demilitarization and Threat Reduction attends informal monthly meetings with CTR program managers to be updated on the status of projects and other management issues. He also serves as the program reviewer for several CTR projects, making him responsible for overseeing the cost, schedule, and performance of each of those projects and approving them at the end of each project phase. For example, in July 2004, he approved a biological weapons proliferation prevention project's acquisition program baseline and authorized the program manager to move the project into the demonstration phase. CTR officials stated that it is now clear who they need to report to and when.

DOD Uses Several New Methods to Assess CTR Project Risk

DOD uses several new methods to assess and mitigate risks associated with CTR projects. DOD identifies a senior official responsible for ensuring the potential risks to meeting objectives are evaluated for each project, requires stakeholders on each project to meet regularly to conduct specific risk management activities, and implements each project in three phases. According to DOD's risk management guide, risk is defined as a measure of the potential inability of a program to achieve its overall program objectives within defined cost, schedule, and technical constraints.⁹

DOD's approach to assessing program risks was limited prior to 2003. In September 1996, we reported that the CTR multiyear plan did not indicate whether program officials had omitted risk and contingencies from project cost estimates.¹⁰ In addition, a 2003 DOD IG report found that DOD did not identify risks or have adequate controls in place to mitigate risk when

⁹DOD, *Risk Management Guidebook for DOD Acquisition*, Fifth Edition, June 2003.

¹⁰GAO, *Weapons of Mass Destruction, Status of the Cooperative Threat Reduction Program*, [GAO/NSIAD-96-222](#) (Washington, D.C.: Sept. 27, 1996).

managing projects.¹¹ According to a CTR official, CTR program and project managers periodically included risk assessments in planning their projects, but did not include actions to control the risks identified if problems occurred. The DOD IG reported that the CTR program management's failure to fully assess project risks contributed to DOD spending nearly \$200 million on projects in Russia to construct a liquid rocket fuel disposition facility that was never utilized and to design a solid rocket motor elimination facility that was never constructed.

In an effort to improve assessments of the risks associated with CTR projects, DOD began designating an official, known as the Milestone Decision Authority (MDA), to be responsible for ensuring that project managers, with assistance from project stakeholders, assess the risks to meeting project objectives and formulate plans to mitigate these risks. MDAs are assigned to projects based on several factors, including the project's risk and expected cost. According to an AT&L official, the Deputy Assistant to the Secretary of Defense for Chemical Demilitarization and Threat Reduction is usually assigned as the MDA for high-cost or high-risk projects. For projects with less risk or expense, the MDA is usually the director of the DTRA/CT directorate. MDAs review the risks identified by the project managers and evaluate the plans they have developed to mitigate these risks.

In addition, DOD instituted periodic stakeholders meetings to assess and minimize risks associated with CTR projects and to discuss major project issues and milestones. In these meetings, project managers present assessments of potential risks that could impact their ability to meet project objectives. For example, a risk identified for the Russian SS-24 missile elimination project was that political or economic developments in Russia might unexpectedly affect the project's costs. After the project managers present their assessments, the stakeholders provide input to address these risks and consider additional problems that may arise during project implementation. According to CTR management officials, this team approach to risk assessment ensures consensus early in each phase of the project. It has resulted in more informed decision making because stakeholders meet regularly to receive updates on project status and make decisions on the next phase of project implementation based on the facts presented during those meetings. Of the 30 DOD and CTR officials we

¹¹DOD, Office of the Inspector General, *Cooperative Threat Reduction: Solid Rocket Motor Disposition Facility* (D-2003-131), Sept. 11, 2003.

interviewed using our structured interview guide, 9 said that this new process of stakeholder involvement was one of the most important new internal controls for the CTR program.¹²

Furthermore, DOD now uses a new phased-contract approach that divides each CTR project into three phases. These phases can vary according to project, but usually include phases covering project development, project execution, and project maintenance, according to a CTR official. This approach helps to minimize risk by allowing managers to make the appropriate changes, delay, or stop a project if a problem occurs. For example, in 2003, in the development phase of a Ukrainian SS-24 missile elimination project, DOD decided not to proceed with the project because the risks associated with the missile destruction method that the Ukrainians wanted to use were too high. Project managers are required to develop exit criteria for each project phase that clearly state under what conditions the project will be permitted to move into the next phase and under what conditions DOD will stop the project. For example, for a CTR project tasked with eliminating Russia's SS-25 missiles, one of the exit criteria for moving into the project's maintenance phase is that DOD complete negotiations on the contract to maintain the missile elimination facility that is being constructed.

DOD Has New Guidelines for Reporting Project Performance

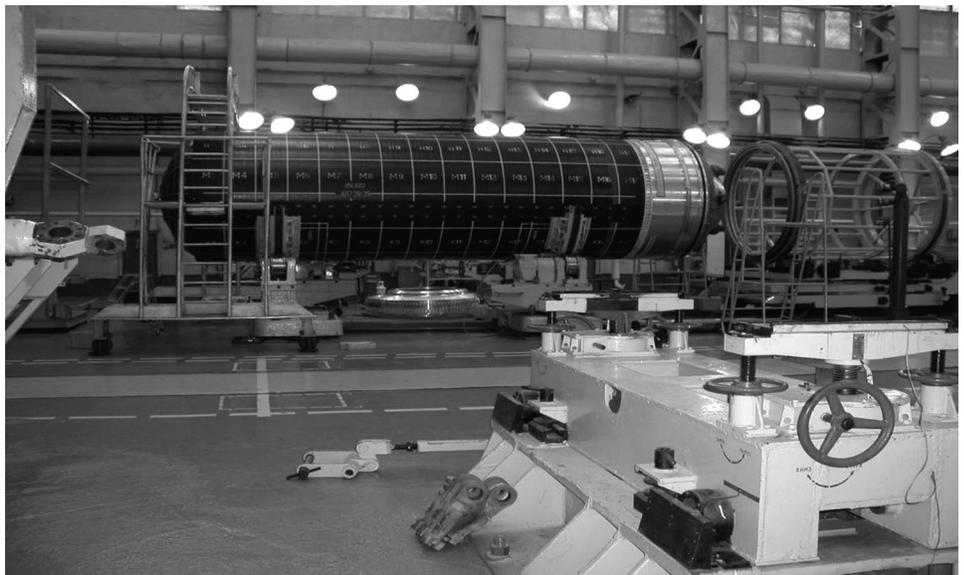
In 2003, DOD devised and implemented new guidelines that provide CTR project managers with written instructions on developing and reporting project objectives, schedules, and cost estimates. According to the internal control guidelines for the federal government, it is important for an organization to establish measures to gauge its performance on critical activities and determine if the organization is meeting its objectives. CTR program area and project managers we interviewed stated that prior to 2003 there were no established procedures for developing performance measures, evaluating project performance, or reporting (either orally or in writing) on project implementation to management. In addition, project

¹²Using our structured interview guide, we asked DOD officials what they believed the most important new internal controls for the CTR program are. This was an open-ended question and each official could provide multiple answers. We obtained the following responses from the 30 officials we interviewed as to which new internal controls are the most important: 19 said the MDA review process, 9 said periodic meetings with stakeholders, 9 said the involvement of the AT&L office in the program, 8 said new reporting requirements, 7 said the new methods for communicating with and documenting the responsibilities of recipient government officials, and 7 said the program's new focus on the acquisition process.

plans were not comprehensive and lacked established baselines against which to measure performance.

According to CTR project managers, the current guidance on performance measurement is clearer and more consistent than in the past. For example, in a training course required for all CTR program and project managers, project managers are instructed on developing measures for how, when, in what sequence, and at what cost specific project tasks will be completed. Our fieldwork included a site visit to a CTR project in Russia that had developed such measures. One measure used to gauge performance on that project is whether the elimination of Russian SS-24 missiles complies with arms control treaty requirements. For each measure, project managers develop objectives – the indicator’s desired outcome – and thresholds – the minimum acceptable performance for that measure. For example, one objective for the SS-24 missile elimination project is to eliminate Russia’s SS-24 missiles by March 2008. However, if the missiles cannot be eliminated by then, they must be eliminated by the threshold date of August 2008. (Figure 2 shows the elimination of an SS-24 engine.)

Figure 2: Russian SS-24 Missile Engine Undergoing Dismantlement



Source: DOD.

If the threshold is not met at the end of a particular project phase, the project manager and DOD management officials may consider stopping the project. When an indicator is in danger of not being met, the project manager is required to submit a warning report to the project's MDA to ensure that management is aware of potential delays and that the project manager is addressing the problem. If the indicator is not met, DOD management officials may stop the project until a plan is in place to bring the indicator up to the threshold level.

DOD Has More Systematic and Consistent Tools to Review Programs

In 2003, DOD introduced a new process to review projects and programs to provide a more systematic and consistent structure to management's review of CTR projects. According to the internal control guidelines for the federal government, program reviews are important for program management because they provide comparisons of actual performance to planned or expected results and help management assess its programs. Program reviews lacked the detail that allowed senior management to evaluate projects and risks consistently. However, according to CTR program managers we interviewed, before 2003 there was no standardized guidance to assist program managers on developing program reviews or implementing their programs. For example, CTR program area and project managers did not receive any guidance on how to report on the daily management of program operations or on the type of information that status reports should include.

Under the new program review system, the designated MDA conducts reviews of a project's cost, schedule, and performance objectives. During program reviews, which take place periodically throughout the course of a project, project managers report to their MDAs on the status of their projects and whether the objectives are being met. In addition, these review meetings are more detailed than they were before the new system was in place. For example, a project review in 2004 for a CTR project tasked with installing nuclear detection devices in Uzbekistan included details on the project's schedule over the next 3 years, with specific dates for completion of certain milestones. It also included a detailed breakdown of funding for the project over the next 3 years and a thorough discussion of project risks. The information was not included in the project's 2003 review. According to several CTR project managers, the new program review system has resulted in more consistently conducted project evaluations. Of the 30 DOD officials we interviewed, 19 said the program review process, conducted by the MDA, was one of the most important new

Communication Is More Structured

internal controls for the CTR program.¹³ They reported that, with the introduction of the MDA, program reviews are occurring at the same intervals for each project and that project managers report cost, schedule, and performance data in the same format to their MDAs during the reviews. Through the course of work we reviewed copies of various MDA project review documents.

According to DOD officials, communication within the CT directorate and among the DOD offices involved in the CTR program, has improved with the introduction of new internal controls. DOD also has improved its external communications with CTR-recipient countries. Internal control guidelines for the federal government state that communication mechanisms should exist within an organization to allow the easy flow of information down, across, and up the organization. However, before 2003, internal communications within the CTR program office were not clear, according to DOD officials. For example, all CTR stakeholders were not present during project development meetings nor were they involved in early decision making about project risks. Communications between DOD and CTR recipient governments also were not clear. DOD assumed, without getting written documentation that CTR recipient countries would carry out the responsibilities and commitments to which they agreed.

Since 2003, communication among the DOD offices working on the CTR program has improved. Stakeholders on specific projects meet more frequently now than in the past to discuss project issues and problems. Project managers involve stakeholders in the earliest stages of project development on through to the final phase of project completion to assure that stakeholders and managers have regular opportunities to learn about project developments and provide input on project implementation. This system has now been institutionalized and all CTR project managers are instructed in a new training course to convene meetings with stakeholders throughout the life of their projects. In addition, new reporting requirements help ensure that all stakeholders are informed of project developments. All of the 30 DOD officials we interviewed said that they are required to report on the cost, schedule, and performance of their programs and projects periodically, including daily, weekly, monthly, and quarterly. For example, DOD now requires program managers to submit monthly project status reports to ensure that potential problems are documented and stakeholders are informed of them. In addition, 28 of the

¹³See footnote 12 for a full list of responses.

30 DOD officials in our structured interview reported that the amount of communication within the CT directorate allows them to effectively implement their projects. Project managers are in frequent contact with contractors implementing projects in recipient countries. We observed a meeting in Russia between a CTR project manager and the Russian contractors implementing the project he manages. During the meeting, they negotiated revisions to a new contract and discussed the project's status. The project manager makes similar trips at least once a month to the project site to oversee progress and meet with the contractors. Other project managers we interviewed in Russia and in the U.S. stated that they hold weekly phone conferences with contractors, exchange emails, and make regular visits to project sites.

Contracting officials in Russia stated that they hold weekly telephone conferences with their CTR project managers and contact them regularly when project implementation issues arise. We observed such a weekly telephone communication during our visit to the International Science and Technology Center in Moscow. Contractors also submit monthly written reports. Project managers also are in daily contact with their program managers and CT directorate management. According to a CTR official, at quarterly program review meetings, program and project managers present detailed information, both orally and in writing, on the status of their projects to all involved stakeholders.

DOD has also improved its external communications with CTR-recipient countries. DOD and recipient government officials now consistently share more detailed information on project developments and issues of concern. CTR management officials and program and project managers are in frequent contact with their recipient government counterparts throughout project implementation. In 2004 CTR teams made 165 trips, compared with 70 trips in fiscal year 2001, to meet recipient government officials and improve their monitoring of CTR projects. Russian government officials working on CTR projects stated that they communicate with CTR officials continually and meet regularly with the director of the CT directorate. They also hold weekly teleconferences with project managers, and project managers visit project sites regularly. While traveling with CTR project managers in Russia and Kazakhstan, we observed extensive discussions of important issues during site visits and meetings with contractors and recipient government officials.

Furthermore, DOD has introduced and updated its controls to ensure that commitments made by the CTR program and recipient governments are

regularly documented and discussed. These controls also are a means to ensure that each party is held accountable for its responsibilities. In 2003, DOD began using Joint Requirements and Implementation Plans (JRIP) to document the commitments and responsibilities agreed to by each party involved in project implementation. For example, a requirements plan for a CTR project tasked with eliminating a specific type of Russian nuclear missile states that one of DOD's responsibilities in implementing the project is to design and construct storage facilities for the missiles to be eliminated. One of the Russian government's responsibilities on the same project is to provide DOD with a schedule for the delivery of the missiles to the proper facility for elimination. If either party fails to meet its obligations as articulated in the document, the other party can stop progress on the project. For example, DOD officials halted new construction from March to June 2004 at the CTR-funded chemical weapons destruction facility at Shchuch'ye until the Russian government stopped insisting on unnecessary design changes for the construction of a boiler house on the site. To further enhance communication between CTR program officials and CTR recipient countries, DOD also holds biannual meetings where officials from both sides meet to review and discuss project implementation and revise plans when necessary. According to CTR management officials and JRIP documents we reviewed, these meetings provide a regular forum for discussion that was not previously available and have improved communication between DOD officials and CTR-recipient governments.

Inherent Risks Remain in Working with Recipient Governments

DOD faces significant challenges in collaborating with CTR-recipient governments to jointly implement projects and ensure that assistance is used to meet program objectives. Successful implementation of CTR projects requires the cooperation of recipient governments, but DOD cannot fully mitigate the risks involved in working jointly with these governments. First, working with CTR-recipient governments often involves lengthy negotiations to reach agreements on various issues throughout a project's implementation. This can delay U.S. funded efforts to help secure or dismantle weapons of mass destruction by months or years. Second, risks to the project can increase when implementation begins before the necessary agreements are in place. Third, after agreements are reached and implementation is under way, additional risk is

introduced by the control environment¹⁴ within the recipient governments. For instance, if a recipient government has a poor control environment risk increases that the agreed to objectives and conditions will not be met.

In cooperating with CTR-recipient governments, DOD must negotiate a variety of agreements that can require lengthy negotiations. The highest level of agreements, called umbrella agreements, provide an overall legal framework for U.S. and CTR-recipient countries' cooperation in implementing projects.¹⁵ Implementing agreements outline the types and amounts of assistance to be provided for specific CTR projects. For instance, projects to eliminate strategic nuclear arms, including strategic bombers, missiles, and related equipment are conducted under the Strategic Nuclear Arms Elimination Implementing Agreement signed by DOD and the Ukrainian Ministry of Defense in December 1993.¹⁶ Agreement amendments update the annual amount of funding that CTR will provide for a specific project within a recipient country. For example, the December 2004 agreement amendment for biological weapons proliferation projects with the government of Kazakhstan provides for \$30 million in CTR funding during fiscal years 2004 and 2005. The recipient governments must sign agreements or agreement amendments before projects can begin and funding can be provided or increased, but this may take time and delay projects, according to CTR officials. According to a CTR program area manager, the Russian government took more than 18 months to sign an implementing agreement for nuclear weapons transportation and security projects because it did not want to reveal the location of nuclear weapons storage sites that the government planned to close. In 2004, the government of Kazakhstan took more than 6 months to sign the annual agreement amendment for biological weapons proliferation projects. According to CTR contractors and officials at Kazakhstani

¹⁴The governments maintain and establish an environment throughout their bureaucracies that sets a positive and supportive attitude toward internal control and management. It provides discipline and structure as well as the climate, which influences the quality of internal control.

¹⁵Umbrella agreements contain a comprehensive set of rights, exemptions, and protections for U.S. personnel and CTR program activities. Currently, DOD has umbrella agreements with the governments of Albania, Azerbaijan, Georgia, Kazakhstan, Moldova, Russia, Ukraine, and Uzbekistan.

¹⁶*Agreement Between the Department of Defense of the United States of America and the Ministry of Defense of Ukraine Concerning the Provision of Material, Services, and Related Training to Ukraine in Connection with the Elimination of Strategic Nuclear Arms*, dated December 5, 1993, and as amended.

biological research facilities, the government's delay slowed efforts to improve the security and safety of biological pathogens at their institutes. For CTR biological weapons proliferation prevention projects in Russia, however, DOD has no implementing agreement. These projects are implemented through the International Science and Technology Center in Moscow.¹⁷ Until it can conclude a biological threat reduction implementing agreement with the Russian government, DOD has limited the types of projects it initiates in Russia.

Risks to CTR projects can increase when DOD begins implementation before the necessary agreements are in place with CTR recipient governments. After more than 10 years, Russia and DOD have yet to negotiate a transparency agreement that would allow U.S. personnel access to the CTR-funded fissile material storage facility at Mayak to ensure that it is being used as intended. DOD designed and built the facility to provide centralized, safe, secure, and ecologically sound storage for weapons-grade fissile material from dismantled Russian nuclear warheads. In December 2003, DOD completed the CTR-funded Mayak facility at a cost of about \$335 million,¹⁸ and the Russian government assumed full responsibility for its operation and maintenance. Although the Russian government has pledged its commitment to transparency, it has not signed an agreement with DOD. Therefore, the United States has no reasonable assurance that Russia will only use the facility to store materials from dismantled nuclear weapons and not reuse the materials. According to CTR program officials, the Russian government may soon begin storing nuclear materials at the Mayak facility without an agreement in place. We first raised concerns about the lack of a transparency agreement for the Mayak facility in 1994.¹⁹ Later, in April 1999, we voiced concerns that the United States still lacked

¹⁷The International Science and Technology Center was established by the United States, the European Union, Russia, and Japan in November 1992 to provide peaceful research opportunities to former Soviet weapons scientists and redirect their skills away from producing weapons of mass destruction.

¹⁸As of April 2005, DOD had spent \$14.9 million on the design of the facility and \$319.6 million on the facility's construction. The amount does not include \$69.3 million spent on fissile material containers for the facility.

¹⁹GAO, *Weapons of Mass Destruction: Reducing the Threat From the Former Soviet Union*, GAO/NSIAD-95-7 (Washington, D.C.: Oct. 6, 1994).

clear assurances that Russia would use the Mayak facility in a manner consistent with all U.S. national security objectives for the project.²⁰

Furthermore, two CTR project failures in Russia illustrate the consequences of DOD not having the necessary agreements in place (see app. I for additional information). In the early 1990s, DOD agreed to assist Russia in constructing a facility to dispose of liquid missile propellant, known as heptyl, which had been drained from intercontinental and submarine-launched ballistic missiles. DOD spent nearly \$95 million over 10 years to build a facility to destroy the heptyl, only to learn in January 2002 that Russia had diverted the heptyl to its commercial space program, rather than storing it for eventual destruction. As a result, the facility was never used. The DOD IG reported in 2002 that CTR program officials negotiated a weak implementing agreement with the Russian government. Specifically, the agreement did not require the Russian government to provide the heptyl or provide access for CTR program officials to inspect the heptyl storage facilities and verify the quantities present.²¹

Similarly, DOD had agreed in the early 1990s to build a facility in Russia to dispose of solid rocket motors from dismantled missiles. DOD spent almost \$100 million over nearly 10 years to design the facility, despite the concerns of local residents about the possible environmental impact. In January 2003, Russian officials notified DOD that the regional government had denied the land allocation permit necessary to begin construction due to the opposition from local residents. As a result, DOD never began construction on the facility. The DOD IG found that the implementing agreement for the design of the solid rocket motor elimination facility at Votkinsk failed to specify Russian responsibilities for the project. Primarily, the Russian government was to obtain the necessary land allocation permits. CTR officials accepted in good faith that Russia would help implement program objectives and therefore assumed that they did not need to document the Russian government's responsibilities. In addition, despite local protests against construction of the facility from the

²⁰GAO, *Weapons of Mass Destruction: Effort to Reduce Russian Arsenals May Cost More, Achieve Less Than Planned*, [GAO/NSIAD-99-76](#) (Washington, D.C.: Apr. 13, 1999.)

²¹DOD Office of the Inspector General, *Cooperative Threat Reduction: Cooperative Threat Reduction Program Liquid Propellant Disposition Project*, D-2002-154 (Washington, D.C.: Sept. 2002).

beginning of the project, DOD project managers did not identify land allocation as a potential risk until April 2002.²²

Even after DOD concludes appropriate agreements, however, risks still may exist due to the control environment of the recipient governments. For instance, if a recipient government has a poor control environment risk increases that the agreed to objectives and conditions will not be met. A good control environment requires that an organization's structure clearly defines key areas of authority and responsibility. When the Russian government reorganized in early 2004, it was uncertain which agencies and officials were in charge of working with DOD. While the names of some of the agencies had merely changed, other agencies were subsumed into larger organizations or completely dissolved. According to CTR program officials, the reorganization had a significant impact on program implementation. For example, the CTR Policy Office is renegotiating its implementing agreements to reflect the new Russian government entities. CTR projects also experienced delays when the Russian government reorganized the committee that granted tax exemptions and resolved customs issues for all CTR assistance entering Russia. Work on the CTR-funded chemical weapons destruction facility in Russia was delayed until needed equipment was cleared through customs. Furthermore, CTR recipient governments may not provide adequate access to project sites or may pursue priorities that compete with CTR program objectives. DOD's inability to gain access to all sites where CTR assistance is provided has been an issue since the CTR program began in 1992. The U.S. government has been concerned with its ability to examine the use of its CTR-provided assistance, while CTR-recipient countries have security concerns regarding U.S. access to sensitive sites.²³ For example, as we reported in March 2003, DOD had made only limited progress installing security upgrades at Russian nuclear weapons storage sites and former biological weapons facilities because Russia would not provide DOD access to several sites.²⁴ Since March 2003, Russia has granted DOD access to some nuclear weapon

²²DOD Office of the Inspector General, *Cooperative Threat Reduction: Solid Rocket Motor Disposition Facility Project*, D-2003-131 (Washington, D.C.: Sept. 2003).

²³GAO, *Cooperative Threat Reduction: DOD Has Adequate Oversight but Procedural Limitations Remain*, GAO-01-694 (Washington, D.C.: June 19, 2001).

²⁴GAO, *Weapons of Mass Destruction: Additional Russian Cooperation Needed to Facilitate U.S. Efforts to Improve Security at Russian Sites*, GAO-03-482 (Washington, D.C.: Mar. 24, 2003).

storage sites, and continues to restrict access to some former biological weapons facilities.

DOD Does Not Have a Mechanism to Review CTR Projects Once They Are Completed

While CTR program officials monitor the progress of ongoing projects, DOD has no mechanism to monitor and evaluate the results of completed projects in relation to their meeting program objectives. According to internal control standards, monitoring should assess the quality of project performance over time. Conducting program evaluations, such as reviewing completed CTR projects, may be warranted after major changes in management plans. DOD does not conduct final evaluations of completed CTR projects and currently has no mechanism to document lessons learned and apply them to future project planning and implementation. At its inception, the CTR program primarily provided equipment to recipient countries, but now the vast majority of assistance is provided through contracted services. Although the program has shifted to funding costly, complex, and sometimes high-risk projects that can last for many years, DOD has not expanded the scope of its project monitoring process to include evaluations of the efficiency and effectiveness of CTR projects upon their completion.

In June 2001, we recommended that DOD conduct such evaluations to improve DOD's overall program oversight. In response, DOD agreed to periodically assess the efficiency and effectiveness of CTR assistance, including contracted services. However, DOD lacks a final review process to assess the efficiency and effectiveness of completed CTR projects. As of June 2005, DOD had completed 77 projects, but program officials did not evaluate and record what went well during a project's implementation and what could have been improved to better meet program objectives. While CTR officials discuss ongoing individual projects performance through the MDA process, senior CTR management officials acknowledged that projects are not evaluated upon their completion and such information is not shared program wide in a systematic manner. As such, it is difficult to apply lessons learned to future CTR projects as they are being planned and implemented and avoid past mistakes. Officials stated that conducting final evaluations could further improve their management of the CTR program, especially as the program expands into countries outside the former Soviet Union. Since DOD does not assess the efficiency and effectiveness of projects as they are completed, it cannot apply the lessons learned from such evaluations to new and ongoing projects in a systematic way.

Conclusion

Since 1992, CTR assistance has helped the states of the former Soviet Union eliminate and protect their weapons of mass destruction. Although the CTR program has helped reduce the threat that these weapons could be stolen or misused, incidents such as the heptyl disposition and solid rocket motor elimination projects demonstrated significant problems with DOD's program management. In the aftermath of these incidents, DOD has worked to revamp its CTR program management to achieve greater assurance that projects are implemented according to program objectives. By standardizing its management approach and applying it consistently across all CTR program areas, DOD is improving its management of the CTR program. DOD has greater assurance that all stakeholders, including recipient governments, are involved in project implementation. CTR program and project managers have clearer guidance on how to conduct their work and report on it. Furthermore, DOD has made progress in more clearly articulating and documenting its cooperative arrangements with CTR recipient countries, as well as holding recipient governments more accountable for implementing the CTR projects in their respective countries.

These improved controls cannot eliminate the risks inherent in the program, but the goal is to mitigate risk to an appropriate level given the circumstances. Most significantly, the success of the CTR program requires the cooperation of recipient governments. Good internal controls help mitigate the risks from having to rely on recipient governments to sign agreements, provide access, and support project implementation. Still, governments can change their project goals, deny access to U.S. contractors and officials, or withhold permits to allow work to proceed. DOD's more robust internal controls have helped minimize the impact of these actions, but they cannot guarantee a project's success. The U.S. government remains concerned about its ability to determine how CTR-provided assistance is being used, while CTR recipient countries continue to have security concerns regarding U.S. access to their sensitive facilities and sites.

In addition, while DOD has made progress over the past 2 years in improving its management of the CTR program, it still does not review the overall performance of projects upon their completion. As projects are completed, assessing and documenting lessons learned will allow DOD to further improve CTR project implementation. As the CTR program completes more projects and the program begins to expand beyond the

former Soviet Union, such a mechanism will become more important to overall program management.

Recommendation for Executive Action

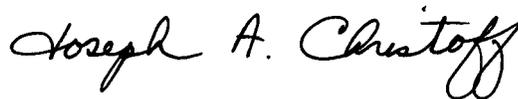
We recommend that the Secretary of Defense conduct performance reviews upon the completion of CTR projects. Such reviews would provide a mechanism for documenting lessons learned and applying them to future project planning and implementation.

Agency Comments and Our Evaluation

DOD provided comments on a draft of this report, which are reproduced in appendix VI. DOD concurred with our recommendation that reviews of completed CTR projects should be conducted to document and apply lessons learned. DOD also provided technical comments, which we have incorporated where appropriate.

We are providing copies of this report to the Secretary of Defense and other interested congressional committees. We will also make copies available to others upon request. In addition, this report will be available on the GAO Web site at <http://www.gao.gov>.

If you or your staff have any questions about this report, please contact me at (202) 512-8979 or christoffj@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made major contributions to this report are listed in appendix VII.



Joseph A. Christoff, Director
International Affairs and Trade

Two Project Failures Cost the CTR Program Nearly \$200 Million

By 2003, two CTR program project failures caused DOD to reassess its management of the program. In the early 1990s, DOD agreed to assist Russia in constructing a facility to dispose of liquid missile propellant, known as heptyl, and build a solid rocket motor disposition facility. However, DOD terminated these projects after spending nearly \$200 million over almost a decade.

In the case of the heptyl disposition facility, DOD spent more than \$95 million over 10 years on the facility at Krasnoyarsk, Russia, that was never used. In 1993, the Russian government asked for CTR assistance to dispose of heptyl from intercontinental and submarine-launched ballistic missiles that were being destroyed in compliance with arms control agreements.¹ At the time, Russian government officials claimed that existing heptyl storage facilities were full and that they needed a way to dispose of the propellant, according to DOD officials. DOD officials also stated that Russian officials had told them that the heptyl could not be used for the Russian commercial space program. However, when CTR officials were ready to test the almost completed facility in January 2002, officials from the Russian Aviation and Space Agency revealed that nearly all of the heptyl had been diverted to the commercial space program. In February 2003, the Deputy Secretary of Defense approved the dismantlement and salvage of the no-longer needed heptyl disposition facility.

According to the DOD IG, a variety of inadequate management controls contributed to the heptyl project failure.² The IG reported that AT&L was not assuming its role in managing the CTR program by providing input and direction for projects. Rather, the CTR Policy Office, which had little experience in following DOD acquisition guidelines, establishing milestones, and identifying risks, was managing daily CTR project activities. Because AT&L was not performing adequate oversight of the

¹The Strategic Arms Reduction Treaty (START) I, signed July 31, 1991, by the United States and the Soviet Union, limited the number of intercontinental ballistic missiles, submarine-launched ballistic missiles, and heavy bombers each side could have as well as the number of warheads the missiles could carry. START II, signed in 1993 by the United States and the Russian Federation, was to eliminate multiple warheads on all intercontinental ballistic missiles except for submarine-launched missiles.

²DOD Office of the Inspector General, *Cooperative Threat Reduction: Cooperative Threat Reduction Program Liquid Propellant Disposition Project*, D-2002-154 (Washington, D.C.: Sept. 2002).

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program, CTR program officials negotiated an implementing agreement³ without specific programmatic commitments from the Russian government and did not thoroughly identify the risks associated with eliminating the heptyl. Specifically, the agreement did not require the Russian government to provide the heptyl or provide access for CTR program officials to inspect the heptyl storage facilities and verify the quantities present. CTR officials accepted in good faith that Russia would provide the heptyl and therefore assumed that they did not need to document or oversee the Russian government's responsibilities. In assessing the risks of the heptyl project, CTR project officials failed to identify the possibility that the Russian government would use the heptyl for other purposes and therefore developed no mitigation plan.

A second project failed in January 2003. After spending almost 10 years to design the facility at Votkinsk to destroy solid rocket motors, CTR program officials ended the project at a cost of almost \$100 million. In the early 1990s, Russia had requested CTR assistance to destroy motors from dismantled missiles in compliance with an arms control agreement. Originally, the facility was to be located at Perm, but pending construction of the facility generated environmental opposition from local residents. The facility was thus moved to Votkinsk in February 1998, where local residents concerned with the environmental impact of the facility also began protests. Still, CTR program officials continued with the design of the facility, remaining optimistic that the regional government would issue the required permits regardless of opposition. Officials from the Russian Aviation and Space Agency told CTR program officials in July 2002 that land for the facility would be allocated no later than September 2002. In a January 2003 letter, however, Russian officials notified DOD that the regional government had denied the land allocation permit due to the opposition from local residents.

Inadequate management practices also contributed to the failure of the solid rocket motor disposition project at Votkinsk. As with the failed heptyl project, the DOD IG reported that AT&L did not assume its management role in overseeing the CTR program.⁴ The CTR Policy Office was managing

³Implementing agreements, signed by DOD and the executive agents of CTR recipient countries, outline the types and amounts of assistance to be provided for specific projects.

⁴DOD Office of the Inspector General, *Cooperative Threat Reduction: Management Structure of the Cooperative Threat Reduction Program*, D-2004-050 (Washington, D.C.: Feb. 2004).

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daily CTR project activities. The implementing agreement for the Votkinsk project failed to specify Russian responsibilities, such as obtaining the necessary land allocation permits. In addition, despite the local environmental protests against construction of the facility from the beginning, project managers did not identify land allocation as a risk until April 2002. Furthermore, the contracting processes that were in place contained no mechanism to terminate the project when costs increased and the schedule was delayed. DTRA awarded the project contract for the complete design and construction of the facility rather than contracting in phases so that possible CTR program losses could be minimized.

Legislative Mandates Covering the CTR Program

As required by section 3611 of the National Defense Authorization Act for Fiscal Year 2004, we reviewed the status of DOD's implementation of legislative mandates covering the CTR program. Since 1992, Congress has passed 25 pieces of legislation that guide CTR project activities. Specifically, Congress has established a series of (1) requirements that must be met before DOD can fund CTR projects, (2) conditions on CTR expenditures, and (3) reporting requirements on the CTR program and project implementation. Figure 3 illustrates the types of congressional legislation covering the CTR program from fiscal year 1992 to 2004 and includes those legislative requirements that have lapsed. Over the years, DOD has mostly complied with these requirements, except for several occasions when it was late in providing required reports to Congress. Legislation has recently been proposed that would repeal some DOD requirements.

Congress has established a variety of requirements that must be met before DOD can fund CTR projects. For example, in establishing the CTR program in 1991, Congress required that CTR assistance provided to the countries of the former Soviet Union could not be expended until the President certified to Congress that the recipient governments were committed to reducing their weapons arsenals.¹ According to CTR officials, verifying CTR program compliance with legislation can be a time-consuming process and may delay the implementation of projects, but they cannot spend CTR funds unless all legislative conditions are met. DOD officials involved with managing the CTR program recognize that Congress is exercising its oversight responsibilities over the CTR program.

Congress has also placed limits or conditions on how DOD can spend CTR money. For instance, in Congress placed conditions on CTR money to prohibit spending in certain areas, such as conventional weapons destruction² and housing for retired or current members of CTR-recipient countries' military forces.³ Also in 2000, Congress halted CTR funding for

¹Public Law 102-228, Section 211.

²Public Law 106-65, Section 1303.

³Public Law 106-79, Section 8078.

construction of the Russian chemical weapons destruction facility at Shchuch'ye⁴ until fiscal year 2004 when it granted a waiver.⁵

Congress also requires DOD to submit reports on overall program implementation, as well as specific projects. Since the beginning of the CTR program, DOD has mostly complied with its congressional reporting requirements. However, as we previously reported, from 1994 through 1999 DOD was late in providing its annual report, which accounts for CTR assistance.⁶ Specifically, DOD was 16 months late in submitting its report for 1997 and more than 10 months late in submitting its report for 1998. Beginning in fiscal year 2001, the reporting requirement to account for CTR assistance became part of the annual CTR report.⁷ For fiscal years 2002 through 2004, DOD provided its annual CTR report to Congress late.⁸ However, DOD provided its annual report to Congress for fiscal years 2005 and 2006 mostly on time.

Recently, some members of Congress have introduced bills that may lessen the legislative burden on the CTR program. In February 2005, Senator Lugar introduced the Nunn-Lugar Cooperative Threat Reduction Act of 2005.⁹ The bill, among other actions, would repeal some of the restrictions that Congress had previously placed on the CTR program. If enacted the

⁴Public Law 106-65, Section 1305.

⁵Public Law 106-65, Section 1305 and Public Law 108-136, Section 1306.

⁶GAO, *Cooperative Threat Reduction: DOD's 1997-1998 Reports on Accounting for Assistance Were Late and Incomplete*, [GAO/NSIAD-00-40](#) (Washington, D.C.: Mar. 15, 2000). GAO, *Cooperative Threat Reduction: DOD Has Adequate Oversight of Assistance, but Procedural Limitations Remain*, [GAO-01-694](#) (Washington, D.C.: June 19, 2001).

⁷Public Law 106-398, Section 1308(a). The annual report describes CTR activities and assistance provided during the preceding fiscal year. Subsequent legislation has added required information to this report. See Public Law 107-107, Section 1309; Public Law 107-314, Section 1304.

⁸GAO, *Cooperative Threat Reduction Program Annual Report*, [GAO-03-341R](#) (Washington, D.C.: Dec. 2, 2002). GAO, *FY 2003 Annual Report on the Cooperative Threat Reduction Program*, [GAO-03-627R](#) (Washington, D.C.: Apr. 8, 2003). GAO, *FY 2004 Annual Report on the Cooperative Threat Reduction Program*, [GAO-03-1008R](#) (Washington, D.C.: July 18, 2003).

⁹S. 313.

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bill would remove (1) a Presidential certification¹⁰ requirement for all CTR recipient countries to receive CTR assistance and (2) the funding constraints placed on the construction of the CTR-funded chemical weapons destruction facility in Russia. In February 2005, members of the House of Representative introduced the Omnibus Nonproliferation and Anti-nuclear Terrorism Act of 2005.¹¹ This bill also includes a provision for the repeal of the same restrictions outlined in the bill introduced by Senator Lugar.

¹⁰Public Law 102-228, Section 211, as amended, specifies that the President must state in writing that CTR recipient countries are committed to (1) making substantial investment of their own resources to dismantle or destroy weapons, (2) forgoing a military modernization program that exceeds legitimate defense requirements, (3) forgoing any use of components of destroyed nuclear weapons in new weapons, (4) facilitating U.S. verification of weapons destruction, (5) complying with all relevant arms control agreements, and (6) observing internally recognized human rights.

¹¹H.R. 665 was introduced by Representatives Schiff, Shays, Butterfield, Chandler, Davis, Edwards, Grijalva, Holt, Israel, Maloney, Scott, Sherman, and Watson.

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Figure 3: CTR Program Legislative Mandates (Fiscal Years 1992-2004)

Legislation		Requirements	Conditions	Reporting	Lapsed
Pub. L. 102-228	Soviet Nuclear Threat Reduction Act of 1991				
Sec. 211 (as amended)	Certification requirement related to commitments of CTR recipients to various CTR goals	●			
Sec. 231	Requirement that Congress be given 15 days notice prior to the obligation of funds	●			●
Sec. 232	Quarterly report activities to reduce the Soviet military threat			●	●
Pub. L. 102-484	Former Soviet Union Demilitarization Act of 1992				
Sec. 1412	Certification requirement related to commitments of CTR recipients to various CTR goals	●			
Sec. 1431	Requirement that Congress be given 15 days notice prior to the obligation of funds with additional notice requirements regarding industrial demilitarization projects	●			●
Sec. 1432	Report requirement concerning activities to reduce the Soviet military threat			●	●
Pub. L. 103-139	Department of Defense Appropriations Act, 1994				
	Line item earmark		●		
Pub. L. 103-160	Cooperative Threat Reduction Act of 1993				
Sec. 1203	Certification requirement related to commitments of CTR recipients to various CTR goals	●			●
Sec. 1205	Limitation on funds authorized for programs to assist in the environmental restoration of military sites		●		●
Sec. 1206	Requirement that Congress be given 15 days notice prior to the obligation of funds with additional notice requirements regarding demilitarization or conversion projects			●	
Sec. 1207	Report requirement concerning activities carried out pursuant to the CTR program			●	●
Pub. L. 103-335	Department of Defense Appropriations Act, 1995				
	Line item earmark for the study, assessment, and identification of nuclear waste disposal by the former Soviet Union in the Arctic and North Pacific regions		●		●
Pub. L. 103-337	National Defense Authorization Act for Fiscal Year 1995				
Sec. 1202	Report requirement concerning activities carried out pursuant to the CTR program			●	●
Sec. 1203	Report requirement concerning accounting for U.S. assistance			●	●
Sec. 1204	Report requirement concerning control and accountability of material relating to weapons of mass destruction			●	●
Sec. 1205	Report requirement concerning multiyear planning and allied support for CTR programs			●	
Sec. 1206	Limitation on the amount of funds authorized to be expended on various CTR programs		●		●
Sec. 1207	Report requirement concerning the offensive biological warfare program of the former Soviet Union states			●	●
Sec. 1208	Coordination requirement	●			

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Legislation		Requirements	Conditions	Reporting	Lapsed
Pub. L. 104-106	National Defense Authorization Act for Fiscal Year 1996				
Sec. 1202	Limitation on the amount of funds authorized to be expended on various CTR programs		●		●
Sec. 1203	Prohibition on use of funds for peacekeeping exercises with Russia		●		●
Sec. 1205	Requirement that Congress be given 15 days notice prior to the obligation of funds	●			
Sec. 1206, as amended	Report on accounting for U.S. assistance			●	●
Sec. 1207	Certification requirement regarding assistance to nuclear weapons scientists of the former Soviet Union	●			
Sec. 1208	Certification requirement relating to the offensive biological warfare program of Russia	●			●
Sec. 1209	Certification requirement regarding the use of CTR funds for the planning and design of a chemical weapons facility	●			●
Pub. L. 104-208	Department of Defense Appropriations Act, 1997				
Sec. 8098	Prohibition on use of funds to finance housing of members of the military forces of the former Soviet Union or of the Russian Federation		●		●
Pub. L. 104-201	National Defense Authorization Act for Fiscal Year 1997				
Sec. 1502	Limitation on the amount of funds authorized to be expended on various CTR programs		●		●
Sec. 1503	Prohibition on use of funds for conducting peacekeeping activities with Russia, for military housing, for environmental restoration, or for job retraining		●		●
Pub. L. 105-56	Department of Defense Appropriations Act, 1998				
Line Item	Earmarks for the dismantling and disposal of nuclear submarines and submarine reactor components and for the Arctic Military Environmental Cooperation Program		●		●
Sec. 8085	Prohibition on use of funds to finance housing of members of the military forces of the former Soviet Union or of the Russian Federation		●		●
Pub. L. 105-85	National Defense Authorization Act for Fiscal Year 1998				
Sec. 1402	Limitation on the amount of funds authorized to be expended on various CTR programs		●		●
Sec. 1403	Prohibition on use of funds for conducting peacekeeping activities with Russia, for military housing, for environmental restoration, or for job retraining		●		●
Sec. 1404	Certification requirement for projects related to the START II Treaty	●			●
Sec. 1405	Certification requirement regarding the use of CTR funds for the planning and design of a chemical weapons facility. Prohibition against use of funds for construction of the facility	●			●
Sec. 1406	Certification requirement regarding the use of CTR funds for the destruction of chemical weapons	●			●

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Legislation		Requirements	Conditions	Reporting	Lapsed
Sec. 1407	Limitation on the use of CTR funds for a storage facility for Russian fissile material	●			●
Sec. 1408	Limitation on the use of CTR funds for weapons storage security activities	●			●
Sec. 1409	Report requirement regarding payment of taxes, duties, and other assessment on assistance provided to Russia under CTR programs			●	●
Pub. L. 105-262 Department of Defense Appropriations Act, 1999					
Former Soviet Union Threat Reduction Line Item	Earmark for the dismantling and disposal of nuclear submarines and submarine reactor components		●		●
Sec. 8079	Prohibition on use of funds to finance housing of members of the military forces of the former Soviet Union or of the Russian Federation		●		●
Pub. L. 105-261 National Defense Authorization Act for Fiscal Year 1999					
Sec. 1302	Limitation on the amount of funds authorized to be expended on various CTR programs		●		●
Sec. 1303	Prohibition on use of funds for conducting peacekeeping activities with Russia, for military housing, for environmental restoration, or for job retraining		●		●
Sec. 1304	Certification requirement regarding use of CTR funds for chemical weapons destruction activities in Russia	●			
Sec. 1305	Limitation on the use of CTR funds for biological weapons proliferation prevention activities in Russia	●			●
Sec. 1306	Certification requirement regarding the Cooperative Counter Proliferation Program	●			●
Sec. 1307	Requirement to submit as part of the Defense Department's annual budget request a summary of amounts requested by project category		●		
Sec. 1308	Report requirement regarding biological weapons programs in Russia			●	●
Sec. 1309	Report requirement regarding individuals in the former Soviet Union with expertise in matters associated with ballistic missiles and weapons of mass destruction			●	●
Pub. L. 106-79 Department of Defense Appropriations Act, 2000					
Former Soviet Union Threat Reduction Line Item	Earmark for the dismantling and disposal of nuclear submarines and submarine reactor components		●		●
Sec. 8078	Prohibition on use of funds to finance housing of members of the military forces of the former Soviet Union or of the Russian Federation				●
Pub. L. 106-65 National Defense Authorization Act for Fiscal Year 2000					
Sec. 1302	Limitation on the amount of funds authorized to be expended on various CTR programs		●		●
Sec. 1303(a)	Prohibition on use of funds for conducting peacekeeping activities with Russia, for military housing, for environmental restoration, or for job retraining		●		

**Appendix II
Legislative Mandates Covering the CTR
Program**

Legislation		Requirements	Conditions	Reporting	Lapsed
Sec. 1303(c)	Prohibition on use of CTR funds for elimination of conventional weapons		●		●
Sec. 1304(a)(1)	Prohibition on use of Fiscal Year 2000 CTR funds for construction of a second wing of a storage facility for Russian fissile material		●		●
Sec. 1304(a)(2)	Limitation on use of CTR funds for design or planning with respect to a second wing of a storage facility for Russian fissile material	●			●
Sec. 1304(b)	Certification requirement regarding the use of previously authorized CTR funds for construction of a second wing of a storage facility for Russian fissile material	●			
Sec. 1305	Prohibition on use of CTR funds for construction of a chemical weapons facility in Russia		●		●
Sec. 1306	Report requirement concerning the Defense Department's role in managing the CTR program			●	●
Sec. 1308	Report requirement concerning DoD's strategy for encouraging states of the former Soviet Union to contribute financially to the CTR effort and other matters			●	●
Sec. 1309	Report requirement concerning the expanded threat reduction initiative			●	●
Sec. 1310	Certification requirement related to CTR fund recipients' commitment to various CTR goals	●			●
Pub. L. 106-259	Department of Defense Appropriations Act, 2001				
Former Soviet Union Threat Reduction Line Item	Earmark for the dismantling and disposal of nuclear submarines and submarine reactor components		●		●
Sec. 8074	Prohibition on use of funds to finance housing of members of the military forces of the former Soviet Union or of the Russian Federation		●		●
Pub. L. 106-398	National Defense Authorization Act for Fiscal Year 2001				
Sec. 1302(a), (c)	Limitation on the amount of funds authorized to be expended on various CTR programs		●		●
Sec. 1302(b)	Report requirement concerning the obligation of CTR funds			●	●
Sec. 1303	Prohibition on use of CTR funds for elimination of conventional weapons		●		
Sec. 1304(a)(1)	Prohibition on use of Fiscal Year 2000 CTR funds for construction of a second wing of a storage facility for Russian fissile material		●		●
Sec. 1304(a)(2)	Limitation on use of CTR funds for design or planning with respect to a second wing of a storage facility for Russian fissile material	●			●
Sec. 1304(b)	Cap on CTR funding available for planning, design, or construction of the first wing of a storage facility for Russian fissile material		●		
Sec. 1305	Limitation on use of funds to support warhead dismantlement processing	●			●
Sec. 1307	Prohibition on use of CTR funds for construction of fossil fuel energy plants; report requirement concerning options for assisting Russia in the development of alternative energy sources		●	●	●
Sec. 1308(a)	Report requirement concerning previous year activities			●	

**Appendix II
Legislative Mandates Covering the CTR
Program**

Legislation		<i>Requirements</i>	<i>Conditions</i>	<i>Reporting</i>	<i>Lapsed</i>
Sec. 1308(i)	Report requirement concerning Russian nonstrategic nuclear arms			●	●
Sec. 1309	Report requirement concerning Russian efforts concerning chemical weapons elimination			●	●
Sec. 1310	Report requirement concerning elimination of weapons grade plutonium			●	●
Pub. L. 107-107	National Defense Authorization Act for Fiscal Year 2002				
Sec. 1302(a)	Limitation on the amount of funds authorized to be expended on various CTR programs	●			●
Sec. 1302(b)	Report requirement concerning the obligation of CTR funds			●	●
Sec. 1305	Prohibition on use of Fiscal Year 2000 CTR funds for construction of a second wing of a storage facility for Russian fissile material		●		●
Sec. 1306	Prohibition against use of CTR funds for construction activities carried out under Russia's program to eliminate the production of weapons grade plutonium		●		●
Sec. 1308 (amending Sec. 1305 of Pub. L. 106-65)	Certification requirement concerning use of CTR funds for construction of a chemical weapons facility in Russia	●			
Sec. 1309	Report requirement concerning the financial commitment of other countries to the Shchuch'ye chemical weapons facility			●	
Pub. L. 107-117	Department of Defense Appropriations Act, 2002				
Former Soviet Union Threat Reduction Line Item	Earmark for the dismantling and disposal of nuclear submarines and submarine reactor components		●		●
Pub. L. 107-248	Department of Defense Appropriations Act, 2003				
Former Soviet Union Threat Reduction Line Item	Earmark for the dismantling and disposal of nuclear submarines and submarine reactor components		●		
Pub. L. 107-314	National Defense Authorization Act for Fiscal Year 2003				
Sec. 1302(a), (b), (d)	Limitation on the amount of funds authorized to be expended on various CTR programs	●			
Sec. 1302(c)	Report requirement concerning the obligation of CTR funds			●	●
Sec. 1304	Report requirement concerning the use of revenue generated by activities carried out under CTR programs			●	
Sec. 1305	Prohibition against use of CTR funds for a second wing of the fissile material storage facility		●		
Pub. L. 108-87	Department of Defense Appropriations Act, 2004				
Former Soviet Union Threat Reduction Line Item	Earmark for the dismantling and disposal of nuclear submarines and submarine reactor components		●		
Pub. L. 108-136	National Defense Authorization Act for Fiscal Year 2004				
Sec. 1302(a) (c)	Limitation on the amount of funds authorized to be expended on various CTR programs			●	

**Appendix II
Legislative Mandates Covering the CTR
Program**

Legislation		Requirements	Conditions	Reporting	Lapsed
Sec. 1302(b)	Report requirement concerning the obligation of CTR funds			●	●
Sec. 1303	Limitation on use of CTR funds for construction activities until certain permits are obtained	●			
Sec. 1304	Limitation on use of CTR funds for biological research in the former Soviet Union	●			
Sec. 1305	Requirement for on-site managers	●			
Sec. 1306	Certification requirement concerning funding for chemical weapons facility in Russia	●			
Sec. 1307	Certification requirement concerning use of facilities constructed for CTR programs or activities	●			
Sec. 1308	Limited grant of authority to engage in proliferation threat reduction activity outside the states of the former Soviet Union		●		
Pub. L. 108-287	Department of Defense Appropriations Act, 2004				
Former Soviet Union Threat Reduction Line Item	Earmark for the dismantling and disposal of nuclear submarines and submarine reactor components		●		
Pub. L. 108-375	National Defense Authorization Act for Fiscal Year 2004				
Sec. 1302(a), (c)	Limitation on the amount of funds authorized to be expended on various CTR programs			●	
Sec. 1302(b)	Report requirement concerning the obligation of CTR funds			●	

Source: GAO analysis.

Scope and Methodology

To assess DOD's management and internal controls over the CTR program, we collected and analyzed DOD documents, including CTR project plans, briefings, annual reports, and milestone decision authority memorandums. We also obtained and analyzed all legislation passed since 1992 that covers the CTR program. We applied the internal standards as described in GAO's *Standards for Internal Control in the Federal Government*.¹ We focused on those controls most relevant to the CTR program, including organizational structure, risk assessments, performance measures, program reviews, communications, and monitoring of projects. We also reviewed DOD acquisition management guidance as contained in the *Defense Threat Reduction Agency's Instruction 5000.01* for our assessment of CTR management controls.² Using the federal government standards and DOD's guidance, we developed and tested a semi-structured interview guide that included questions regarding DOD's internal controls for the CTR program. We included steps in the development and administration of the semi-structured interview guide to minimize errors resulting from the respondents' interpretation of the questions or from differences in information available to respondents answering the questions. We pretested the instrument with three DOD officials. In addition, an internal survey specialist reviewed our semi-structured interview guide. We modified the interview guide to reflect the questions and comments from the pretests and internal review. We used the semi-structured interview guide to interview 30 DOD officials responsible for managing and implementing the CTR program. We also held meetings with 17 other officials. Specifically, we met with officials from the CTR Policy Office, AT&L, and DTRA's Business and Cooperative Threat Reduction (CT) directorates. Within CT, we obtained information from the director, deputy director, program and project managers from all five program areas,³ and officials from the Program Integration office. In addition, we met with officials from DTRA offices in Moscow and Almaty and the Threat Reduction Support Center in Springfield, Virginia. We traveled to the Russian Federation to observe CTR projects involving strategic offensive

¹GAO/AIMD-00-21.3.1 (Washington, D.C.: Nov. 1999). We also referred to GAO's publication, *Internal Control Management and Evaluation Tool*, GAO-01-1008G (Washington, D.C.: Aug. 2001).

²DTRA Instruction 5000.01: *Defense Threat Reduction Agency (DTRA) Major Programs* (Ft. Belvoir, VA: Nov. 15, 2004).

³The five program areas are Biological Weapons Proliferation Prevention, Chemical Weapons Elimination, Nuclear Weapons Safety and Security, Strategic Offensive Arms Elimination, and Weapons of Mass Destruction Proliferation Prevention.

arms elimination and biological weapons proliferation prevention. We met with Russian officials at the Federal Space Agency, the Federal Agency for Industry, and the Federal Atomic Energy Agency. We also visited the Republic of Kazakhstan to observe CTR-funded projects involving biological weapons proliferation prevention. While in Russia and Kazakhstan, we met with representatives from all five CTR Integrating Contractors⁴ to obtain information on their roles in implementing CTR projects. We also reviewed our prior work on the CTR program.

Although information about funding for the CTR program and the program's accomplishments is used for background purposes only, we assessed the reliability of these data by reviewing relevant agency documents and obtaining information from agency officials. We determined that the data used were sufficiently reliable for the purposes of this report.

We performed our work from April 2004 through May 2005 in accordance with generally accepted government auditing standards.

⁴The five contractors are Parsons; Bechtel International Systems, Inc.; Raytheon Technical Services Company; Kellogg, Brown, and Root; and Washington Group International.

Current CTR Program Areas

Since 1992, Congress has authorized DOD to provide more than \$5 billion for the CTR program to help the former states of the Soviet Union, including Russia, Ukraine, Belarus, Kazakhstan, Uzbekistan, Azerbaijan, Moldova, and Georgia, secure and eliminate their weapons of mass destruction and prevent their proliferation. As of April 2005, DOD has obligated about \$4.5 billion in support of the CTR program. Of this obligated amount, about \$2.7 billion funds projects are being implemented under CTR's five program areas of biological weapons proliferation prevention, chemical weapons elimination, nuclear weapons safety and security, strategic offensive arms elimination, and weapon of mass destruction proliferation prevention initiative, as shown in figure 4. The remaining obligations cover completed CTR projects or other program support areas.¹

¹Other program support areas include Defense and Military Contacts, Arctic Nuclear Waste, and administrative costs.

Figure 4: CTR Program Area Descriptions and Obligations as of April 2005

Biological Weapons Proliferation Prevention



The Biological Weapons Proliferation Prevention (BWPP) program involves providing security and safety upgrades at institutes engaged only in legitimate dangerous biological pathogen research. CTR assistance is being provided to Georgia, Kazakhstan, Russia, and Uzbekistan to improve the security and safety of biological research facilities and to consolidate dangerous biological pathogen collections to reduce the number of storage sites. Some CTR assistance is also being provided for the elimination of biological weapons infrastructure in Kazakhstan, Georgia, and Russia. The BWPP program in Kazakhstan, Russia, and Uzbekistan also includes efforts to engage former biological weapons scientists in cooperative biological research projects to prevent the proliferation of their expertise. Furthermore, the biological threat agent detection and response project in Kazakhstan, Georgia, and Uzbekistan will strengthen dangerous pathogen detection and response networks, enable discovery of the diversion or accidental release of biological materials, and safely consolidate pathogen collections in central labs.^a

CTR Funds Obligated as of April 2005:
\$210.3 million

Integrating Contractors:
Raytheon Technical Services Company (Russia) and Bechtel National, Inc. (non-Russia former Soviet Union states)

Chemical Weapons Elimination



The Chemical Weapons Elimination program is assisting Russia in the safe, secure, and environmentally sound destruction of its chemical weapons stockpile. Primarily, CTR assistance is funding the design, construction, equipment acquisition and installation, systems integration, training, and start-up of the chemical weapons destruction facility at Shchuch'ye. Construction of the facility began in March 2003, but the facility may not be operational until July 2009. In addition, CTR money is assisting Russia with the demilitarization of former chemical weapons production facilities in Volgograd and Novocheboksarsk. This effort includes decontaminating, dismantling, and destroying specialized equipment related to the production, transfer, and storage of chemical weapons, chemical agents, and their precursors.

CTR Funds Obligated as of April 2005:
\$816.1 million

Integrating Contractor:
Parsons Delaware, Inc.^b

Appendix IV
Current CTR Program Areas

Nuclear Weapons Safety and Security



The Nuclear Weapons Safety and Security (NWSS)^c program is helping Russia to enhance its ability to secure nuclear weapons during transportation and storage. CTR assistance is being used to provide support and safety equipment for nuclear weapons storage sites, enhance the safety and security of nuclear weapons storage sites by installing security systems and training guard forces, and improving the safety and security of nuclear weapons during shipment through new rail cars and storage containers.

CTR Funds Obligated as of April 2005:
\$516.2 million

Integrating Contractors:
Raytheon Technical Services Company and Bechtel National, Inc.

Strategic Offensive Arms Elimination



The Strategic Offensive Arms Elimination (SOAE) program assists Russia in the destruction of Russian strategic weapons and their infrastructure to reduce the opportunities for their proliferation or use. The CTR program is assisting Russia by contracting for, and overseeing destruction of, its strategic weapons delivery systems and their related infrastructure. For example, CTR assistance is providing equipment and services to destroy or dismantle intercontinental ballistic missiles and their delivery systems, including silo launchers and road and rail mobile launchers. CTR is also assisting in the destruction of Russian submarine-launched ballistic missiles, as well as their launchers. In addition, the SOAE program is assisting Russia in shipping to storage the spent naval reactor fuel used on its nuclear powered submarines being prepared for elimination.

CTR Funds Obligated as of January 2005:
\$1.1 billion

Integrating Contractors:
Bechtel National, Inc.; Kellogg, Brown, and Root; Raytheon Technical Services Company; Parsons Delaware, Inc.; and Washington Group International

Weapons of Mass Destruction Proliferation Prevention Initiative



The Weapons of Mass Destruction Proliferation Prevention Initiative (WMD-PPI) program seeks to bolster non-Russian former Soviet Union states' ability to prevent the proliferation of WMD across their borders. Currently, CTR program officials are working with the governments of Azerbaijan, Kazakhstan, Ukraine, and Uzbekistan. CTR assistance will provide equipment and indigenous logistics support, training, and infrastructure support to those agencies of recipient governments vested with the authority to monitor borders for illegal transport of WMD or related materials. Such agencies include Border Guard, Customs, National Guard, and selected Defense and Interior government organizations.

CTR Funds Obligated as of April 2005:
\$38.2 million

Integrating Contractors:
Washington Group International and Raytheon Technical Services Company

Sources: DOD (photos 2, 4, 5) and GAO (photos 1, 3).

^aUkraine may also receive CTR assistance under the BWPP program.

^bThe U. S. Army Corps of Engineers and other government agencies are involved with the construction of the chemical weapons destruction facility at Shchucy'ye.

^cNWSS includes Nuclear Weapons Storage Security projects and Nuclear Weapons Transportation Security projects in Russia.

DOD's Current Management and Internal Controls for the CTR Program Compared with Internal Control Standards

In managing the CTR program, standards for internal controls in the federal government provide an overall framework for DOD to establish and maintain management controls and identify and address major performance challenges and areas at risk for mismanagement. The five overall standards for internal control are control environment, risk assessment, control activities, information and communications, and monitoring. Each standard contains numerous factors that an organization's management can use to evaluate its internal controls. For example, under the control environment standard, there are about 30 factors listed such as whether an agency's organizational structure has appropriate and clear internal reporting requirements. For this report, we focused on those factors most relevant to CTR program implementation. The scope of our work thus covered factors such as organizational structure, risk assessments, performance measures, program reviews, communications, and monitoring of projects. Table 1 describes the factors selected in reviewing DOD's current internal controls for the CTR program.

Appendix V
DOD's Current Management and Internal
Controls for the CTR Program Compared
with Internal Control Standards

Table 1: Internal Control Standards and Factors Compared with DOD Internal controls

Standards	Factors	Current DOD internal controls
<p>Control environment</p> <p>Establish and maintain an environment throughout the organization that sets a positive and supportive attitude toward internal control and conscientious management.</p>	<p>Organizational structure</p> <p>Key areas of authority and responsibility are defined and communicated throughout the organization.</p> <p>Appropriate and clear internal reporting relationships have been established.</p>	<p>DOD filled vacancies in the office of the Under Secretary of Defense for Acquisitions, Technology, and Logistics (AT&L) to provide oversight of the program. Specifically, within AT&L, the office of the Deputy Assistant to the Secretary of Defense for Chemical Demilitarization and Threat Reduction participates in CTR program planning, including overseeing program review meetings and providing guidance to program and project managers. This office also interacts with the CTR Policy Office and conveys policy guidance to the Cooperative Threat Reduction Directorate.</p> <p>DOD uses designated Milestone Decision Authority (MDA) to perform oversight of all CTR program areas. The MDA chairs program reviews and approves project acquisition and implementation strategies. The MDA has the authority to approve all project phases or to withhold approval subject to revised planning.</p> <p>CTR project managers regularly report to their MDAs to provide updates on project status and to report on cost, schedule, and performance. With the introduction of the MDA process, program reviews occur at the same intervals for each project and project managers are reporting similar types of information to their MDAs.</p> <p>DTRA Implementing Instructions for Major Program Guidance (DTRA 5000.01) now defines the roles and responsibilities for management and oversight of DTRA major programs, including CTR projects.</p>

**Appendix V
DOD's Current Management and Internal
Controls for the CTR Program Compared
with Internal Control Standards**

(Continued From Previous Page)

Standards	Factors	Current DOD internal controls
Risk assessment	Risk identification, risk analysis, and managing risk during change	
Provide for an assessment of the risks the agency faces from both external and internal sources.	Management comprehensively identifies risk using various methodologies as appropriate.	Since the two CTR project failures in 2003, DOD now uses several methods to assess and mitigate risks associated with CTR projects. An MDA is designated for each CTR project based on several factors, including the project's risk and expected cost.
	Management has developed an approach for risk management and control based on how much risk can be prudently accepted. For example, specific control activities are identified to manage or mitigate specific risks at each activity level.	CTR program officials now use a phased-contract approach in managing project implementation. Under this approach, projects are evaluated in three phases to minimize project risk. DOD has instituted periodic meetings of stakeholders to assess and minimize risks associated with CTR projects.
	The agency has mechanisms in place to anticipate, identify, and react to risks presented by changes in governmental, economic, industry, regulatory, operating, or other conditions that can affect the achievement of entity-wide or activity-level goals and objectives.	The CTR program uses amendments to implementing agreements to convert recipient government assumptions or responsibilities into firm commitments. Implementing agreements have been used to limit CTR program risks. CTR's new and revised internal controls provide a mechanism for addressing and mitigating the specific risks associated with each project, but the CTR program must still rely on the good will of recipient governments to help implement projects. DOD cannot fully mitigate the risks of cooperating with these governments.
	Adequate mechanisms exist to identify risks to the agency arising from external factors.	
Control activities	Top-level and management reviews at the functional or activity level	
Help ensure that management's directives are carried out effectively and efficiently in accomplishing the agency's objectives.	Top-level management regularly reviews actual performance against budgets, forecasts, and prior results.	The MDA for CTR projects is responsible for balancing requirements with risks, approving and overseeing cost, schedule, and performance baselines. DOD has introduced a new process to review CTR projects whereby the designated MDA conducts periodic reviews of a project's cost, schedule, and performance objectives.
	Agency managers review actual performance against targets.	Monthly review meetings of CTR projects include more detailed discussions of project plans that now include objectives, exit strategies, and project status. Project plans are submitted to CTR management for review regularly.
	Performance measures and indicators	
	The agency has established and monitors performance measures and indicators.	CTR project baselines now include the thresholds and objectives for key parameters such as cost, schedule, and performance. DTRA had developed and implemented guidelines that provide CTR project managers with written instructions on developing and reporting project objects, schedules, and cost estimates.

**Appendix V
DOD's Current Management and Internal
Controls for the CTR Program Compared
with Internal Control Standards**

(Continued From Previous Page)

Standards	Factors	Current DOD internal controls
<p>Information and communications</p> <p>Should be recorded and communicated to management and others who need it.</p>	<p>Communications</p> <p>Mechanisms should exist to allow the easy flow of information down, across, and up the organization, and easy communications exist between functional activities, such as between procurement and production activities.</p>	<p>DTRA Implementing Instructions for Major Program Guidance (DTRA 5000.01) documents the roles and responsibilities for management and oversight of DTRA major programs, including CTR projects.</p> <p>All CTR stakeholders are provided with consistent information on a regular basis through emails, weekly reports, and periodic meetings.</p> <p>CTR project managers hold weekly phone conferences with contractors implementing projects in recipient countries to ensure proper program implementation. Contractors are required to submit monthly written reports to CTR officials.</p> <p>DOD has improved its external communications with CTR-recipient countries. To more clearly define the project commitments of CTR-recipient governments and minimize risk at the outset of each project and throughout its life cycle, DOD has introduced and updated controls to ensure that commitments made by the CTR program and governments receiving CTR assistance are clearly defined and documented.</p>
<p>Monitoring</p> <p>Should assess the quality of performance over time and ensure that the findings of audits and other reviews are promptly resolved.</p>	<p>Ongoing monitoring</p> <p>Management has a strategy to ensure that ongoing monitoring is effective and will trigger separate evaluations where problems are identified.</p> <p>Separate evaluations are often prompted by events such as major changes in management plans or strategies.</p>	<p>CTR program officials now monitor the performance of ongoing projects through a variety of controls, but they do not assess the performance of CTR projects upon their completion.</p> <p>DTRA has developed and implemented guidance that provides CTR project managers with written instructions on how to measure performance for meeting project objectives, schedules, and cost estimates. The metrics described in this guidance are intended to establish meaningful goals and track milestones for each project.</p> <p>During periodic program reviews, CTR project managers report to their MDAs on the status of their projects, primarily whether objectives are being met.</p> <p>CTR project managers interact regularly with contractors and recipient government officials through emails, phone conferences, and project visits. In fiscal year 2003, CTR teams made 165 project trips compared with 70 trips in 2001.</p>

Source: GAO analysis.

Comments from the Department of Defense



POLICY

OFFICE OF THE UNDER SECRETARY OF DEFENSE
2000 DEFENSE PENTAGON
WASHINGTON, DC 20301-2000

09 JUN 2005

Mr. Joseph A. Christoff
Director, International Affairs and Trade
U.S. General Accounting Office
441 G Street, N.W.
Washington, DC 20548

Dear Mr. Christoff:

This is the Department of Defense (DoD) response to the GAO draft report, "COOPERATIVE THREAT REDUCTION: DOD Has Improved its Management and Internal Controls but Challenges Remain," dated May 27, 2005 (GAO Code 320264/GAO-05-329).

My office has received the draft GAO report and concurs with the recommendation that the Secretary of Defense conduct performance reviews of CTR projects upon their completion to document lessons learned and apply them to future project planning and implementation.

My point of contact for this report is James H. Reid at (703) 696-7737, james.reid@osd.mil.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Lisa Bronson".

Lisa Bronson
Deputy Under Secretary of Defense,
Technology Security Policy and
Counterproliferation

cc:
ATSD (NCB)
DATSD (CD&TR)
Director, DTRA

GAO Contact and Staff Acknowledgments

GAO Contact

Joseph A. Christoff (202) 512-8979

Staff Acknowledgments

In addition to the contact named above, Dave Maurer, Beth Hoffman León, Josie Sigl, Stephanie Robinson, Nima Patel Edwards, Stacy Edwards, Lynn Cothorn, Judy Pagano, and Mark Dowling contributed to this report. Etana Finkler also provided assistance.

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