



Selected Acquisition Report (SAR)

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



**Program Executive Office
Assembled Chemical Weapons Alternatives**

Chemical Demilitarization-Assembled Chemical Weapons Alternatives (Chem Demil-ACWA)

As of FY 2016 President's Budget

Defense Acquisition Management
Information Retrieval
(DAMIR)

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Common Acronyms and Abbreviations for MDAP Programs

Acq O&M - Acquisition-Related Operations and Maintenance
ACAT - Acquisition Category
ADM - Acquisition Decision Memorandum
APB - Acquisition Program Baseline
APPN - Appropriation
APUC - Average Procurement Unit Cost
\$B - Billions of Dollars
BA - Budget Authority/Budget Activity
Blk - Block
BY - Base Year
CAPE - Cost Assessment and Program Evaluation
CARD - Cost Analysis Requirements Description
CDD - Capability Development Document
CLIN - Contract Line Item Number
CPD - Capability Production Document
CY - Calendar Year
DAB - Defense Acquisition Board
DAE - Defense Acquisition Executive
DAMIR - Defense Acquisition Management Information Retrieval
DoD - Department of Defense
DSN - Defense Switched Network
EMD - Engineering and Manufacturing Development
EVM - Earned Value Management
FOC - Full Operational Capability
FMS - Foreign Military Sales
FRP - Full Rate Production
FY - Fiscal Year
FYDP - Future Years Defense Program
ICE - Independent Cost Estimate
IOC - Initial Operational Capability
Inc - Increment
JROC - Joint Requirements Oversight Council
\$K - Thousands of Dollars
KPP - Key Performance Parameter
LRIP - Low Rate Initial Production
\$M - Millions of Dollars
MDA - Milestone Decision Authority
MDAP - Major Defense Acquisition Program
MILCON - Military Construction
N/A - Not Applicable
O&M - Operations and Maintenance
ORD - Operational Requirements Document
OSD - Office of the Secretary of Defense
O&S - Operating and Support
PAUC - Program Acquisition Unit Cost

PB - President's Budget
PE - Program Element
PEO - Program Executive Officer
PM - Program Manager
POE - Program Office Estimate
RDT&E - Research, Development, Test, and Evaluation
SAR - Selected Acquisition Report
SCP - Service Cost Position
TBD - To Be Determined
TY - Then Year
UCR - Unit Cost Reporting
U.S. - United States
USD(AT&L) - Under Secretary of Defense (Acquisition, Technology and Logistics)

Program Information

Program Name

Chemical Demilitarization-Assembled Chemical Weapons Alternatives (Chem Demil-ACWA)

DoD Component

DoD

Responsible Office

Mr. Conrad Whyne
SFAE-ACW-Z
5183 Blackhawk Road
APG-EA, MD 21010-5424

conrad.f.whyne.civ@mail.mil

Phone: 410-436-3498

Fax: 410-436-1992

DSN Phone: 584-3498

DSN Fax: 584-1992

Date

Assigned: December 19, 2010

References

SAR Baseline (Development Estimate)

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

Approved APB

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

Mission and Description

Chemical Demilitarization-Assembled Chemical Weapons Alternatives (Chem Demil-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 DoD was charged with identifying and demonstrating two or more alternative technologies to incineration for the destruction of assembled chemical weapons. The DAE assigned 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 the time of initiation, the ACWA program was known as the Assembled Chemical Weapons Assessment program. When the assessment phase was complete, the ACWA program 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. To raise the program's visibility and obtain the necessary resources, PM ACWA was redesignated as the Program Executive Office, ACWA on October 1, 2012.

Executive Summary

This December 2014 SAR details changes to cost, schedule, and performance since last reported in the December 2013 SAR for Chem Demil-ACWA. Program funding and production quantities listed in this SAR are consistent with the Fiscal Year (FY) 2016 PB.

Systemization at the Pueblo Chemical Agent-Destruction Pilot Plant (PCAPP) increased by 27.5%; i.e., the September 2013 re-planned systemization is now approximately 73.5% complete compared to the 46% complete reported in the December 2013 SAR.

Construction at the Blue Grass Chemical Agent-Destruction Pilot Plant (BGCAPP) increased by 12%; i.e., construction of the destruction plant is approximately 91% complete compared to the 79% complete reported in the December 2013 SAR. Systemization is underway and currently 28% complete.

The PEO for the Chem Demil-ACWA program has received a MILCON appropriation in FY 2015 of \$38.7M for the BGCAPP project. Of this amount, \$4.7M is a recovery of the reduction from the FY 2013 MILCON sequestered funds and \$34M will be an authorization ceiling increase (from \$746M to \$780M).

Since the 2011 Nunn-McCurdy review of the Chem Demil-ACWA program, increased emphasis has been placed on the early identification of risks and the close tracking of their potential impact on cost and schedule. Chem Demil-ACWA continues to evaluate ways to mitigate risks, shorten schedules, control costs, and safely accelerate the program.

PCAPP:

PCAPP is a fixed-base, single-use system designed to perform all necessary steps for destruction of the stockpile of chemical weapons in storage at Pueblo Chemical Depot (PCD), Colorado. The PCAPP project has completed the design and construction phases of the program. The project is currently in the systemization phase which is the preparatory phase where all processes and equipment are tested to ensure they are working properly.

As of January 31, 2015, systemization is approximately 73.5% complete. Equipment and system testing is the primary focus of the systemization effort to date. Facilities and equipment turnover from systemization to operations will be central to future efforts. Approximately 44% (27 of 61) of the systems/facilities, to include the mechanical, process and supporting utility systems have been successfully turned over to operations.

The current systemization schedule drivers are corrective actions associated with emergent issues discovered during ongoing systemization efforts. These issues include items such as monitoring line replacement, sealing of ventilation leaks, electronic security system testing, additional facility construction certification packages, and Agent Processing Building Fire Barrier Walls.

Construction of the PCAPP operator training and certification facility was completed in November 2012 and classroom training started in late December 2012. Installation of the training equipment in the "hands-on" area of the facility was completed October 2, 2014. The development of discrete knowledge based courses was completed and practical exercises began on October 20, 2014.

PCAPP continues to work closely with the Colorado Department of Public Health and Environment (CDPHE) Hazardous Materials and Waste Management Division. Since May 2014, CDPHE has visited the site on a weekly basis to walk through various system, equipment, and operational Standard Operating Procedures. This has afforded them valuable insight into the equipment, systems, and familiarity with the personnel operating and controlling the facility. In addition, PCAPP and CDPHE have conducted several meetings to resolve CDPHE comments and questions regarding a number of Resource Conservation and Recovery Act (RCRA) permit required testing, operational, and emergency response plans.

The PCAPP Explosive Destruction System (EDS) start of operations to destroy existing over packed munitions is scheduled to begin the second quarter FY 2015. In March 2014, PCAPP and PCD received regulatory approvals from both

the CDPHE and Pueblo County to begin construction activities for the PCAPP EDS. Through close coordination and cooperation between PCAPP, PCD, Joint Project Manager - Elimination (P), and CDPHE, the approval for environmental permitting of the PCAPP EDS became effective on October 15, 2014. The Pueblo County Certificate of Designation (CD) for PCAPP EDS was approved on September 10, 2014. Two meetings to discuss the approval of the Pueblo County CD for PCAPP were held, and it was approved on January 14, 2015. The current start up plan includes a PCAPP EDS pre-operational survey, an operational test readiness review, and a notification to the Organisation for the Prohibition of Chemical Weapons (OPCW) at least 30 days prior to the start of agent operations.

In preparation of the transition to the operational phase of the program, Chem Demil-ACWA continues to work closely with the SC. The SC resubmission of their operations phase proposal was received on January 30, 2014. The PCAPP Field Office's technical evaluation of the SC's proposal was conducted in the second and third quarter FY 2014. On September 11, 2014, Chem Demil-ACWA met with the Director of Defense Pricing to fulfill the Defense Federal Acquisition Regulation Supplement and Procedures Guidance and Information 201.170-2(b)(1) requirements for pre-award peer reviews of noncompetitive acquisition prior to negotiations. At this meeting, Chem Demil-ACWA requested permission to start negotiations of the PCAPP operations phase (phase 1 of the peer review requirement) and permission was granted allowing negotiations to begin on September 15, 2014. A follow-on discussion with the Director of Defense Pricing (phase 2 of the peer review requirement) occurred on December 15, 2014, resulting in the approval to award the operational phase of the contract in the second quarter FY 2015.

BGCAPP:

BGCAPP is a fixed-base, single-use system designed to perform all necessary steps for destruction of the stockpile of chemical weapons in storage at Blue Grass Army Depot (BGAD), KY. The BGCAPP project has completed the design phase of the program. The project is concurrently in the construction and systemization phases. Construction is due to be complete in the fourth quarter FY 2015, and the systemization phase will be ongoing through 2018.

As of January 31, 2015, construction at BGCAPP is approximately 92% complete and systemization is approximately 28% complete. Construction continues on the Munitions Demilitarization Building (MDB), the Supercritical Water Oxidation (SCWO) Processing Building (SPB), the Personnel Maintenance Building/Medical Facility, and the Entry Control Facility. The MDB is where the chemical weapons will be disassembled, the explosives removed, and the agent and energetics neutralized. Within the MDB the piping, conduit and cable installation, Heating, Ventilation, and Air Conditioning (HVAC) ductwork, fire detection system and sprinkler installation are nearing completion. At the SPB, piping, electrical, and HVAC installations are being performed. Also, at the Personnel Maintenance Building/Medical Facility electrical, sanitary sewer, water, and the air service piping installations are nearing completion. The electrical and HVAC work is in progress at the Entry Control Facility. These buildings are scheduled to be completed in the third quarter FY 2015.

As of January 31, 2015, 357 of the scheduled 585 quality data packages have been turned over from the construction team to the systemization team. The systemization teams continue to conduct continuity checks between equipment installed in the MDB and the Control and Support Building Facility Control System along with pipe testing and flushing, and pre-commissioning and commissioning of subsystems in the Utility Building.

BGCAPP continues to make progress on implementation of the Static Detonation Chamber (SDC), which will be used for the safe destruction of the problematic mustard munitions at BGAD. The SDC start of operations is scheduled for 2017, which will precede the 2018 start of operations in the main plant. The SC and the SDC provider, UXB International, Inc., conducted 30%, 60%, and 90% design reviews for the SDC March 11-13, 2014, June 10-11, 2014, and November 4-6, 2014, respectively. The purpose of these design reviews was to identify changes/improvements to the current SDC design for the safe destruction of the mustard munitions.

BGCAPP has cleared several key milestones toward implementation of the SDC. The contract to construct, systemize, operate, and close the SDC was awarded on June 30, 2014. On August 22, 2014, the Kentucky Department of Environmental Protection (KDEP) approved the Temporary Authorization Request submitted by BGCAPP to allow construction activities begin at the SDC site prior to the issuance of the Resource Conservation and Recovery Act (RCRA) permit modification. This, along with the KDEP acceptance to the BGCAPP Title V Air Permit modification as technically complete, allowed the civil site preparation work to proceed as BGCAPP is finalizing the RCRA Part B, Class 3 Permit Modification Request. Construction of the SDC site began in November 2014. On October 8, 2014 the BGCAPP Laboratory

was authorized to receive the working level dilute mustard agent standards needed to prepare/validate the air monitoring and analytical methods to support the SDC. This is a significant step in the preparation to begin SDC operations. Finally, the OPCW requires intrusive sampling of chemical munitions to verify the chemical fill, which must be performed in the presence of on-site treaty inspectors during SDC destruction operations. The intrusive sampling strategy for the mustard munitions was forwarded through the US State Department to the OPCW Technical Secretariat, and concurrence was received on October 30, 2014.

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

Threshold Breaches

APB Breaches

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

Nunn-McCurdy Breaches

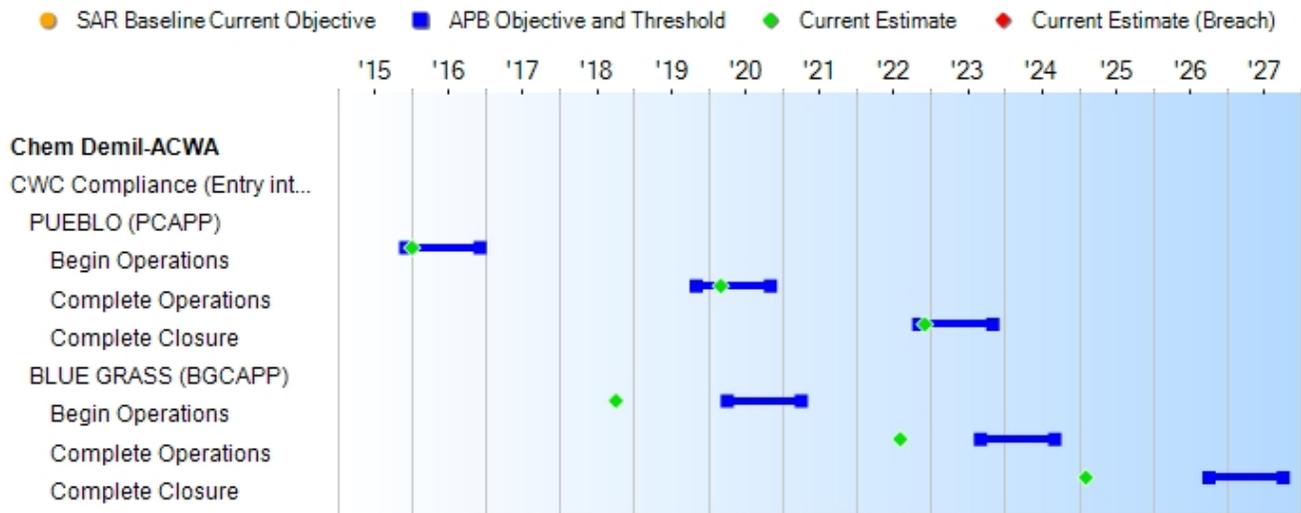
Current UCR Baseline

PAUC	None
APUC	None

Original UCR Baseline

PAUC	None
APUC	None

Schedule



Schedule Events				
Events	SAR Baseline Development Estimate	Current APB Development Objective/Threshold	Current Estimate	
CWC Compliance (Entry into Force April 29, 1997)				
PUEBLO (PCAPP)				
Begin Operations	Dec 2015	Dec 2015	Dec 2016	Jan 2016 (Ch-1)
Complete Operations	Nov 2019	Nov 2019	Nov 2020	Mar 2020 (Ch-1)
Complete Closure	Nov 2022	Nov 2022	Nov 2023	Dec 2022 (Ch-1)
BLUE GRASS (BGCAPP)				
Begin Operations	Apr 2020	Apr 2020	Apr 2021	Oct 2018 (Ch-1)
Complete Operations	Sep 2023	Sep 2023	Sep 2024	Aug 2022 (Ch-1)
Complete Closure	Oct 2026	Oct 2026	Oct 2027	Feb 2025 (Ch-1)

Change Explanations

(Ch-1) The current estimates are based on the 2014 POE.

Acronyms and Abbreviations

BGCAPP - Blue Grass Chemical Agent-Destruction Pilot Plant
CWC - Chemical Weapons Convention
PCAPP - Pueblo Chemical Agent-Destruction Pilot Plant
POE - Program Office Estimate

Performance

Performance Characteristics				
SAR Baseline Development Estimate	Current APB Development Objective/Threshold		Demonstrated Performance	Current Estimate
Environmental Laws and Regulations				
Meets DoD, State, and/or Federal Requirements	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 Requirements	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 Reference

Operational Requirements Document (ORD) dated September 2, 1994

Change Explanations

None

Notes

Environmental Laws and Regulations: 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 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.

Safety and Occupational Health Laws and Regulations: 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.

Chemical Agent Release: An event involving chemical agent-destruction pilot plants or Explosive Destruction Technologies where the following occurs:

- 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.
- 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.

Chemical Agent Exposure: Department of the Army Implementation Guidance Policy for Revised Airborne Exposure Limits (June 18, 2004) Appendices A and B, defines a chemical agent exposure as an event when an individual exhibits clinical

signs or symptoms of being exposed to chemical agent.

Track to Budget

RDT&E

Appn	BA	PE
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Defense-Wide 0390 02 0708007A

Project	Name
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Chemical Agents and Munitions Destruction (Shared) (Sunk)

Defense-Wide 0390 02 0708083D

Project	Name
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Chemical Agents and Munitions Destruction (Shared)

MILCON

Appn	BA	PE
------	----	----

Defense-Wide 0391 01 0708007D

Project	Name
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Pueblo Chemical Depot Ammunition Demilitarization Facility (Sunk)

Blue Grass Army Depot Ammunition Demilitarization (Sunk)

Cost and Funding

Cost Summary

Total Acquisition Cost							
Appropriation	BY 2011 \$M			BY 2011 \$M	TY \$M		
	SAR Baseline Development Estimate	Current APB Development Objective/Threshold		Current Estimate	SAR Baseline Development Estimate	Current APB Development Objective	Current Estimate
RDT&E	8615.5	8615.5	9477.1	8885.7	9246.6	9246.6	9630.9
Procurement	0.0	0.0	--	0.0	0.0	0.0	0.0
Flyaway	--	--	--	0.0	--	--	0.0
Recurring	--	--	--	0.0	--	--	0.0
Non Recurring	--	--	--	0.0	--	--	0.0
Support	--	--	--	0.0	--	--	0.0
Other Support	--	--	--	0.0	--	--	0.0
Initial Spares	--	--	--	0.0	--	--	0.0
MILCON	1365.3	1365.3	1501.8	1360.1	1370.5	1370.5	1359.2
Acq O&M	0.0	0.0	--	0.0	0.0	0.0	0.0
Total	9980.8	9980.8	N/A	10245.8	10617.1	10617.1	10990.1

Confidence Level

Confidence Level of cost estimate for current APB: 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.

Total Quantity			
Quantity	SAR Baseline Development Estimate	Current APB Development	Current Estimate
RDT&E		3136	3136
Procurement		0	0
Total		3136	3136

Cost and Funding

Funding Summary

Appropriation Summary									
FY 2016 President's Budget / December 2014 SAR (TY\$ M)									
Appropriation	Prior	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	To Complete	Total
RDT&E	4032.7	575.8	569.3	611.5	683.8	634.8	758.4	1764.6	9630.9
Procurement	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MILCON	1320.5	38.7	0.0	0.0	0.0	0.0	0.0	0.0	1359.2
Acq O&M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PB 2016 Total	5353.2	614.5	569.3	611.5	683.8	634.8	758.4	1764.6	10990.1
PB 2015 Total	5353.2	614.5	613.7	617.9	655.8	641.9	765.7	1731.3	10994.0
Delta	0.0	0.0	-44.4	-6.4	28.0	-7.1	-7.3	33.3	-3.9

Quantity Summary										
FY 2016 President's Budget / December 2014 SAR (TY\$ M)										
Quantity	Undistributed	Prior	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	To Complete	Total
Development	3136	0	0	0	0	0	0	0	0	3136
Production	0	0	0	0	0	0	0	0	0	0
PB 2016 Total	3136	0	0	0	0	0	0	0	0	3136
PB 2015 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							
0390 RDT&E Chemical Agents and Munitions Destruction, Defense							
Fiscal Year	Quantity	TY \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
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	--	--	--	--	--	--	626.6
2014	--	--	--	--	--	--	584.2
2015	--	--	--	--	--	--	575.8
2016	--	--	--	--	--	--	569.3
2017	--	--	--	--	--	--	611.5
2018	--	--	--	--	--	--	683.8
2019	--	--	--	--	--	--	634.8
2020	--	--	--	--	--	--	758.4
2021	--	--	--	--	--	--	683.1
2022	--	--	--	--	--	--	545.6
2023	--	--	--	--	--	--	344.5
2024	--	--	--	--	--	--	158.4
2025	--	--	--	--	--	--	30.9
2026	--	--	--	--	--	--	2.1
Subtotal	3136	--	--	--	--	--	9630.9

Annual Funding							
0390 RDT&E Chemical Agents and Munitions Destruction, Defense							
Fiscal Year	Quantity	BY 2011 \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
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	--	--	--	--	--	--	456.0
2011	--	--	--	--	--	--	374.2
2012	--	--	--	--	--	--	390.8
2013	--	--	--	--	--	--	600.5
2014	--	--	--	--	--	--	547.0
2015	--	--	--	--	--	--	530.6
2016	--	--	--	--	--	--	515.5
2017	--	--	--	--	--	--	543.5
2018	--	--	--	--	--	--	596.0
2019	--	--	--	--	--	--	542.5
2020	--	--	--	--	--	--	635.4
2021	--	--	--	--	--	--	561.1
2022	--	--	--	--	--	--	439.4
2023	--	--	--	--	--	--	272.0
2024	--	--	--	--	--	--	122.6
2025	--	--	--	--	--	--	23.4
2026	--	--	--	--	--	--	1.6
Subtotal	3136	--	--	--	--	--	8885.7

Annual Funding 0391 MILCON Chemical Demilitarization Construction, Defense	
Fiscal Year	TY \$M
	Total Program
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	187.9
2011	124.7
2012	75.3
2013	144.8
2014	122.5
2015	38.7
Subtotal	1359.2

Annual Funding 0391 MILCON Chemical Demilitarization Construction, Defense	
Fiscal Year	BY 2011 \$M
	Total Program
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	184.4
2011	120.4
2012	71.7
2013	135.6
2014	111.2
2015	34.5
Subtotal	1360.1

Low Rate Initial Production

There is no LRIP for this program.

Foreign Military Sales

None

Nuclear Costs

None

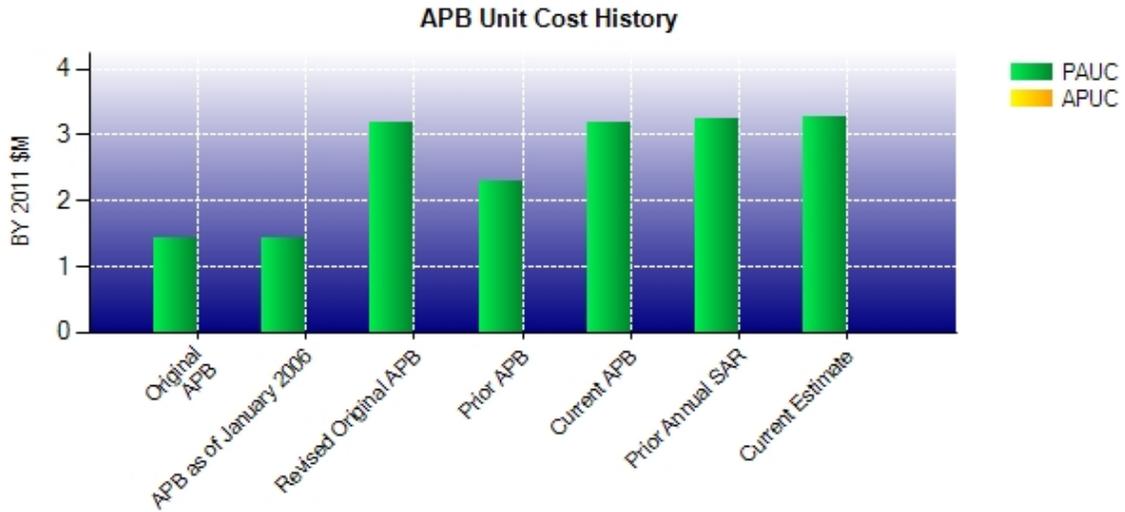
Unit Cost

Unit Cost Report

Item	BY 2011 \$M	BY 2011 \$M	% Change
	Current UCR Baseline (Mar 2012 APB)	Current Estimate (Dec 2014 SAR)	
Program Acquisition Unit Cost			
Cost	9980.8	10245.8	
Quantity	3136	3136	
Item	3.183	3.267	+2.64
Average Procurement Unit Cost			
Cost	0.0	0.0	
Quantity	0	0	
Unit Cost	--	--	--

Item	BY 2011 \$M	BY 2011 \$M	% Change
	Revised Original UCR Baseline (Mar 2012 APB)	Current Estimate (Dec 2014 SAR)	
Program Acquisition Unit Cost			
Cost	9980.8	10245.8	
Quantity	3136	3136	
Unit Cost	3.183	3.267	+2.64
Average Procurement Unit Cost			
Cost	0.0	0.0	
Quantity	0	0	
Unit Cost	--	--	--

Unit Cost History



Item	Date	BY 2011 \$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 2013	3.255	N/A	3.506	N/A
Current Estimate	Dec 2014	3.267	N/A	3.504	N/A

SAR Unit Cost History

Current SAR Baseline to Current Estimate (TY \$M)									
Initial PAUC Development Estimate	Changes								PAUC Current Estimate
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
3.386	0.005	0.000	0.097	0.000	0.016	0.000	0.000	0.118	3.504

Current SAR Baseline to Current Estimate (TY \$M)										
Initial APUC Development Estimate	Changes								APUC Current Estimate	
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total		
0.000	--	--	--	--	--	--	--	--	--	0.000

An APUC Unit Cost History is not available, since no Initial APUC Estimate had been calculated due to a lack of defined quantities.

SAR Baseline History					
Item	SAR Planning Estimate	SAR Development Estimate	SAR Production Estimate	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	10990.1
Total Quantity		N/A	N/A	0	3136
PAUC		N/A	N/A	N/A	3.504

Cost Variance

Summary TY \$M				
Item	RDT&E	Procurement	MILCON	Total
SAR Baseline (Development Estimate)	9246.6	--	1370.5	10617.1
Previous Changes				
Economic	+65.3	--	+0.7	+66.0
Quantity	--	--	--	--
Schedule	+308.1	--	--	+308.1
Engineering	--	--	--	--
Estimating	+14.8	--	-12.0	+2.8
Other	--	--	--	--
Support	--	--	--	--
Subtotal	+388.2	--	-11.3	+376.9
Current Changes				
Economic	-48.4	--	-1.4	-49.8
Quantity	--	--	--	--
Schedule	--	--	--	--
Engineering	--	--	--	--
Estimating	+44.5	--	+1.4	+45.9
Other	--	--	--	--
Support	--	--	--	--
Subtotal	-3.9	--	--	-3.9
Adjustments	--	--	--	--
Total Changes	+384.3	--	-11.3	+373.0
CE - Cost Variance	9630.9	--	1359.2	10990.1
CE - Cost & Funding	9630.9	--	1359.2	10990.1

Summary BY 2011 \$M				
Item	RDT&E	Procurement	MILCON	Total
SAR Baseline (Development Estimate)	8615.5	--	1365.3	9980.8
Previous Changes				
Economic	--	--	--	--
Quantity	--	--	--	--
Schedule	+217.1	--	--	+217.1
Engineering	--	--	--	--
Estimating	+17.6	--	-6.5	+11.1
Other	--	--	--	--
Support	--	--	--	--
Subtotal	+234.7	--	-6.5	+228.2
Current Changes				
Economic	--	--	--	--
Quantity	--	--	--	--
Schedule	--	--	--	--
Engineering	--	--	--	--
Estimating	+35.5	--	+1.3	+36.8
Other	--	--	--	--
Support	--	--	--	--
Subtotal	+35.5	--	+1.3	+36.8
Adjustments	--	--	--	--
Total Changes	+270.2	--	-5.2	+265.0
CE - Cost Variance	8885.7	--	1360.1	10245.8
CE - Cost & Funding	8885.7	--	1360.1	10245.8

Previous Estimate: December 2013

RDT&E	\$M	
Current Change Explanations	Base Year	Then Year
Revised escalation indices. (Economic)	N/A	-48.4
Reduced estimate reflects delay in ramp up of staffing levels in support of operations at Pueblo Chemical Agent-Destruction Pilot Plant. (Estimating)	-3.5	-3.9
Adjustment for current and prior escalation. (Estimating)	+5.0	+5.3
Revised estimate reflects application of new outyear escalation indices. (Estimating)	+34.1	+43.1
Rephasing of estimating costs to align with most current estimate. (Estimating)	+16.6	+21.7
Economic inflation (Estimating)	-16.7	-21.7
RDT&E Subtotal	+35.5	-3.9

MILCON	\$M	
Current Change Explanations	Base Year	Then Year
Revised escalation indices. (Economic)	N/A	-1.4
Adjustment for current and prior escalation. (Estimating)	+1.3	+1.4
MILCON Subtotal	+1.3	0.0

Contracts

Contract Identification

Appropriation: RDT&E
Contract Name: Pueblo
Contractor: Bechtel National Inc. PCAPP Project
Contractor Location: Pueblo Chemical Depot
 Process Support Building
 45825 Highway 96 East
 Pueblo, CO 81006
Contract Number: DAAA09-02-D-0025/1
Contract Type: Cost Plus Award Fee (CPAF)
Award Date: September 27, 2002
Definitization Date: September 30, 2002

Contract Price

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	2024.2	N/A	2613	2212.7	2203.5

Target Price Change Explanation

The difference between the Initial Contract Price Target and the Current Contract Price Target is due to additional tasks being awarded. The initial contract price only included the initial design effort.

Contract Variance

Item	Cost Variance	Schedule Variance
Cumulative Variances To Date (1/26/2015)	-126.0	-15.5
Previous Cumulative Variances	-106.1	-9.2
Net Change	-19.9	-6.3

Cost and Schedule Variance Explanations

The unfavorable net change in the cost variance is due to the result of inefficiencies in conducting plant systemization due to the extended effort to complete construction exclusions and punchlist items and due to the discovery of plant deficiencies that must be corrected before systemization can be completed.

The unfavorable net change in the schedule variance is due to the result of delays in plant systemization due to the extended effort to complete construction exclusions and punchlist items and due to plant deficiencies that must be corrected before systemization can be performed.

Notes

This contract was initially a cost plus incentive fee, multi-phase Task Order (TO) contract. The restructured contract transitioned from an incentive fee structure to an award fee structure on September 26, 2013 via Modification 68. The Initial Contract Target Price (\$178.2M) only included the initial design effort. By December 2010, the restructured contract included the original contract (TOs 1 through 6) and a new contract covering Pre-Systemization and Systemization. Additionally, Operations and Closure phases will eventually be added. The Pueblo Chemical Agent-Destruction Pilot Plant (PCAPP) Systems Contractor (SC) proposal for the operations phase has been submitted and is currently under review by the government. The Current Contract Target Price of \$2,024.2M incorporates all contract modifications through December 2014.

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

TO 2, which was definitized on May 5, 2003, required the SC to design the facility. (Design completion is now included in TO 6.) This task had a total contract value of \$173.5M when initiated in April 2003. A subsequent Stop Work Order budget adjustment issued in February 2012, resulted in an adjusted total contract value of \$142.1M. The revised BAC for this TO is \$127.8M. All deliverables are complete.

TO 3, which was definitized on December 14, 2004, required the SC to conduct special studies as required and support design and fabrication of first-of-a-kind equipment. This task has a total contract value of \$41.8M. The revised BAC for this TO is \$36.5M. All deliverables are complete.

TO 4, which was definitized on November 1, 2003, required the SC to provide Project Services support, including public outreach, to the contract. This task, which is complete, has a total contract value of \$52.5M and was primarily level of effort work. The revised BAC for this TO is \$49.4M.

TO 5 requires the SC to construct the PCAPP facilities. This task has a current total contract value of \$821.2M. The revised BAC for this TO is \$758.7M. The SC declared construction complete in December 2012 with exclusions. Exclusions will be completed by FY 2015.

TO 6, which was definitized on September 7, 2005, required the SC to complete the optimized redesign. This task has a total contract value of \$97.6M. The revised BAC for this TO is \$87.5M. All deliverables are complete.

Systemization was 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 total contract value of Systemization is \$717M. The revised BAC for this task is \$763.7M. Construction turn-over delays have impacted Systemization work. The SC completed re-planning of the Systemization schedule in September 2013.

Estimate at Completion (EAC) Changes: The Contract Level EAC increased \$78.37M during CY 2014, from \$1,947.26M to \$2,025.63M.

The Contract level EAC increase of \$78.37M is comprised of Task 1 and Task 2 (-\$0.772M); Task 3 FOAK/Energetics (+\$0.142M); Task 4 Project Support (+\$0.128M); Task 5 Construction (+\$8.00M); Task 6 Redesign (+\$0.613M); and Systemization Task (+\$67.48M).

Construction-

A further analysis of the Construction increase reveals a base EAC increase of +\$8.00M, which is the sum of control account EACs. In addition, TO 5 Most Likely EAC also includes all unresolved/potential trends and requests for equitable adjustment.

At the Control Account level, the largest contributors to the increased EAC are: Construction Resident Engineering/Non-Manual (+\$1.896M); Yard B (+\$1.757M); Yard A (+\$1.450M); Construction Distributable Costs (+\$1.337M); Field Erected

Tanks (+\$1.337M); and three dozen other accounts encompassing the balance of +\$0.227M.

Systemization-

Systemization increase shows a base EAC increase of +\$67.48M (sum of distributed budget EACs in Control Accounts plus the Undistributed Budget). The EAC growth includes the impact of a 116-day forecasted schedule extension for Systemization from the baseline completion date of September 20, 2015 to January 14, 2016.

At the Control Account level, the largest contributors increased by \$63.547M. The largest of these contributors are: Project Services - BNI (+\$16.253M); Systemization Engineering (+\$10.873M); Commissioning & Startup Maintenance Support (+\$10.788M); Project Services (+\$8.737M); Commissioning & Startup Operations Support (+\$6.461M); Optimization – Laboratory – Battelle (+\$5.329); and Project Services - Battelle (+\$5.104M).

Contract Identification

Appropriation: RDT&E
Contract Name: Blue Grass
Contractor: Bechtel Parsons Blue Grass JV
Contractor Location: 830 Eastern Bypass
 Suite 106
 Richmond, KY 40475
Contract Number: DAAA09-03-D-0023/1
Contract Type: Cost Plus Incentive Fee (CPIF)
Award Date: June 13, 2003
Definitization Date: June 13, 2003

Contract Price							
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	2669.6	N/A	523	2733.2	2728.1

Target Price Change Explanation

The difference between the Initial Contract Price Target and the Current Contract Price Target is due to additional tasks and Contract Line Item Number (CLINs) being awarded. The initial contract price only included the initial design effort.

Contract Variance		
Item	Cost Variance	Schedule Variance
Cumulative Variances To Date (2/16/2014)	-68.3	-30.4
Previous Cumulative Variances	-48.2	-11.3
Net Change	-20.1	-19.1

Cost and Schedule Variance Explanations

The unfavorable net change in the cost variance is due to the result of inefficiencies in conducting plant construction and poor schedule performance by craft laborers. The systems contractor has increased hiring and incorporated shift schedules to remedy the inefficiencies. Miscellaneous engineering inefficiencies related to the discovery of plant deficiencies that must be corrected before construction can be completed.

The unfavorable net change in the schedule variance is due to the result of inefficiencies in conducting plant construction due to plant deficiencies that must be corrected before construction is completed and turned over to systemization.

Notes

The Government awarded Contract W52P1J-09-C-0013 to Bechtel Parsons Blue Grass Team (BPBGT) 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 BPBGT to complete project lifecycle planning and execution. This contract is a cost plus incentive fee CLIN contract. The total negotiated contract cost for this contract is \$2,025.9M (excluding fees of \$211.3M).

CLIN 002 (Construction Phase IV) was definitized via Contract Modification on March 31, 2011, and consists of completing all BGCAPP construction required for plant systemization and operations. A Contract Modification was issued on July 11, 2013 to incorporate the FY 2013, Continued Resolution Authority impacts to this CLIN. Another Contract Modification was issued on February 14, 2014, to incorporate transfer of scope to Systemization CLIN 003). This CLIN currently has a total contract value of \$1,270.5M (includes fee). The total work under this CLIN was 89.5 percent complete in December 2014, and has a Budget at Completion (BAC) of \$1139.5M representing 45.4 percent of the total BAC for both contracts. The current Estimate at Completion (EAC) for this CLIN is \$1231.5M.

CLIN 003 (Systemization) was partially definitized on June 4, 2011, consisting of planning, scheduling, staffing, supporting and managing the first FY of plant systemization (subsequently referred to as FY 2012 Pre-Systemization). The Balance of Systemization proposal was submitted in November 2011, and was awarded in September 2012. A Contract Modification was issued on February 14, 2014, to incorporate transfer of scope from Construction CLIN 002 to Systemization. Another Contract Modification was issued on December 1, 2014 to incorporate a cost avoidance by eliminating the EVMS flow down requirement for Teaming Subcontractors. This CLIN currently has a total contract value of \$624.7M (includes fee). The total work under this CLIN was 27.7 percent complete in December 2014, and has a BAC of \$544.4M representing 21.7 percent of the total BAC for both contracts. The current EAC for this CLIN is \$528.9M.

CLIN 006 (First of a Kind Part II) was definitized on May 31, 2011, and consists of manufacturing, testing and delivering six Munitions Washout System cavity access machines, two rocket cutting and shearing lines, two neutralization system sampling stations, and three Supercritical Water Oxidation systems with aluminum filtration systems. This CLIN currently has a total contract value of \$134.1M (includes fee). The total work under this CLIN is 100 percent complete, and has a BAC of \$116.2M representing 4.6 percent of the total BAC for both contracts. The EAC (i.e., final actual cost) for this CLIN is \$113.5M, completed in September 2013.

CLIN 007 Explosive Destruction Technologies (EDT) Part "A" 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. The EDT Part "A" Extension was awarded in September 2012, and EDT Part "B" was awarded in June 2013. In November 2013, an undefinitized portion of EDT Part "C" was established as authorized unpriced work based on the incremental proposed value through July 2014. The negotiated EDT Part "C" Extension was awarded via Contract Modification on June 30, 2014. This CLIN currently has a total contract value of \$208.0M (includes fee). The total work under this CLIN was 23.1 percent complete in December 2014, and has a BAC of \$160.4M representing 6.4 percent of the total BAC for both contracts. The current EAC for this CLIN is \$152.3M.

EAC Changes:

The total EAC increased \$218.3M from the previous SAR from \$2,390.3M to \$2,608.6M. The percent complete for both contracts increased from 65.9 to 74.7 percent complete. The net EAC increase of \$218.3M is due to increasing CLIN 007 EDT scope and cost by \$118.2M, and CLIN 002 Construction by \$106.2M, and decreasing CLIN 003 Systemization by a negative \$1.5M, and further reductions due to closed Task Order/CLIN rate adjustments of negative total of \$4.6M.

The EAC increase for CLIN 007 EDT is primarily due to incorporation of the Contract Modification for EDT Part "C."

The EAC increase for CLIN 002 Construction is primarily due to actual and forecasted Craft labor overruns, with the associated overruns in Construction Support and Engineering, experienced in conjunction and as a result of poor Craft labor schedule performance.

The EAC decrease for CLIN 003 Systemization is primarily due to a net reduction resulting from replanning Project Services and Direct Support and incorporating the Contract Modification that eliminated the EVMS flow down requirement for Teaming Subcontractors. This was mostly offset by the Contract Modification that incorporated the transfer of scope from Construction CLIN 002 to Systemization.

Deliveries and Expenditures

Deliveries				
Delivered to Date	Planned to Date	Actual to Date	Total Quantity	Percent Delivered
Development	0	0	3136	0.00%
Production	0	0	0	--
Total Program Quantity Delivered	0	0	3136	0.00%

Expended and Appropriated (TY \$M)			
Total Acquisition Cost	10990.1	Years Appropriated	19
Expended to Date	4746.1	Percent Years Appropriated	63.33%
Percent Expended	43.19%	Appropriated to Date	5967.7
Total Funding Years	30	Percent Appropriated	54.30%

The above data is current as of December 31, 2014.

Operating and Support Cost

Cost Estimate Details

Date of Estimate:

Source of Estimate:

Quantity to Sustain:

Unit of Measure:

Service Life per Unit:

Fiscal Years in Service:

Sustainment Strategy

Sustainment Strategy statement from the January 2012 Acquisition Strategy for ACWA approved on February 3, 2012: Unlike other DoD acquisition programs, the ACWA Program does not result in fielded items for the warfighter. Upon successful performance of the contractual requirements, all United States chemical agent munitions stockpiles will be eliminated and the destruction facilities will be decontaminated, decommissioned, and demolished. Thus, there are no requirements for future sustainability. As part of the current contracts, the contractors are required to maintain and sustain the facilities until closure of the facilities.

Antecedent Information

No Antecedent.

Cost Element	Annual O&S Costs BY2011 \$M	
	Chem Demil-ACWA	No Antecedent (Antecedent)
Unit-Level Manpower	0.000	0.000
Unit Operations	0.000	0.000
Maintenance	0.000	0.000
Sustaining Support	0.000	0.000
Continuing System Improvements	0.000	0.000
Indirect Support	0.000	0.000
Other	0.000	0.000
Total	--	--

Item	Total O&S Cost \$M		
	Chem Demil-ACWA		No Antecedent (Antecedent)
	Current Development APB Objective/Threshold	Current Estimate	
Base Year	N/A	N/A	N/A
Then Year	N/A	N/A	N/A

O&S Cost Variance		
Category	BY 2011 \$M	Change Explanations

Prior SAR Total O&S Estimates - Dec 2013 SAR	0.0
Programmatic/Planning Factors	0.0
Cost Estimating Methodology	0.0
Cost Data Update	0.0
Labor Rate	0.0
Energy Rate	0.0
Technical Input	0.0
Other	0.0
Total Changes	0.0
Current Estimate	0.0

Disposal Estimate Details

Date of Estimate:

Source of Estimate:

Disposal/Demilitarization Total Cost (BY 2011 \$M): 0.0