



## Selected Acquisition Report (SAR)

RCS: DD-A&T(Q&A)823-243



**Program Manager Assembled  
Chemical Weapons Alternatives**

**CHEM DEMIL-ACWA**

As of December 31, 2011

Defense Acquisition Management  
Information Retrieval  
(DAMIR)

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**UNCLASSIFIED**

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## Program Information

### Designation And Nomenclature (Popular Name)

Chemical Demilitarization-Assembled Chemical Weapons Alternatives

### DoD Component

DoD

## Responsible Office

### Responsible Office

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**Date Assigned** December 19, 2010

## References

### SAR Baseline (Production Estimate)

Defense Acquisition Executive (DAE) Approved Acquisition Program Baseline (APB) dated March 31, 1998

### Approved APB

Defense Acquisition Executive (DAE) Approved Acquisition Program Baseline (APB) dated March 21, 2012

## Mission and Description

The U.S. Army Element (USAE), Assembled Chemical Weapons Alternatives (ACWA) is performing a portion of the chemical warfare materiel elimination mission. In 1996, Congress and the President, responding to public concerns about the safe destruction of chemical weapons, established and later expanded the ACWA program (Public Laws 104-208, 105-261, 106-79 and 107-248). The Department of Defense was charged with identifying and demonstrating two or more alternative technologies to incineration for the destruction of assembled chemical weapons. The Defense Acquisition Executive assigned Program Manager (PM) ACWA the responsibility for developing neutralization technologies to eliminate the chemical weapons stockpiles located at Pueblo, CO, and Blue Grass, KY (July 16, 2002, and February 3, 2003, respectively). At time of initiation, the ACWA program was known as the Assembled Chemical Weapons Assessment program. When the assessment phase was complete, ACWA shifted its focus from assessing chemical weapons destruction technologies to implementing full-scale pilot testing. As a result, the program was renamed Assembled Chemical Weapons Alternatives in June 2003, to better reflect the new program goals.

## Executive Summary

This Selected Acquisition Report (SAR) details changes to cost, schedule, and performance since last reported in the December 2010 SAR for Chemical Demilitarization-Assembled Chemical Weapons Alternatives (Chem Demil-ACWA). Although the as-of date for this report is technically December 31, 2011, where possible, significant events that have occurred since that date are included to provide the most current and timely information available.

Mr. Conrad Whyne accepted the permanent leadership of the ACWA program, which became effective on February 26, 2012. The program will be transformed from a Program Management Office to a Program Executive Office (PEO) to provide heightened visibility and additional dedicated resources to the program.

Deviations from the April 2007 Acquisition Program Baseline (APB) resulted in a critical Nunn-McCurdy cost breach which was reported to Congress on December 16, 2010 and reported in the December 2010 SAR. A Nunn-McCurdy review of the ACWA program was completed on June 14, 2011, when the Under Secretary of Defense for Acquisition, Technology and Logistics (USD(AT&L)) certified a restructured program to Congress. At the same time, the USD(AT&L) issued an Acquisition Decision Memorandum (ADM) that provided direction for restructuring the ACWA program for certification pursuant to section 2433a of title 10, United States Code, in lieu of termination.

Also pursuant to section 2433a of title 10, United States Code, the USD(AT&L) directed the restructured ACWA program to obtain a Milestone (MS) B approval. The Office of the Secretary of Defense (OSD) conducted a MS B review of the ACWA program from June 2011 through February 2012. The Defense Acquisition Executive (DAE) approved the MS B decision in March 2012. In conjunction with the MS B decision, the DAE approved a revised APB that contains revised cost and schedule estimates for the ACWA program. These revised estimates are reflected in this SAR.

### PUEBLO CHEMICAL AGENT-DESTRUCTION PILOT PLANT (PCAPP):

PCAPP is a fixed-base, single-use system designed to perform or address all necessary steps for destruction of the stockpile of chemical weapons in storage at Pueblo Chemical Depot (PCD), Colorado.

As of January 2012, construction at PCAPP is approximately 89 percent complete and systemization is approximately 16 percent complete. Construction continues on the Brine Reduction System (BRS), the Biotreatment Electrical Building (BEB), the Agent Processing Building (APB), the Enhanced Reconfiguration Building (ERB) and the Filter Press Building. BRS construction crews focused on platform steel, tank settings, coatings, piping and electrical installations while Immobilized Cell Bioreactor (ICB) workers continued with electrical and piping installation and equipment insulation. BEB crews completed the large diameter piping which connects the ICBs in the Biotreatment Area (BTA) while equipment crews installed cable, underground duct banks and pipe rack piping throughout. APB crews geared up to set both electrical and mechanical equipment while site workers completed site grading and final preparations for a variety of mechanical equipment in the balance of facilities. Permanent power has been supplied to several outlying buildings including the Control Support Building (CSB). As of January 2012, approximately 30 percent of the mechanical and electrical systems have been successfully turned over to the systemization team. The ERB facility achieved mechanical completion on January 22, 2012. Mechanical construction complete, which includes the major parts of the plant, is anticipated June 2012. Total construction complete, which includes punch list items and the Parts Monitoring Equipment/Munitions Monitoring Equipment is anticipated September 2012.

Anomalies were found in the surface coating of three ICB pads in the PCAPP BTA in 2010; the Colorado Department of Public Health and Environment (CDPHE) and the Systems Contractor (SC) reached agreement on all

issues in 2011. However technical issues with the high density polyethylene (HDPE) membrane over the ICB pads caused a delay in the completion of the corrective actions required under the Consent Order issued to the SC. The SC requested and was granted an extension until February 29, 2012 to complete the corrective actions on the coatings portion of the Consent Order. Continued technical problems hamper the completion of the ICB pads corrective actions and an additional extension is anticipated to be requested prior to the February 29, 2012 deadline. The CDPHE is aware of the technical issues and is monitoring the progress.

The CDPHE proposed a destruction removal efficiency (DRE) of 99.99% at PCAPP for 1,2-dichloroethane (DCA) and vinyl chloride, volatile organic compounds found as contaminants in mustard agent and hydrolysate, which is beyond the capabilities of the current off gas treatment system. A team of government and SC subject matter experts worked collaboratively to address technical issues and engage the CDPHE on a mutually agreeable path forward. On September 30, 2011, the SC submitted a proposed strategy for the DRE resolution to the government for review. Negotiations have since been underway with the CDPHE to resolve this issue within the current design and construction schedule. Proposed revisions, by both the SC and CDPHE, to the operational permit language regarding carbon filter enclosure monitoring and carbon change-out frequency are under discussion between the project team and the CDPHE.

The ACWA Program Office has initiated a Supplemental Environmental Assessment (EA) to the original PCAPP site-specific Environmental Impact Statement (EIS) to evaluate the use of explosive destruction technologies (EDT) for the destruction of overpacked and reject munitions and explosive components at PCAPP. ACWA is working with the CDPHE and the Environmental Protection Agency (EPA) Region 8 to develop the Supplemental EA. Due to National Environmental Policy Act regulations, no contract award for the procurement of an EDT system can take place until a Finding of No Significant Impact (FONSI) is published, which is anticipated May 2012. Preliminary draft EA and Multiple Pathway Health Risk Assessment (MPHRA) results indicate that the environmental impacts associated with the EDT systems in combination with operations at the PCAPP are not significant. The use of EDT will reduce the risks associated with processing these problematic munitions by hand within the plant. The supplemental EA is expected to be completed by 4th Quarter Fiscal Year 2012.

To meet the National Fire Protection Agency standards for firewater capacity, the existing firewater storage tanks at PCAPP require augmentation until the facility sprinkler systems are commissioned in the summer of 2012, at the conclusion of facility construction. To accommodate this requirement, in January 2012, the PCAPP process water tanks were connected to the existing firewater distribution loop with associated verification, testing and acceptance by the Pueblo Chemical Depot Fire Chief. In addition, in early summer 2012, the firewater pump house will undergo maintenance to correct minor corrosion and wear issues to the distribution system piping.

#### BLUE GRASS CHEMICAL AGENT-DESTRUCTION PILOT PLANT (BGCAPP):

BGCAPP is a fixed-base, single-use system designed to perform or address all necessary steps for destruction of the stockpile of chemical weapons in storage at Blue Grass Army Depot (BGAD), KY.

As of January 2012, construction at BGCAPP is 46 percent complete, and continues on the Munition Demilitarization Building (MDB), the Control and Support Building (CSB), the Supercritical Water Oxidation Processing Building (SPB), the Utility Building (UB), the Bulk Chemical Storage (BCS) area, and the Laboratory Building. MDB crews continued to install neutralization tanks and reactors and to erect framework for elevated concrete wall placements. The MDB is where the chemical weapons will be disassembled, the explosives removed and the agent neutralized.

Progress also continues with installation of structural steel and wall paneling as well as the installation of electrical and piping systems. CSB craft workers are erecting steel supports for the utility pipe rack along the exterior while SPB crews have completed the building foundation. UB crews have completed installation of water chillers. The UB will supply compressed air and water to be used during operations. Workers at the BCS are fabricating, erecting and welding tanks which will house chemicals required to support the neutralization. The laboratory crews have completed the concrete foundation and are awaiting building modules. The Firewater Pump House was declared operational in May 2011. During the remainder of the construction phase, the tanks and pump house will provide the site with fire-suppression water. Future first-of-a-kind (FOAK) equipment testing in 2012 includes the Supercritical

Water Oxidation, Rocket Cutter/Shear machines, and Munitions Washout System.

ACWA requested the U.S. Army Chemical Materials Agency (CMA) to conduct an X-ray assessment of a representative sample of the mustard munitions stored at BGAD. Assessment operations of 96 mustard 155MM projectiles and 80 overpacked munitions were completed on June 14, 2011. Data was collected and analyzed by ACWA and a report was issued in November 2011 which compiled results of the mutual effort by ACWA and CMA. The extent of solidification of the mustard projectiles and the condition of the overpacked munitions for plant processing were summarized in the report. The mean percent heel was determined to be 54.8 percent with a median of 51.4 percent. Therefore, on average, somewhat more than half of the fill material in the munitions X-rayed has solidified. Approximately 45 percent of the previously overpacked munitions had liquid outside of the chemical agent cavity, and 2.5 percent had heel outside of the agent cavity. These results will be assessed and a determination will be made as to the extent EDT can be used to assure the safe handling of all mustard munitions during destruction operations.

ACWA, working collaboratively with the CMA, is executing a reuse plan of Enhanced On-Site Containers (EONCs) which are specialized containers used to transport munitions from storage igloos to the demilitarization plant. A total of 38 EONCs were shipped from Pine Bluff Arsenal (PBA) and a total of 30 EONCs were shipped from Anniston Chemical Activity (ANCA) to BGAD.

After an in-depth review, the U.S. Department of Labor's Occupational Safety & Health Administration (OSHA) has awarded BGCAPP the Voluntary Protection Program (VPP) Star Status certification. The certification process which lasted over 18 months included a construction site assessment of BGCAPP's safety procedures against stringent VPP standards. The VPP Star Status is one of its highest recognitions for a worker safety program.

#### SOFTWARE ISSUES:

There are no significant software-related issues with this program at this time.

**Threshold Breaches****APB Breaches**

<b>Schedule</b>		<input type="checkbox"/>
<b>Performance</b>		<input type="checkbox"/>
<b>Cost</b>	RDT&E	<input type="checkbox"/>
	Procurement	<input type="checkbox"/>
	MILCON	<input type="checkbox"/>
	Acq O&M	<input type="checkbox"/>
<b>Unit Cost</b>	PAUC	<input type="checkbox"/>
	APUC	<input type="checkbox"/>

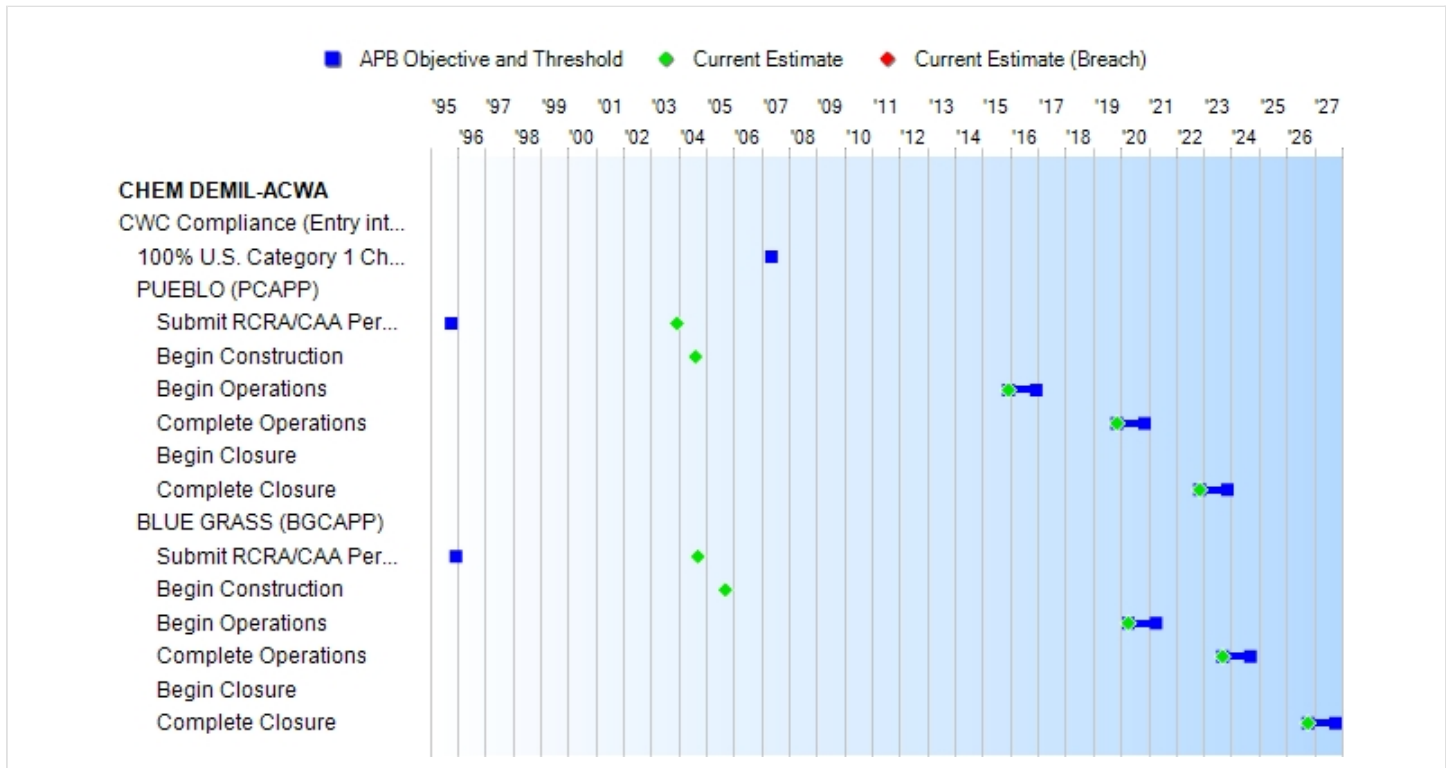
**Nunn-McCurdy Breaches****Current UCR Baseline**

PAUC	None
APUC	None

**Original UCR Baseline**

PAUC	None
APUC	None

### Schedule





Milestones	SAR Baseline Prod Est	Current APB Development Objective/Threshold		Current Estimate	
CWC Compliance (Entry into Force 29 APR 97)					
100% U.S. Category 1 Chemical Weapons Destroyed	MAY 2007	N/A	N/A	N/A	
PUEBLO (PCAPP)					
Submit RCRA/CAA Permit Applications	OCT 1995	N/A	N/A	DEC 2003	
Begin Construction	TBD	N/A	N/A	AUG 2004	
Begin Operations	TBD	DEC 2015	DEC 2016	DEC 2015	(Ch-1)
Complete Operations	N/A	NOV 2019	NOV 2020	NOV 2019	(Ch-1)
Begin Closure	TBD	N/A	N/A	N/A	
Complete Closure	N/A	NOV 2022	NOV 2023	NOV 2022	(Ch-1)
BLUE GRASS (BGCAPP)					
Submit RCRA/CAA Permit Applications	DEC 1995	N/A	N/A	SEP 2004	
Begin Construction	TBD	N/A	N/A	SEP 2005	
Begin Operations	TBD	APR 2020	APR 2021	APR 2020	(Ch-1)
Complete Operations	N/A	SEP 2023	SEP 2024	SEP 2023	(Ch-1)
Begin Closure	TBD	N/A	N/A	N/A	
Complete Closure	N/A	OCT 2026	OCT 2027	OCT 2026	(Ch-1)

### Acronyms And Abbreviations

BGCAPP - Blue Grass Chemical Agent-Destruction Pilot Plant  
CAA - Clean Air Act  
CWC - Chemical Weapons Convention  
PCAPP - Pueblo Chemical Agent-Destruction Pilot Plant  
RCRA - Resource Conservation and Recovery Act

### Change Explanations

(Ch-1) SAR schedule estimates in previous SAR were being evaluated during a Nunn-McCurdy review and were not determined at that time. A Program Office Estimate (POE) for schedule was developed in May 2011 based on the contractor's Integrated Master Schedule. The POE is in line with the independent assessment performed by the Cost Assessment and Program Evaluation (CAPE) for the Nunn-McCurdy review and the Milestone B approval.

### Memo

Note that the "Begin Closure" milestones for both PCAPP and BGCAPP were removed from the schedule milestones listing in the 2007 Acquisition Program Baseline because the plants are designed to allow for closure to begin before operations end.

## Performance

Characteristics	SAR Baseline Prod Est	Current APB Development Objective/Threshold		Demonstrated Performance	Current Estimate
Environmental Laws and Regulations	Meets DoD, State, and/or Federal Reqmts	Meets DoD, State, and/or Federal Requirements	Meets DoD, State, and/or Federal Requirements	On Track	Meets DoD, State, and/or Federal Requirements
Safety and Occupational Health Laws and Regulations	Meets DoD, State, and/or Federal Reqmts	Meets DoD, State, and/or Federal Requirements	Meets DoD, State, and/or Federal Requirements	On Track	Meets DoD, State, and/or Federal Requirements
Chemical Agent Release	0	0	0	On Track	0
Chemical Agent Exposure	0	0	0	On Track	0

### Requirements Source:

Operational Requirements Document (ORD) for Chemical Stockpile Disposal Program, dated September 02, 1994.

### Acronyms And Abbreviations

DoD - Department of Defense

### Change Explanations

None

### Memo

1/ "Meets Environmental Laws and Regulations" means the facility is operating in compliance with all conditions specified in environmental permits and applicable laws and regulations. The threshold is breached if violation of law or regulation warrants a stop-work order issued by the Department of Defense (DoD), the State, the Department of Health and Human Services, or the Environmental Protection Agency and causes a schedule delay of more than 12 months.

2/ "Meets Safety and Occupational Health Laws and Regulations" means the facility is operating in compliance with the conditions specified in safety and occupational health laws and regulations. The threshold is breached if a violation warrants a stop-work order issued by DoD, the State, or the Occupational Safety and Health Administration and causes a schedule delay of more than 12 months.

3/ Number of events. The term "chemical agent release" is defined as an event involving chemical agent-destruction pilot plants where the following occurs:

a. Confirmed chemical agent release above the general population limit (GPL) at the installation boundary measured in accordance with the approved monitoring and/or modeling plan with the pilot plant as the

identified source.

b. Confirmed chemical agent release from the pilot plant's exhaust air filter stack above the allowable threshold limit. Allowable threshold limits are calculated as vapor screening level ceiling values.

4/ Number of events. A "chemical agent exposure", as defined by Department of the Army Implementation Guidance Policy for Revised Airborne Exposure Limits (June 18, 2004) Appendices A and B, refers to an individual who exhibits clinical signs or symptoms of being exposed to chemical agent.

**Track To Budget****RDT&E**

APPN 0390    BA 02                    PE 0708083D                    (DoD)

Chemical Agents and Munitions Destruction, Defense

**MILCON**

APPN 0391    BA 01                    PE 0708007D                    (DoD)

Chemical Demilitarization Construction, Defense

## Cost and Funding

### Cost Summary

#### Total Acquisition Cost and Quantity

Appropriation	BY2011 \$M			BY2011 \$M	TY \$M		
	SAR Baseline Prod Est	Current APB Development Objective/Threshold	Current Estimate	Current Estimate	SAR Baseline Prod Est	Current APB Development Objective	Current Estimate
RDT&E	0.0	8615.5	9477.1	8615.5	0.0	9246.6	9246.6
Flyaway	0.0	--	--	--	0.0	--	--
Recurring	0.0	--	--	--	0.0	--	--
Non Recurring	0.0	--	--	--	0.0	--	--
Support	0.0	--	--	--	0.0	--	--
Procurement	770.2	0.0	--	0.0	681.3	0.0	0.0
Flyaway	770.2	--	--	0.0	681.3	--	0.0
Recurring	770.2	--	--	0.0	681.3	--	0.0
Non Recurring	0.0	--	--	0.0	0.0	--	0.0
Support	0.0	--	--	0.0	0.0	--	0.0
Other Support	0.0	--	--	0.0	0.0	--	0.0
Initial Spares	0.0	--	--	0.0	0.0	--	0.0
MILCON	473.1	1365.3	1501.8	1365.3	418.6	1370.5	1370.5
Acq O&M	1353.0	0.0	--	0.0	1330.5	0.0	0.0
Total	2596.3	9980.8	N/A	9980.8	2430.4	10617.1	10617.1

Confidence Level for Current APB Cost 50% - The Independent Cost Estimate (ICE) to support Chemical Demilitarization-Assembled Chemical Weapons Alternatives Program, Milestone B decision, like all life-cycle cost estimates previously performed by the Cost Assessment and Program Evaluation (CAPE), is built upon a product-oriented work breakdown structure, based on historical actual cost information to the maximum extent possible, and, most importantly, based on conservative assumptions that are consistent with actual demonstrated contractor and government performance for a series of acquisition programs in which the Department has been successful. It is difficult to calculate mathematically the precise confidence levels associated with life-cycle cost estimates prepared for Major Defense Acquisition Program (MDAP) programs. Based on the rigor in methods used in building estimates, the strong adherence to the collection and use of historical cost information, and the review of applied assumptions, we project that it is about equally likely that the estimate will prove too low or too high for execution of the program described.

The Base Year for the program has been updated from FY 1994 to FY 2011 using a deflator of 1.3391489.

<b>Quantity</b>	<b>SAR Baseline Prod Est</b>	<b>Current APB Development</b>	<b>Current Estimate</b>
RDT&E	0	3136	3136
Procurement	0	0	0
Total	0	3136	3136

The Research, Development, Test and Evaluation (RDT&E) quantity reflects tons of chemical agent to be destroyed by ACWA. This number is 3,136 U.S. tons (881,842 munitions) and is composed of 2,613 U.S. tons (780,078 munitions) in the Pueblo stockpile and 523 U.S. tons (101,764 munitions) in the Blue Grass stockpile.

**Cost and Funding****Funding Summary**

**Appropriation and Quantity Summary**  
**FY2013 President's Budget / December 2011 SAR (TY\$ M)**

<b>Appropriation</b>	<b>Prior</b>	<b>FY2012</b>	<b>FY2013</b>	<b>FY2014</b>	<b>FY2015</b>	<b>FY2016</b>	<b>FY2017</b>	<b>To Complete</b>	<b>Total</b>
RDT&E	2420.1	401.8	627.7	625.9	620.9	592.3	614.4	3343.5	9246.6
Procurement	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MILCON	941.5	75.3	151.0	80.9	93.6	28.2	0.0	0.0	1370.5
Acq O&M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PB 2013 Total	3361.6	477.1	778.7	706.8	714.5	620.5	614.4	3343.5	10617.1
PB 2012 Total	3365.5	477.1	568.9	678.0	707.8	688.5	528.3	3693.2	10707.3
Delta	-3.9	0.0	209.8	28.8	6.7	-68.0	86.1	-349.7	-90.2

<b>Quantity</b>	<b>Undistributed</b>	<b>Prior</b>	<b>FY2012</b>	<b>FY2013</b>	<b>FY2014</b>	<b>FY2015</b>	<b>FY2016</b>	<b>FY2017</b>	<b>To Complete</b>	<b>Total</b>
Development	3136	0	0	0	0	0	0	0	0	3136
Production	0	0	0	0	0	0	0	0	0	0
PB 2013 Total	3136	0	0	0	0	0	0	0	0	3136
PB 2012 Total	3136	0	0	0	0	0	0	0	0	3136
Delta	0	0	0	0	0	0	0	0	0	0

## Cost and Funding

### Annual Funding By Appropriation

#### Annual Funding TY\$

#### 0390 | RDT&E | Chemical Agents and Munitions Destruction, Defense

Fiscal Year	Quantity	End Item Recurring Flyaway TY \$M	Non End Item Recurring Flyaway TY \$M	Non Recurring Flyaway TY \$M	Total Flyaway TY \$M	Total Support TY \$M	Total Program TY \$M
1997	--	--	--	--	--	--	39.2
1998	--	--	--	--	--	--	4.0
1999	--	--	--	--	--	--	32.6
2000	--	--	--	--	--	--	108.3
2001	--	--	--	--	--	--	78.5
2002	--	--	--	--	--	--	22.2
2003	--	--	--	--	--	--	97.5
2004	--	--	--	--	--	--	167.3
2005	--	--	--	--	--	--	174.5
2006	--	--	--	--	--	--	52.5
2007	--	--	--	--	--	--	215.8
2008	--	--	--	--	--	--	305.7
2009	--	--	--	--	--	--	283.3
2010	--	--	--	--	--	--	452.8
2011	--	--	--	--	--	--	385.9
2012	--	--	--	--	--	--	401.8
2013	--	--	--	--	--	--	627.7
2014	--	--	--	--	--	--	625.9
2015	--	--	--	--	--	--	620.9
2016	--	--	--	--	--	--	592.3
2017	--	--	--	--	--	--	614.4
2018	--	--	--	--	--	--	697.6
2019	--	--	--	--	--	--	742.4
2020	--	--	--	--	--	--	679.2
2021	--	--	--	--	--	--	600.7
2022	--	--	--	--	--	--	415.7
2023	--	--	--	--	--	--	159.4
2024	--	--	--	--	--	--	37.9
2025	--	--	--	--	--	--	10.6
<b>Subtotal</b>	<b>3136</b>	--	--	--	--	--	<b>9246.6</b>



## Annual Funding BY\$

## 0390 | RDT&amp;E | Chemical Agents and Munitions Destruction, Defense

Fiscal Year	Quantity	End Item Recurring Flyaway BY 2011 \$M	Non End Item Recurring Flyaway BY 2011 \$M	Non Recurring Flyaway BY 2011 \$M	Total Flyaway BY 2011 \$M	Total Support BY 2011 \$M	Total Program BY 2011 \$M
1997	--	--	--	--	--	--	49.0
1998	--	--	--	--	--	--	4.9
1999	--	--	--	--	--	--	39.4
2000	--	--	--	--	--	--	130.3
2001	--	--	--	--	--	--	93.4
2002	--	--	--	--	--	--	26.1
2003	--	--	--	--	--	--	114.2
2004	--	--	--	--	--	--	191.5
2005	--	--	--	--	--	--	194.3
2006	--	--	--	--	--	--	56.8
2007	--	--	--	--	--	--	227.8
2008	--	--	--	--	--	--	316.2
2009	--	--	--	--	--	--	289.7
2010	--	--	--	--	--	--	455.9
2011	--	--	--	--	--	--	373.2
2012	--	--	--	--	--	--	390.0
2013	--	--	--	--	--	--	599.1
2014	--	--	--	--	--	--	587.4
2015	--	--	--	--	--	--	572.4
2016	--	--	--	--	--	--	536.4
2017	--	--	--	--	--	--	546.6
2018	--	--	--	--	--	--	609.6
2019	--	--	--	--	--	--	637.3
2020	--	--	--	--	--	--	572.7
2021	--	--	--	--	--	--	497.6
2022	--	--	--	--	--	--	338.3
2023	--	--	--	--	--	--	127.4
2024	--	--	--	--	--	--	29.8
2025	--	--	--	--	--	--	8.2
<b>Subtotal</b>	<b>3136</b>	--	--	--	--	--	<b>8615.5</b>

**Annual Funding TY\$**  
**0391 | MILCON | Chemical Demilitarization**  
**Construction, Defense**

<b>Fiscal Year</b>	<b>Total Program TY \$M</b>
2000	2.0
2001	11.8
2002	29.3
2003	56.6
2004	104.2
2005	81.9
2006	--
2007	131.0
2008	104.2
2009	144.3
2010	151.5
2011	124.7
2012	75.3
2013	151.0
2014	80.9
2015	93.6
2016	28.2
<b>Subtotal</b>	<b>1370.5</b>

**Annual Funding BY\$**  
**0391 | MILCON | Chemical Demilitarization**  
**Construction, Defense**

<b>Fiscal Year</b>	<b>Total Program BY 2011 \$M</b>
2000	2.4
2001	14.0
2002	34.0
2003	64.1
2004	114.8
2005	87.6
2006	--
2007	135.2
2008	106.1
2009	144.1
2010	148.4
2011	120.1
2012	71.3
2013	140.4
2014	73.9
2015	84.0
2016	24.9
<b>Subtotal</b>	<b>1365.3</b>

### **Low Rate Initial Production**

There is no Low Rate Initial Production (LRIP) for this program.

### **Foreign Military Sales**

None

### **Nuclear Cost**

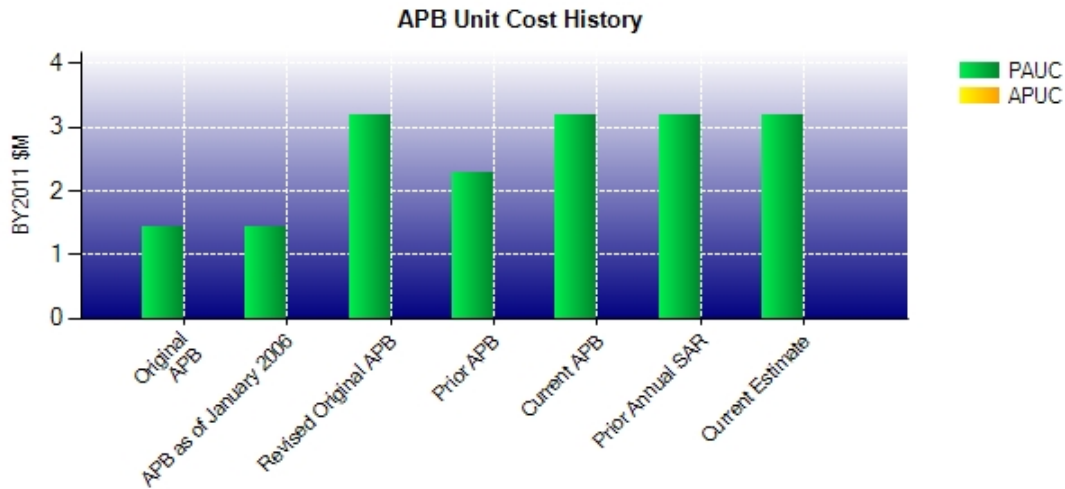
None

**Unit Cost****Unit Cost Report**

	BY2011 \$M	BY2011 \$M	
Unit Cost	Current UCR Baseline	Current Estimate (DEC 2011 SAR)	BY % Change
Program Acquisition Unit Cost (PAUC)			
Cost	9980.8	9980.8	
Quantity	3136	3136	
Unit Cost	3.183	3.183	0.00
Average Procurement Unit Cost (APUC)			
Cost	0.0	0.0	
Quantity	0	0	
Unit Cost	--	--	--

	BY2011 \$M	BY2011 \$M	
Unit Cost	Original UCR Baseline	Current Estimate (DEC 2011 SAR)	BY % Change
Program Acquisition Unit Cost (PAUC)			
Cost	9980.8	9980.8	
Quantity	3136	3136	
Unit Cost	3.183	3.183	0.00
Average Procurement Unit Cost (APUC)			
Cost	0.0	0.0	
Quantity	0	0	
Unit Cost	--	--	--

### Unit Cost History



	Date	BY2011 \$M		TY \$M	
		PAUC	APUC	PAUC	APUC
Original APB	APR 2003	1.434	N/A	1.355	N/A
APB as of January 2006	APR 2003	1.434	N/A	1.355	N/A
Revised Original APB	MAR 2012	3.183	N/A	3.386	N/A
Prior APB	APR 2007	2.293	N/A	2.540	N/A
Current APB	MAR 2012	3.183	N/A	3.386	N/A
Prior Annual SAR	DEC 2010	3.192	N/A	3.414	N/A
Current Estimate	DEC 2011	3.183	N/A	3.386	N/A

### SAR Unit Cost History

#### Current SAR Baseline to Current Estimate (TY \$M)

Initial PAUC Prod Est	Changes								PAUC Current Est
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
0.775	-0.041	0.000	-0.157	0.000	0.000	0.000	0.000	-0.198	3.386

#### Current SAR Baseline to Current Estimate (TY \$M)

Initial APUC Prod Est	Changes								APUC Current Est
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
0.217	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

## SAR Baseline History

Item/Event	SAR Planning Estimate (PE)	SAR Development Estimate (DE)	SAR Production Estimate (PdE)	Current Estimate
Milestone I	N/A	N/A	N/A	N/A
Milestone II	N/A	N/A	N/A	N/A
Milestone III	N/A	N/A	N/A	N/A
IOC	N/A	N/A	N/A	N/A
Total Cost (TY \$M)	N/A	N/A	2430.4	10617.1
Total Quantity	N/A	N/A	0	3136
Prog. Acq. Unit Cost (PAUC)	N/A	N/A	N/A	3.386

**Cost Variance****Cost Variance Summary**

<b>Summary Then Year \$M</b>					
	<b>RDT&amp;E</b>	<b>Proc</b>	<b>MILCON</b>	<b>Acq O&amp;M</b>	<b>Total</b>
SAR Baseline (Prod Est)	--	681.3	418.6	1330.5	2430.4
Previous Changes					
Economic	-118.2	-7.7	-4.6	-51.2	-181.7
Quantity	--	--	--	--	--
Schedule	-165.8	--	+15.6	--	-150.2
Engineering	--	--	--	--	--
Estimating	+9659.7	-673.6	+902.0	-1279.3	+8608.8
Other	--	--	--	--	--
Support	--	--	--	--	--
Subtotal	+9375.7	-681.3	+913.0	-1330.5	+8276.9
Current Changes					
Economic	+52.4	--	+0.6	--	+53.0
Quantity	--	--	--	--	--
Schedule	-382.1	--	+38.9	--	-343.2
Engineering	--	--	--	--	--
Estimating	+200.6	--	-0.6	--	+200.0
Other	--	--	--	--	--
Support	--	--	--	--	--
Subtotal	-129.1	--	+38.9	--	-90.2
Total Changes	+9246.6	-681.3	+951.9	-1330.5	+8186.7
CE - Cost Variance	9246.6	--	1370.5	--	10617.1
CE - Cost & Funding	9246.6	--	1370.5	--	10617.1

Summary Base Year 2011 \$M					
	RDT&E	Proc	MILCON	Acq O&M	Total
SAR Baseline (Prod Est)	--	770.2	473.1	1353.0	2596.3
Previous Changes					
Economic	--	--	--	--	--
Quantity	--	--	--	--	--
Schedule	-230.0	--	-2.5	--	-232.5
Engineering	--	--	--	--	--
Estimating	+8911.7	-770.2	+857.4	-1353.0	+7645.9
Other	--	--	--	--	--
Support	--	--	--	--	--
Subtotal	+8681.7	-770.2	+854.9	-1353.0	+7413.4
Current Changes					
Economic	--	--	--	--	--
Quantity	--	--	--	--	--
Schedule	-291.3	--	+37.7	--	-253.6
Engineering	--	--	--	--	--
Estimating	+225.1	--	-0.4	--	+224.7
Other	--	--	--	--	--
Support	--	--	--	--	--
Subtotal	-66.2	--	+37.3	--	-28.9
Total Changes	+8615.5	-770.2	+892.2	-1353.0	+7384.5
CE - Cost Variance	8615.5	--	1365.3	--	9980.8
CE - Cost & Funding	8615.5	--	1365.3	--	9980.8

Previous Estimate: December 2010



<b>RDT&amp;E</b>	<b>\$M</b>	
<b>Current Change Explanations</b>	<b>Base Year</b>	<b>Then Year</b>
Revised escalation indices. (Economic)	N/A	+52.4
Adjusted schedule to reflect the Nunn-McCurdy restructured program which was certified by the Defense Acquisition Executive in June 2011. (Schedule)	-291.3	-382.1
Adjustment for current and prior escalation. (Estimating)	+6.3	+4.8
Adjusted cost estimate to reflect the Nunn-McCurdy restructured program which was certified by the Defense Acquisition Executive in June 2011. (Estimating)	+218.8	+195.8
<b>RDT&amp;E Subtotal</b>	<b>-66.2</b>	<b>-129.1</b>

<b>MILCON</b>	<b>\$M</b>	
<b>Current Change Explanations</b>	<b>Base Year</b>	<b>Then Year</b>
Revised escalation indices. (Economic)	N/A	+0.6
Adjusted schedule to reflect the Nunn-McCurdy restructured program which was certified by the Defense Acquisition Executive in June 2011. (Schedule)	+37.7	+38.9
Adjustment for current and prior escalation. (Estimating)	+2.1	+1.9
Adjusted cost estimate to reflect the Nunn-McCurdy restructured program which was certified by the Defense Acquisition Executive in June 2011. (Estimating)	-2.5	-2.5
<b>MILCON Subtotal</b>	<b>+37.3</b>	<b>+38.9</b>

## Contracts

### Appropriation: RDT&E

Contract Name	<b>PCAPP Systems Contract</b>
Contractor	Bechtel National Inc.
Contractor Location	Pueblo, CO 81003
Contract Number, Type	DAAA09-02-D-0025/1, CPIF
Award Date	September 27, 2002
Definitization Date	September 30, 2002

Initial Contract Price (\$M)			Current Contract Price (\$M)			Estimated Price At Completion (\$M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
178.2	N/A	2613	1854.1	N/A	2613	1877.1	1860.9

Variance	Cost Variance	Schedule Variance
Cumulative Variances To Date	-36.8	-30.5
Previous Cumulative Variances	-10.2	-7.3
Net Change	-26.6	-23.2

### Cost And Schedule Variance Explanations

The unfavorable net change in the cost variance is due to Construction Non-Manual/Resident Engineering utilizing resources (personnel business travel & temporary assignments) to complete detailed engineering design and processing of field change notices in support of accelerated Construction.

The unfavorable net change in the schedule variance is due to congestion in restricted work areas impacting unit rate production.

**Contract Comments**

The difference between the initial contract price target and the current contract price target is due to several tasks being awarded to this contract.

This is a cost plus incentive fee multi-phase Task Order (TO) contract. The Initial Contract Target Price (\$178.2M) only included the initial design effort. Restructuring of the contract was completed in June 2009. The restructured contract includes the original contract (TOs 1 through 6) and a new contract covering Systemization (designated TO 7 in Bechtel National Inc.'s Earned Value Management System) and Pre-systemization.

The Current Contract Target Price of \$1,854.1M incorporates all contract modifications through December 2011. The Contractor and the Program Manager estimated price at completion include authorized unpriced work of \$6.8M for Systemization modifications.

TO 1, which was definitized on September 30, 2002, required the Pueblo Chemical Agent Destruction Pilot Plant (PCAPP) Systems Contractor (SC) to develop the Design Build Plan and was awarded for a total contract value of \$3.9M. All deliverables are complete. The revised Budget at Completion (BAC) is \$3.6M (includes fees).

TO 2, which was definitized on May 5, 2003, required the PCAPP SC to complete the PCAPP design. Design completion is now included in TO 6. All the deliverables are complete. This task had a total contract value of \$173.5M (excluding fees) when initiated in April 2003. The revised BAC for this TO is \$128.3M (includes fees). The closeout of the TO will occur after final payments are made to all the teaming subcontractors

TO 3, which was definitized on December 14, 2004, requires the PCAPP SC to conduct special studies as required and support design and fabrication of first-of-a-kind (FOAK) equipment. This task has a total contract value of \$53.6M. The revised BAC for this TO is \$36.1M (includes fees). The work was 99.0 percent complete in December 2011.

TO 4, which was definitized on November 1, 2003, requires the PCAPP SC to provide Project Services support (including public outreach) to the contract. This task has a total contract value of \$50.2M and is primarily level of effort work. The BAC per July 2010 data is \$49.4M (includes fees). The Project Services phase has been part of Construction Stage 3 contract since October 2008 (Fiscal Year 2009). The work was completed in July 2010.

TO 5 requires the PCAPP SC to construct the PCAPP facilities. This task has a current total contract value of \$721.9M (excluding fees). TO 5 is further broken into Stages 1A, 1B, 2, 3A, and 3B. Stages 1A and 1B of construction are complete. Stage 2 construction was awarded on May 31, 2007. Stage 3 construction negotiations were completed in January 2008, with an expected award value of \$484.7M (excluding fees). In April 2008, because of the authorization issue of Military Construction (MILCON) funding, the PCAPP project had to re-plan the balance of construction consistent with available MILCON funding. Stage 3 was split into Stages 3A/B; with the Stage 3B contract, the remaining construction scope was awarded on October 15, 2008. In June, 2011 a supplemental contract mod for Expedited Construction was negotiated for \$6.7M. This contract gave budget to craft and subcontract work and reduced budget for non-manual services. It also placed new completion milestones: Mechanical Completion advanced 1 year to June 2012; and Substantial Completion advanced 6 months to September 2012. The revised BAC for this TO is now \$746.7M. The work is 89 percent complete as of January 2012.

TO 6, which was definitized on September 7, 2005, requires the PCAPP SC to complete the optimized redesign. This task has a total contract value of \$86.9M (excluding fees). All deliverables were completed in December 2007. The revised BAC for this TO is \$87.2M. The closeout of the TO will occur after the Defense Contract Audit Agency audit.

Systemization is a contract that was originally awarded in two parts: Part 1, Pre-Systemization and Part 2, Systemization. Part 1, which includes work during the Construction phase associated with preparation of the Systemization phase documentation, was awarded in June 2009. Part 2, which includes all the major tasks, was

awarded in December 2010. The revised BAC for this task is \$587.6M. This contract has a total value of \$686.4M (includes fee).

The awards of the operations and closure phases have not been scheduled.

### **EAC Changes:**

The total Estimate at Completion (EAC) increased \$96.3M from the previous SAR from \$1,624M to \$1,720M. The contract percent complete increased from 51 to 64 percent complete.

The Contract level EAC increase of +\$96M is comprised of:

Task 5 Construction = +\$60.9M;

Systemization task = +\$35.3M; and

Task 3 FOAK/Energetics = -\$0.23M

#### **Construction-**

A further analysis of the Construction increase reveals a base EAC increase of +\$47.2M that includes the sum of control account EACs plus the Undistributed Budget (UB). In addition, Bechtel National Inc. (BNI) has added full utilization of outstanding Management Reserve (MR) at +\$13.7M.

At the Control Account level, the largest contributors to the increased EAC are: Construction Resident Engineering/Non Manual (+\$31.9M); Construction Distributable Costs (+\$12.7M); Agent processing Building (+\$9.8M); and over half a dozen accounts encompassing the balance of Process Facilities amount to +\$22.4M. The positive increase in EAC was offset by negative changes in numerous control accounts.

#### **Systemization-**

Systemization increase shows a base EAC increase of +\$4.2M (sum of distributed budget EACs in Control Accounts plus the UB). In addition Bechtel has applied a 70% usage factor to the outstanding MR that equals +\$31.1M as which is used as a forecast of the additional cost increase expected from uncompleted work. Thus the bulk of the EAC resides in MR and is yet to be allocated.

At the Control Account level the largest contributors to the increase are few because only the Pre-Systemization portion of the work was fully covered in the distributed budget in December 2010. At that time, the bulk of the completion estimate was made from the UB (\$275M in December 2010 vs., \$7M in December 2011).

The main accounts that existed in December 2010 showing a significant increase for similar scope are Laboratory Preparation – Battelle (+\$1.4M); Pre-Systemization – URS (+\$914K) and Pre-Systemization Laboratory – Battelle (+\$84K).

**Appropriation: RDT&E**

Contract Name	<b>BGCAPP Systems Contract</b>
Contractor	Bechtel Parsons Blue Grass
Contractor Location	Richmond, KY 40475
Contract Number, Type	DAAA09-03-D-0023/1, CPIF
Award Date	June 13, 2003
Definitization Date	June 13, 2003

Initial Contract Price (\$M)			Current Contract Price (\$M)			Estimated Price At Completion (\$M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
138.0	N/A	523	2045.3	N/A	523	1977.3	2047.5

Variance	Cost Variance	Schedule Variance
Cumulative Variances To Date	-29.3	-12.3
Previous Cumulative Variances	-27.3	+2.5
Net Change	-2.0	-14.8

**Cost And Schedule Variance Explanations**

The unfavorable net change in the cost variance is due to Resident Engineering disciplines providing additional support to construction, procurement and vendor design relating to construction.

The unfavorable net change in the schedule variance is due to craft labor, construction and the implementation of the final negotiated Phase IV construction proposal.

**Contract Comments**

The difference between the initial contract price target and the current contract price target is due to several tasks being awarded to this contract. The initial contract price only included the initial design effort.

**Contract DAAA09-03-D-0023**

The Government awarded Contract DAAA09-03-D-0023 to Bechtel Parsons Blue Grass (BPBG) Team on June 13, 2003 (Task Order (TO) structure). This contract is a cost plus incentive fee multi-phase Task Order (TO) contract. There were a total of seven TOs awarded on the contract, ending up with a total negotiated contract cost (NCC) of \$564.4M (excluding fees of \$64.7M).

TO 1, which was definitized on June 13, 2003, required the Blue Grass Chemical Agent Destruction Pilot Plant (BGCAPP) Systems Contractor (SC) to complete the BGCAPP design. This task has a total contract value of \$297.5M (includes fee). This TO 1 is 100 percent complete and represents 15 percent of the total budget at complete (BAC) for both contracts (DAAA09-03-D-0023 and W52P1J-09-C-0013). The current estimate at complete (EAC) for the TO is \$307.3M and was completed in February 2011.

TO 2, was definitized on September 30, 2003, and then cancelled. It required the BGCAPP SC to implement a risk mitigation program in support of the BGCAPP. This TO had a total contract value of \$20K (includes fee). The BAC has since been revised to \$0.

TO 3, which was definitized on September 26, 2003, required the BGCAPP SC to provide Public Communications services support to the BGCAPP contract. This TO has a total contract value of \$3.1M (includes fee). The work is 100 percent complete and represents 0.2 percent of the total BAC for both contracts.

TO 4, which was definitized on February 22, 2006, required the BGCAPP SC to initiate construction of the BGCAPP facilities, and was further expanded to include Phase I, Phase II, and Phase III. The Phase II construction proposal was awarded in November 2007. A Limited Notice to Proceed (LNTP) was then issued for Phase IIIA and IIIB. The Phase IIIA construction proposal was submitted in November 2007, and was awarded in December 2008. The Phase IIIB proposal was submitted in January 2008, and was awarded in July 2009. There was a "Phase IV" proposal submitted in April 2009 which was eventually negotiated and awarded in March 2011 under the new contract as "Contract Line Item Number (CLIN) 002." (see below). This TO has a total contract value of \$228.1M (includes fee). The work is 100 percent complete and represents 11.1 percent of the total BAC for both contracts. The current EAC for the TO is \$180.1M and was completed in September 2010.

TO 5, which was definitized on August 2, 2005, required the BGCAPP SC to perform the special studies and design considerations. This task has a total contract value of \$1.5M (includes fee). The work is 100 percent complete and represents 0.1 percent of the total BAC for both contracts.

TO 6, which was definitized on September 19, 2006, is a LNTP for the BGCAPP SC to perform expedited rocket motors removal technology validation tests. This task has a total contract value of \$3.0M (includes fee). The work is 100 percent complete and represents 0.2 percent of the total BAC for both contracts.

TO 7, which was definitized on June 20, 2007, required the BGCAPP SC to support design and fabrication of the first-of-a-kind (FOAK) equipment. TO 7 was further broken into Part I and Part II (Part II was later negotiated as "CLIN 006" under the new contract). The TO has a total contract value of \$95.2M (includes fee). Part I was awarded in April 2009. As mentioned above, there was a "Part II" proposal that was submitted in April 2009 and was eventually negotiated and awarded under the new contract as "CLIN 002" in May 2011 (see below). This task was 99.2 percent complete as of December 2011, and represents 4.9 percent of the total BAC for both contracts. The current EAC for the TO is \$90.2M and was substantially completed in December 2010, with hold out work scheduled to be complete in March 2012.

**Contract W52P1J-09-C-0013**

The Government awarded Contract W52P1J-09-C-0013 to BPBG Team on March 19, 2009 (CLIN structure). The

Procuring Contracting Officer established and executed Contract W52P1J-09-C-0013 strictly as an administrative change which restructured and converted Contract DAAA09-03-D-0023 (the original competitively solicited and awarded Indefinite delivery, indefinite quantity (IDIQ) contract) into Contract W52P1J-09-C-0013 (a multi-year, lifecycle, cost reimbursable, systems contract). Contract W52P1J-09-C-0013 permits the Government and BPBG Team to complete project lifecycle planning and execution. This contract is a cost plus incentive fee CLIN contract. The total NCC for this contract is \$1,276.3M (excluding fees of \$139.9M).

CLIN 002 (Construction Phase IV) was definitized on March 31, 2011, and consists of completing all BGCAPP construction required for plant systemization and operations. This CLIN currently has a total contract value of \$1,260.3M (includes fee). The total work under this CLIN was 36.2 percent complete in December 2011, and represents 60.9 percent of the total BAC for both contracts.

CLIN 003 (Systemization) was partially definitized on June 4, 2011, consisting of planning, scheduling, staffing, supporting and managing the first fiscal year of plant systemization (FY2012). This CLIN currently has a total contract value of \$20.6M (includes fee). The total work under this CLIN was 30.6 percent complete in December 2011, and represents 1 percent of the total BAC for both contracts.

CLIN 006 (FOAK Part II) was definitized on May 31, 2011, and consists of manufacturing, testing and delivering six (6) Munitions Washout System cavity access machines, two (2) rocket cutting and shearing lines, two (2) neutralization system sampling stations, and three (3) Supercritical Water Oxidation (SCWO) systems with aluminum filtration systems. This CLIN currently has a total contract value of \$134.1M (includes fee). The total work under this CLIN was 60.1 percent complete in December 2011, and represents 6.5 percent of the total BAC for both contracts.

CLIN 007 Explosive Detonation Technologies (EDT) was definitized on May 31, 2011, and consisted of conducting a comprehensive feasibility study analysis and comparison of alternate approaches for processing problematic mustard munitions. This CLIN currently has a total contract value of \$1.3M (includes fee). The total work under this CLIN was 100 percent complete in December 2011, and represents 0.1 percent of the total BAC for both contracts.

### **EAC Changes:**

The total Estimate at Completion (EAC) decreased \$70M from the previous SAR from \$1,843M to \$1,773M. The contract percent complete increased from 42 to 58 percent complete.

The net EAC reduction of -\$70M is due to reducing the undistributed budget (UB), -\$45M, CLIN 002 Construction, -\$34M, and CLIN 006 FOAK Part II, -\$8.8M, with some offset from CLIN 003 Systemization, +\$16.5M, CLIN 007 EDT, +\$0.5M, TO 007 FOAK Part I, +\$0.4M, TO 001 Design, +\$0.4M, and other closed TO rate adjustments, -\$0.1M.

The EAC reduction for UB for CLIN 002 and 006 is due to a Budget Change Authorization (BCA) that incorporated the Negotiated Contract Cost (NCC) for Task 4 Phase 4 (CLIN 002) at the time Contract Modification P00023 was issued in the spring of 2011. Only the change from Authorized Unpriced Work to the NCC was incorporated in the BCA. The distributed budget, period of performance, and Management Reserve, was revised to reflect the NCC values in a follow-on BCA.

The EAC reduction for the balance of CLIN 002 Construction is due to implementation of the final negotiated proposal and schedule, mostly adjusting the non-manual Project Support and Project Services staff to reflect the new accelerated construction completion date of July 2015, changing the execution strategy for the Personnel Maintenance Building, adjusting the Miniature Continuous Air Monitoring Systems (MINICAMS) budget to reflect the negotiated Purchase Order (PO) value, correcting a budget loading error in which the MINICAMS tax and freight was duplicated, elimination of the continuous selector system, and reducing the Bulk Materials PO value for two-way on/off control valves.

The EAC reduction for CLIN 006 FOAK Part II is due to implementation of the final negotiated proposal and



schedule, the slower start on Fabrication Support compared to what was originally planned in non-manual labor for Pasco, General Atomics, Parsons, and Bechtel National Inc., as well as associated staff other direct costs, continued non-manual labor efficiencies on design related work, and craft labor progress on fabrication of the Munitions Washout System, Rocket Cutting Machine, Rocket Shear Machine, and Agent Neutralization System/Energetics Neutralization System glove boxes.

The EAC increase for CLIN 003 Systemization is due to a BCA that incorporated the NCC for FY12 Systemization costs.

The EAC increase for CLIN 007 EDT is due to a BCA that incorporated the NCC for completing a comprehensive feasibility study analysis and comparison of alternate approaches for processing problematic mustard munitions.

The EAC increase for TO 007 FOAK Part I is due to refabrication and reinstallation of the Metal Parts Treater Steam Super-Heater piping.

The EAC increase for TO 001 Design is due to continuing accruals in finishing up the Design effort, including some special studies.



**Deliveries and Expenditures**

<b>Deliveries To Date</b>	<b>Plan To Date</b>	<b>Actual To Date</b>	<b>Total Quantity</b>	<b>Percent Delivered</b>
Development	0	0	3136	0.00%
Production	0	0	0	--
<b>Total Program Quantities Delivered</b>	<b>0</b>	<b>0</b>	<b>3136</b>	<b>0.00%</b>

<b>Expenditures and Appropriations (TY \$M)</b>			
Total Acquisition Cost	10617.1	Years Appropriated	16
Expenditures To Date	2922.0	Percent Years Appropriated	55.17%
Percent Expended	27.52%	Appropriated to Date	3838.7
Total Funding Years	29	Percent Appropriated	36.16%

## Operating and Support Cost

### Assumptions And Ground Rules

Cost Element	Costs BY2011 \$M	
	CHEM DEMIL-ACWA	No Antecedent
Unit-Level Manpower	--	--
Unit Operations	--	--
Maintenance	--	--
Sustaining Support	--	--
Continuing System Improvements	--	--
Indirect Support	--	--
Other	--	--
Total Unitized Cost (Base Year 2011 \$)	--	--

Total O&S Costs \$M	CHEM DEMIL-ACWA	No Antecedent
Base Year	--	--
Then Year	--	--

Operating and Support costs are an integral part of the ACWA program and, as such, are reported previously in the funding and cost sections of this report.