

Department of Defense
Chemical Demilitarization Program
Semi-Annual Report to Congress



**Office of the Under Secretary of Defense for Acquisition,
Technology and Logistics**

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EXECUTIVE SUMMARY

As required by section 1521(j) of title 50, United States Code, the September 2012 Department of Defense (DoD) Chemical Demilitarization Program (CDP) Semi-Annual Report to Congress presents information describing the Department's progress toward destruction of the U.S. stockpile of lethal chemical agents and munitions by the Chemical Weapons Convention (CWC) destruction deadline of April 29, 2012, but not later than December 31, 2017; and provides the status of ongoing actions to accelerate the program.

The U.S. Army Chemical Materials Agency (CMA) is responsible for the destruction of approximately 90 percent of the U.S. stockpile declared under the CWC and located at seven sites: Johnston Atoll; Aberdeen, Maryland; Anniston, Alabama; Tooele, Utah; Pine Bluff, Arkansas; Newport, Indiana; and Umatilla, Oregon. The Assembled Chemical Weapons Alternatives (ACWA) program is responsible for destroying the remaining 10 percent of the declared chemical weapons stockpile located at Pueblo, Colorado, and Blue Grass, Kentucky.

The CMA completed destruction operations of its portion of the chemical weapons stockpile on January 21, 2012. Preparations for destroying the remaining U.S. chemical weapons stockpile are ongoing at the sites in Colorado and Kentucky. At the Pueblo Chemical Depot in Colorado, construction is nearly complete and systemization activities have begun. At the Blue Grass Army Depot in Kentucky, construction is well underway and initial systemization activities are being conducted. The Department continues to evaluate options to improve overall schedule and reduce costs.

The Department will continue working to minimize the time required to complete destruction of the remaining chemical weapons stockpile without sacrificing safety and security.

Chemical Demilitarization Program Semi-Annual Report to Congress September 2012

INTRODUCTION

This report provides: (1) the status of the Department's progress toward destruction of the U.S. stockpile of lethal chemical agents and munitions by the CWC destruction deadline of April 29, 2012, but not later than December 31, 2017; and (2) the status of ongoing actions to accelerate the program.

REPORTING REQUIREMENTS

Section 1521(j) of title 50, U.S.C., includes a semi-annual reporting requirement on the implementation by the United States of its chemical weapons destruction obligations under the CWC.

OPTIONS AND ALTERNATIVES FOR ACCELERATING DESTRUCTION

Starting in 2008, the Department conducted assessments to define options and alternatives for accelerating destruction of the remaining chemical weapons stockpile by the 2012 CWC destruction deadline, but not later than the 2017 congressionally-mandated deadline. The Department identified for evaluation three options to destroy the remaining chemical weapons stockpile: (1) provide performance incentives to ensure destruction is complete at CMA sites by April 29, 2012; (2) transport portions of the stockpile to operational chemical weapons destruction facility locations; and (3) accelerate the ACWA program sites' destruction schedules. The Department concluded that no realistic options were available to destroy the complete U.S. stockpile by the CWC destruction deadline of April 2012. However, on January 21, 2012, the CMA sites did complete destruction operations, which represented nearly 90 percent of the U.S. stockpile destroyed. Following a rigorous and lengthy review mandated by section 2433a of title 10, U.S.C. (commonly referred to as the Nunn-McCurdy statute), the Under Secretary of Defense for Acquisition, Technology and Logistics (USD(AT&L)) certified a restructured ACWA program to Congress on June 14, 2011. The restructured program maintains current destruction technologies (neutralization followed by on-site secondary waste treatment), considers supplemental use of Explosive

Semi-Annual Report under 50 U.S.C. 1521(j)

The report shall include:

- The anticipated schedule at the time of such report for the completion of destruction of chemical agents, munitions, and materiel at each chemical weapons demilitarization facility in the United States;
- A description of the options and alternatives for accelerating the completion of chemical weapons destruction at each such facility, particularly in time to meet the stockpile elimination deadline (currently 2017);
- A description of the funding required to achieve each of the options for accelerated destruction, and a detailed life-cycle cost estimate for each of the affected facilities included in each such funding profile; and
- A description of all actions being taken by the United States to accelerate the destruction of its entire stockpile of chemical weapons, agents, and materiel in order to meet the current April 29, 2012, destruction deadline under the CWC, or as soon thereafter as possible.

Destruction Technology (EDT), and continues to evaluate options to improve overall schedule and cost.

LIFE-CYCLE COSTS AND DESTRUCTION SCHEDULE ESTIMATES

With construction continuing at a steady pace, at the Blue Grass Chemical Agent-Destruction Pilot Plant (BGCAPP) and the Pueblo Chemical Agent-Destruction Pilot Plant (PCAPP) (54 percent and 96 percent complete, respectively, as of August 2012), the ACWA program is making steady progress toward the start of operations to destroy the remaining 10 percent of the U.S. chemical weapons stockpile. In March 2012, the USD(AT&L) approved a new Acquisition Program Baseline (APB) to support the restructured ACWA program. The new APB includes the new life-cycle cost estimate of \$10.6 billion (see Table 1) and accompanying schedule (Table 2) that shows Pueblo and Blue Grass completing destruction operations in 2019 and 2023, respectively.

The CMA completed destruction operations of its portion of the chemical weapons stockpile on January 21, 2012. CMA is now focused on closing the remaining chemical weapons destruction facilities at Pine Bluff, Arkansas; Anniston, Alabama; Umatilla, Oregon; and Tooele, Utah. As a result of completing destruction operations ahead of schedule and at lower than anticipated costs, \$100.9 million has been returned to the Office of the Secretary of Defense. The returned funding includes \$98.8 million of FY 2012 Operations and Maintenance funding and \$2.1 million of FY 2011 Procurement funding. The funding cannot be used by the CMA or the ACWA program within the timeframe allowed by the appropriation.

Table 1. CDP Cost Estimate (Then-Year \$Millions)

Project/ FY	Prior	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	To Complete	Total
CMA	20,282.2	1,152.7	674.1	715.4	284.2	273.8	296.1	1,184.8	24,863.3
ACWA	3,361.6	477.1	778.7	706.8	714.5	620.5	614.4	3,343.5	10,617.1
<i>Total</i>	23,643.8	1,629.8	1,452.8	1,422.2	998.7	894.3	910.5	4,528.3	35,480.4

CMA – U.S. Army Chemical Materials Agency ACWA – Assembled Chemical Weapons Alternatives

Note: CMA and ACWA cost estimates are based on the FY 2013 President’s Budget Request, prior to reprogramming.

Table 2. CDP Schedule Estimate

Milestone	ACWA	
	PCAPP	BGCAPP
Begin Ops	DEC 2015	APR 2020
Complete Ops	NOV 2019	SEP 2023

PCAPP – Pueblo Chemical Agent-Destruction Pilot Plant
 BGCAPP – Blue Grass Chemical Agent-Destruction Pilot Plant

Note: The ACWA program schedule estimates are based upon the 2012 Acquisition Program Baseline.

ONGOING ACTIONS TO ACCELERATE DESTRUCTION

The Department continues to review the use of Explosive Destruction Technology (EDT) to supplement destruction of problematic mustard munitions within the chemical weapons stockpiles at Pueblo, Colorado, and Blue Grass, Kentucky. Lessons learned from CMA's experience with EDT systems are actively being shared with the ACWA program to aid the National Environmental Policy Act (NEPA) evaluations and technical assessments.

The ACWA program continues to assess and plan for possible EDT use to supplement destruction at the PCAPP. Incorporating EDT into the destruction process will mitigate technical risk and enhance workforce safety. A NEPA Environmental Assessment (EA) for the use of EDT at PCAPP is complete and concludes that the installation and operation of an EDT facility will have no significant environmental impacts. The acquisition process for a site-specific EDT will begin by the end of the year.

In addition, the ACWA program has begun discussions with the Pueblo systems contractor to implement section 923 of the John Warner National Defense Authorization Act for Fiscal Year 2007 (Public Law 109-364). This public law authorized the Secretary of Defense to include an incentives clause in any contract for the destruction of the U.S. stockpile of lethal chemical agents and munitions for the purpose of: (1) providing the contractor for the chemical demilitarization facility an incentive of up to \$110 million to accelerate the safe elimination of the United States chemical weapons stockpile; and (2) providing up to \$55 million to reduce the total cost of the Chemical Demilitarization Program by providing incentive payments for the early completion of destruction operations and the closure of such facility. Upon finalizing the PCAPP Accelerated Schedule Incentives Agreement, a similar agreement will be negotiated with the systems contractor on the BGCAPP contract.

At the BGCAPP, an analysis of x-rays of mustard-filled munitions confirmed that over the past 65 years, a significant portion of the mustard agent has solidified. This suggests that removal of the mustard agent from projectiles would take significantly more time than originally forecast to destroy. As a result, the ACWA program is exploring the feasibility of supplementing the planned neutralization process at BGCAPP with EDT to destroy mustard-filled munitions. The use of EDT may accelerate destruction efforts by destroying the mustard munitions ahead of regular plant operations to destroy the nerve agent munitions. The ACWA program will continue to evaluate the destruction process to determine the final sequencing of chemical weapons destruction at Blue Grass. A NEPA EA for the use of EDT at BGCAPP has been initiated and will be completed prior to any final decision on the use of EDT.

CONCLUSION

The CMA completed its chemical weapons stockpile mission ahead of the CWC 100-percent destruction deadline of April 29, 2012, and is squarely focused on closure operations. While the current way ahead for destroying the remaining 10 percent is not expected to accommodate the December 31, 2017, congressionally-mandated destruction deadline, the Department will continue to look for opportunities to expedite the safe and secure elimination of the remaining chemical weapons stockpile.