



**Annual Status Report
on the
Destruction of the United States Stockpile of Lethal
Chemical Agents and Munitions
for Fiscal Year 2011**

September 30, 2011

**Preparation of this report/study cost the Department of Defense a total of approximately \$128,000
in Fiscal Years 2011-2012.**

Generated on 2011 Dec 12 0820 RefID: E-F77F093

TABLE OF CONTENTS

I.	Introduction.....	1
II.	Mission	1
III.	Organization	1
IV.	Current Operations	2
	A. Safety	2
	B. Chemical Stockpile Storage	2
	C. Chemical Stockpile Destruction	3
V.	Funding Execution.....	9
VI.	Chemical Stockpile Emergency Preparedness Program	10

APPENDICES

A	ABBREVIATIONS AND SYMBOLS
B	OCCURRENCES OF LEAKING CHEMICAL MUNITIONS
C	PROGRAM DISBURSEMENTS SUMMARY

(This page intentionally left blank.)

I. Introduction

The Department of Defense (DoD) is submitting this annual report for Fiscal Year (FY) 2011 to Congress, pursuant to section 1521(i) of title 50 United States Code (USC). The report documents the status of the U.S. Chemical Demilitarization Program (CDP) as of September 30, 2011.

II. Mission

The purpose of the CDP is to destroy the U.S. stockpile of lethal chemical agents and munitions, as well as Non-Stockpile Chemical Materiel (NSCM) declared under the Chemical Weapons Convention (CWC).¹ The U.S. Army Chemical Materials Agency (CMA) and the Assembled Chemical Weapons Alternatives (ACWA) manage this nationally and internationally important program, emphasizing safe and secure operations and providing maximum protection to the workers, the public, and the environment.

III. Organization

The CDP is divided into two Acquisition Category (ACAT) ID Major Defense Acquisition Programs: (1) Chemical Demilitarization Program (Chem Demil)-CMA and (2) Chem Demil-ACWA. Chem Demil-CMA is managed by the Department of the Army. In accordance with Public Law (PL) 111-383, the ACWA program remains under DoD management with a direct reporting relationship to the Office of the Under Secretary of Defense for Acquisition, Technology and Logistics.

Chem Demil-CMA includes chemical weapons stockpile destruction operations for approximately 90 percent of the U.S. stockpile. The CMA portion of the stockpile has been stored at Deseret Chemical Depot (DCD), Utah; Umatilla Chemical Depot (UMCD), Oregon; Anniston Chemical Activity (ANCA), Alabama (operations complete); Pine Bluff Chemical Activity (PBCA), Arkansas (operations complete); Newport Chemical Depot (NECD), Indiana (operations and closure complete); Aberdeen Proving Ground (APG)-Edgewood Area, Maryland (operations and closure complete); and Johnston Atoll in the Pacific Basin (operations and closure complete). Chem Demil-CMA also includes the Chemical Stockpile Emergency Preparedness Program (CSEPP) and the Non-Stockpile Chemical Materiel Project (NSCMP) (CDP mission complete). CSEPP is at all sites storing or destroying chemical munitions and the surrounding communities, including ACWA sites. Outside of the CDP, CMA is also responsible for storing the chemical weapons stockpile, and assessing and destroying of known and suspected chemical warfare materiel recovered from range-clearing operations and chemical weapons burial sites.

¹ The Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on Their Destruction, commonly known as the Chemical Weapons Convention (CWC) defines the stockpile elimination milestone for 100 percent destruction of Category 1 chemical weapons as April 29, 2012, the latest date allowable under the CWC. Public law adds "but not later than December 31, 2017".

Chem Demil-ACWA includes chemical weapons stockpile destruction operations for approximately 10 percent of the U.S. stockpile. This portion is stored at Pueblo Chemical Depot (PCD), Colorado, and Blue Grass Chemical Activity (BGCA), Kentucky. The ACWA Program Office manages chemical stockpile destruction efforts in accordance with section 1521(g) of title 50 United States Code.

IV. Current Operations

The CDP made significant progress in the destruction of the U.S. chemical agents and munitions stockpile in FY 2011. CMA facilities, together with the ACWA program, have destroyed a total of 2,559,820 munitions and a total of 27,314 U.S. tons of chemical agent from the original U.S. stockpile. This is 89.2 percent of the original stockpile as of September 30, 2011. During FY 2011, agent destruction operations were completed and facility closure operations initiated at the Pine Bluff and Anniston Chemical Agent Disposal Facilities. Destruction operations continued at Umatilla. Tooele Chemical Agent Disposal Facility destroyed all except overpacked and deteriorated munitions, and remaining problematic munitions are being processed using the Deactivation Furnace System (DFS) and Explosive Destruction Technology (EDT). Construction and systemization continued at the Blue Grass, Kentucky, and the Pueblo, Colorado, facilities.

A. Safety

Both CMA and ACWA remain committed to the safety of the workers, the public, and the environment. The Bureau of Labor Statistics maintains a standardized record of all industries Recordable Incidence Rate (RIR), which is the measure of Occupational Safety and Health Administration (OSHA) defined injuries and/or illnesses per 200,000 hours worked. CMA maintains an RIR well below the national average listed for the chemical manufacturing industry, with the combined RIR for the operating sites at the end of FY 2011 at 0.32 and the total CMA RIR at 0.83. The combined RIR for ACWA is 1.44 for the year, which, for the construction phase, is safer than the national average for non-residential building construction industries.

B. Chemical Stockpile Storage

The chemical stockpile has been destroyed at ANCA, PBCA, NECD, APG, and Johnston Island, and only remains at DCD, UMCD, BGCA, and PCD. CMA continued to assess the safety and integrity of the chemical stockpile during FY 2011 through a monitoring and inspection program that includes analytical sampling and analysis. CMA uses high-performance overpack containers to safely store leaking containers and munitions. Leaks that occur in storage are extremely unlikely to endanger on- or off-post communities in the vicinity of the storage sites; thus, the stockpile can be safely stored until treated and/or destroyed. During FY 2011, a total of five leaking munitions were discovered and overpacked or processed through the local chemical agent

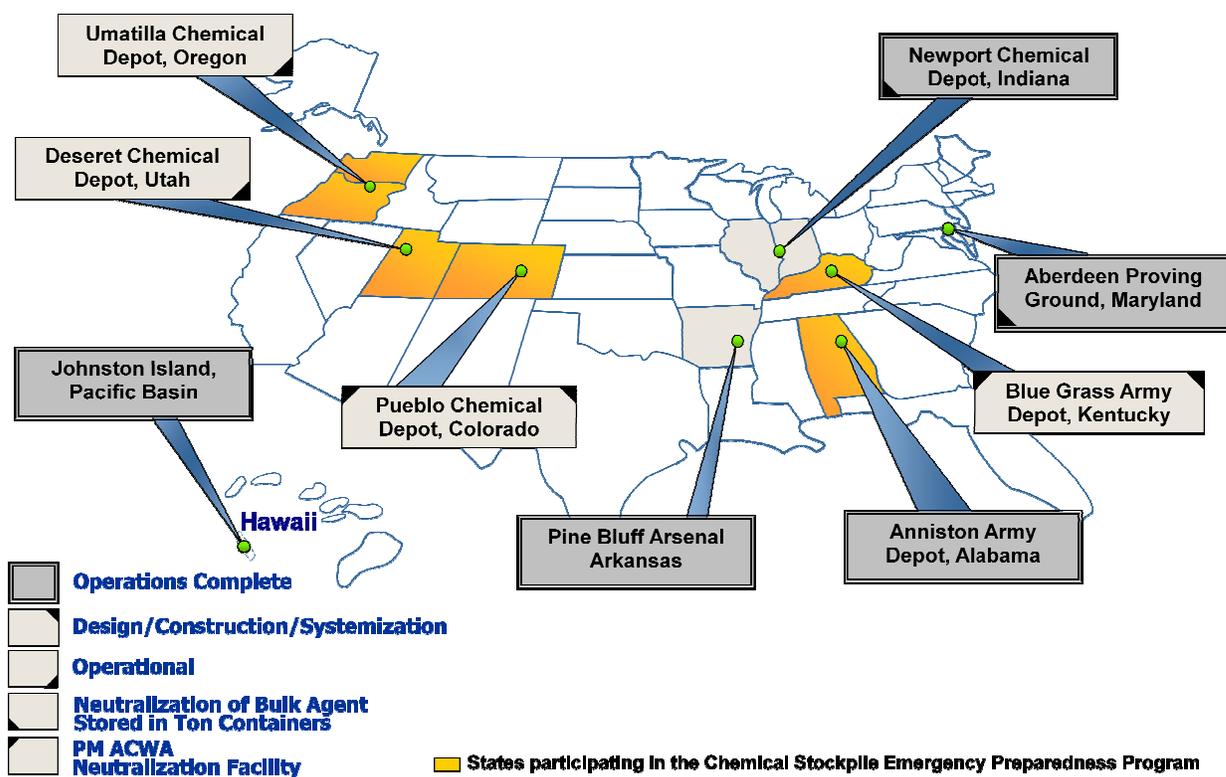
disposal facility (CDF) without incident. For historical leaker information, see Appendix B.

During FY 2011, there were three Category I: non-surety emergency (informational) chemical events, no Category II: limited area/post only emergency (site response) events, and no Category III: community emergency (external response) chemical events (defined in accordance with Army Regulation 50-6, Chemical Surety). At no time was the community or environment at risk of exposure to chemical agents.

CMA continues to reduce storage risk as quickly as possible through destruction of the stockpile and incident mitigation initiatives.

C. Chemical Stockpile Destruction

National Chemical Stockpile Distribution by Storage Location



Note 1: Unless annotated, destruction technology is incineration.

Note 2: Blue Grass Army Depot has chemical warfare materiel stored at an associated Chemical Activity.

At the start of FY 2011, CMA-managed disposal facilities at Deseret, Anniston, Pine Bluff, and Umatilla were operational. The Pine Bluff and Anniston facilities completed destruction operations during FY 2011. CMA CDFs destroyed approximately 2,870 U.S. tons of chemical agent during FY 2011 (9.1 percent of the original U.S. stockpile of 31,501 U.S. tons).

A critical Nunn-McCurdy breach by the ACWA Program was reported to Congress on December 16, 2010. Based on an independent cost assessment by the Office of the Secretary of Defense (OSD) Cost Assessment and Program Evaluation office, the Program Acquisition Unit Cost (PAUC) increased 37 percent above the April 2007 Acquisition Program Baseline (APB). Increased costs are attributed primarily to the fact that the baseline cost estimate did not adequately recognize program uncertainty or complexity. On June 14, 2011, the Under Secretary of Defense for Acquisition, Technology and Logistics certified to Congress, in accordance with Title 10 USC, section 2433a, that continuation of the ACWA Program is essential to national security; there were no alternatives to the program that will provide acceptable capability to meet the joint military capability at less cost; the new program acquisition unit cost estimates are reasonable; the program is a higher priority than programs whose funding must be reduced to accommodate the growth in the cost of the program; and the management structure is adequate to manage and control the program acquisition unit cost. The ACWA Program is also undergoing the required certification process as legislated in Title 10 USC, section 2366b, which will continue through the second quarter of FY 2012. The Program will consider the use of an EDT to process problematic mustard munitions at Blue Grass, and if difficulties with on-site treatment of hydrolysate are encountered, off-site treatment and disposal will be pursued.

The CMA and the ACWA Program continue to implement initiatives to identify and mitigate challenges and share lessons learned across the CDP. The CMA and the ACWA Program also continue to implement and refine cost control initiatives, which include performance-based incentives for chemical demilitarization Systems Contractors (SCs).

Section 1421(n) of PL 111-383 allows the CDP to use performance-based incentive clauses in chemical weapons destruction facility contracts to accelerate the safe elimination of the U.S. chemical weapons stockpile and reduce the total life-cycle cost of the CDP. During FY 2011, all CMA SCs were ahead of their negotiated life-cycle schedules. The ACWA Program construction and systemization activities are on schedule.

Deseret Chemical Depot (DCD), Tooele Chemical Agent Disposal Facility (TOCDF), and Chemical Agent Munitions Disposal System (CAMDS), Utah

TOCDF completed baseline incineration operations in just under 15 years based on the start of chemical weapons destruction operations on August 22, 1996. Remaining reject, overpacked, and deteriorated chemical agent munitions destruction started in the DFS with a new munition cutter on September 29, 2011, and may also be processed by EDT in the Detonation of Ammunition in a Vacuum Integrated Chamber (DAVINCH). As of September 30, 2011, TOCDF has destroyed a total of 1,138,439 munitions (99.9 percent of the total number of munitions in the DCD stockpile).

TOCDF completed destruction of chemical agent mustard ton containers (TCs) on May 16, 2011. This campaign completed all except overpacked and deteriorated munitions, leaving 135 distilled sulfur mustard (HD) / mustard-T mixture (HT) 4.2-inch mortars and 198 H 155mm projectiles for special processing. TOCDF destroyed a total of 1,031 TCs containing 914 U.S. tons of agent during FY 2011.

Chemical agents tabun (GA) (4 TCs) and lewisite (L) (10 TCs) will be destroyed in the Area 10 Liquid Incinerator (ATLIC). Construction and installation of the liquid incinerator is complete and systemization is underway.

The TOCDF SC awarded a subcontract for EDT on December 16, 2009, to destroy the reject 155mm mustard agent (H) projectiles, overpacked/reject 4.2-inch mortars, and a number of HT and HD sample containers. Construction and installation of the DAVINCH is complete, systemization is currently in progress.

Closure of the TOCDF facility is in progress. Agent piping is being removed.

As of September 30, 2011, TOCDF personnel have recorded more than 13 million consecutive hours of operations without a lost-time injury. TOCDF received the Utah Safety Council Award for the third straight year.

CAMDS was the primary CDP research, test, and development facility demonstrating material handling, incineration, neutralization, pollution abatement, personal protective equipment, and waste treatment. CAMDS is currently undergoing closure activities. On February 24, 2011, it was determined that the contamination in the facility had been reduced to the level that an agent protective suit called the Demilitarization Protective Ensemble was no longer required for human entry into the facility. All areas of the facility have successfully passed the unventilated monitoring tests and are awaiting demolition.

Anniston Chemical Activity (ANCA) and Anniston Chemical Agent Disposal Facility (ANCDF), Alabama

ANCDF completed incineration operations in just over eight years, based on the start of chemical weapons destruction operations on August 9, 2003. As of September 30, 2011, ANCDF has destroyed all of the 661,531 munitions in the ANCA stockpile. ANCDF destroyed a total of 398 U.S. tons of agent during FY 2011.

ANCDF completed destruction of all except overpacked and deteriorated munitions on June 21, 2011. ANCDF started processing mustard 4.2-inch mortars through the furnaces on July 6, 2009, and completed the baseline mortars on January 5, 2011. ANCDF started processing HD 155mm projectiles on January 25, 2011, and completed the campaign on March 30, 2011. ANCDF started processing HD TCs on March 18, 2011 and completed the TCs on May 19, 2011. On May 23, 2011, ANCDF started processing HD 105mm projectiles and completed the campaign on June 21, 2011. The final shipment of munitions by the ANCA storage and

transportation crews was completed on September 8, 2011. Both the Metal Parts Furnace (MPF) and the Static Detonation Chamber (SDC) were used to process problematic munitions. The MPF problematic munitions operations were completed on September 22, 2011.

On March 9, 2011, ANCDF completed commissioning/testing of the SDC, an alternative approach for safe and prompt destruction of problematic (reject and overpacked) munitions encountered during mustard munitions processing. SDC operations started on March 30, 2011, and were completed on September 22, 2011, having destroyed 2,197 HD 105mm projectiles, 23 HD 155mm projectiles, and 517 HD/HT 4.2 inch mortars during FY 2011.

As of September 30, 2011, ANCDF personnel have recorded 0.4 million consecutive hours of operations without a lost-time injury.

Anniston completed a joint project with ACWA, collecting data on the use of the Linear Projectile Mortar Disassembly (LPMD). The LPMD will be used at the Pueblo Chemical Agent-Destruction Pilot Plant (PCAPP) and the Blue Grass Chemical Agent-Destruction Pilot Plant (BGCAPP) to remove energetic components from HD/HT-filled munitions. ANCDF benefitted by receiving a group of “energetic free” mustard projectiles, which reduced schedule loss during periods of downtime of the DFS/Projectile/Mortar Disassembly Machine/Heated Discharge Conveyor. The project included three campaigns: 4.2-inch mortars (completed in FY 2010 on August 23, 2010), 105-mm projectiles, and 155-mm projectiles. The 105-mm HD projectile campaign began on September 7, 2010, and was completed on February 3, 2011. The HD 155-mm projectile campaign began on February 9, 2011, and was completed on March 22, 2011. The LPMD was also used to remove 48 M57 fuses from 105-mm projectiles for a study at Picatinny Arsenal. The fuses were shipped to Picatinny Arsenal on July 12, 2011. The LPMD reconfigured a total of 17,164, 105-mm projectiles, and 7,939, 155-mm projectiles in FY 2011.

ANCDF was inducted into the State of Alabama Engineering Hall of Fame on February 26, 2011.

Umatilla Chemical Depot (UMCD) and Umatilla Chemical Agent Disposal Facility (UMCDF), Oregon

UMCDF marked seven years of chemical weapons destruction operations on September 8, 2011. As of September 30, 2011, UMCDF has destroyed a total of 220,442 munitions (99.9 percent of the total number of munitions in the UMCD stockpile).

UMCDF continued processing HD TCs, destroying 1,625 TCs containing a total of 1,444 U.S. tons of agent during FY 2011. UMCDF received approval from the Oregon Department of Environmental Quality on August 23, 2011, to process at

100 percent of the demonstrated feed rate of the Agent Trial Burn (ATB).² The Rinsate Transfer System began processing on April 16, 2011.

As of September 30, 2011, UMCDF personnel have recorded more than 9.0 million consecutive hours of operations without a lost-time injury. UMCD received the U.S. Army Materiel Command Organizational Safety Award on March 25, 2011.

UMCD received the U.S. Fish and Wildlife Service National Conservation Partnership Award on March 14, 2011, for supporting numerous environmental and conservation efforts which included the protection of breeding habitats for the burrowing owl and long billed curlew.

Pine Bluff Chemical Activity (PBCA) and Pine Bluff Chemical Agent Disposal Facility (PBCDF), Arkansas

During FY 2011, PBCDF completed destruction of mustard agent TCs on November 12, 2010, destroying 142 TCs containing 115 U.S. tons of mustard agent, thus completing destruction of its entire chemical munition stockpile in less than 6 years based on the start of operations on March 29, 2005.

PBCDF closure began on November 18, 2010, after completing the first rinse of the Agent Collection System, which represents completion of agent operations according to the Chemical Weapons Convention (CWC). On November 24, 2010, treaty verification ended and the Organisation for the Prohibition of Chemical Weapons (OPCW) inspection team departed on December 3, 2010. Arkansas Governor Beebe approved Senate Concurrent Resolution 3, commending PBCDF on the successful elimination of the chemical weapons stockpile at Pine Bluff Arsenal on February 23, 2011, and an end of operations ceremony was held on March 10, 2011. PBCA received approval to terminate surety status on June 6, 2011, and on September 14, 2011 the Arkansas Department of Environmental Quality approved the clean closure of the last seven remaining Resource Conservation and Recovery Act (RCRA)-permitted igloos.

PBCDF started destruction of legacy waste on January 7, 2011. M55 rocket disassembly equipment was decontaminated and shipped to BGCAPP on May 19, 2011, for reuse. Decommissioning of the bulk drain station, the toxic cubicle, the explosion containment chamber, and the DFS are in process.

On September 29, 2011, PBCDF personnel achieved one year of operations without incurring a recordable injury, and more than 5.2 million consecutive hours of operations without a lost-workday away injury.

² To show that chemical agent can be destroyed successfully, CDFs perform ATBs before processing a new agent. The CDFs are then authorized to process at 50 percent of the demonstrated processing rate until the preliminary ATB report is approved, which allows a 75 percent processing rate. When the final report is approved, a 100 percent processing rate is permitted.

PBCA requested that the U.S. Environmental Protection Agency (EPA) close the National Toxic Substances Control Act (TSCA) permit that authorizes storage of polychlorinated biphenyls (PCBs).

Pueblo Chemical Depot (PCD) and Pueblo Chemical Agent-Destruction Pilot Plant (PCAPP), Colorado

Construction of the PCAPP and First-of-A-Kind (FOAK) equipment fabrication and testing continued during FY 2011. Electrical, process piping, mechanical equipment, and heating, ventilation, and air conditioning (HVAC) installation continued on the Agent Processing Building and Enhanced Reconfiguration Building (ERB), as well as other facilities. Systemization of completed utilities (electrical, water, natural gas, etc.) was also in progress. Facility construction is approximately 84 percent complete as of September 30, 2011.

PCAPP personnel recorded more than 0.7 million consecutive hours of operation without a lost-time injury.

ACWA is preparing a new Environmental Assessment (EA) recommending expanded employment of a commercial EDT that will be released in mid-March 2012 for public review and comment and will supplement the 2002 Pueblo Environmental Impact Statement.

PCD conducted a 100 percent inspection of the surety igloos after seismic activity occurring on August 22, 2011. There was no adverse effect from the earthquake.

Blue Grass Chemical Activity (BGCA) and Blue Grass Chemical Agent-Destruction Pilot Plant (BGCAPP), Kentucky

Construction of blast containment walls, structural steel, interior walls, utilities, and HVAC continued at BGCAPP during FY 2011. Several building projects were completed this year. The first building at Blue Grass declared operational was the fire water pump house. Other completed projects are the fencing and access road, the Access Control Building, the Personnel Support Building, the Maintenance Building, and the badging facility. Site construction is approximately 40 percent complete.

Fabrication and testing was completed on site-specific FOAK equipment, specifically, the Metal Parts Treater and Energetics Batch Hydrolyzer. Additional FOAK equipment is under fabrication, including the Rocket Cutting Machines and Rocket Shear Machines, Munitions Washout Stations and the Supercritical Water Oxidation reactor vessels.

BGCAPP continued progress toward the OSHA Voluntary Protection Program Star status. As of September 30, 2011, BGCAPP personnel have recorded more than 0.2 million consecutive hours of operations without a lost-time injury.

An investigation was completed this year to determine the condition of mustard munitions at BGCA. X-ray of 155mm mustard projectiles was started on May 9, 2011, to determine if solidification found at other demilitarization sites would also be found at Blue Grass. A total of 176 containerized non-leaker and leaker munitions were x-rayed. Significant amounts of solid heel were found in these munitions. The testing was completed on June 14, 2011, with a final report to be released early in FY 2012.

BGCA conducted a 100 percent inspection of the surety igloos after seismic activity occurring on August 22, 2011. The inspections were completed on September 1, 2011, and there were no indications of any structural damage.

V. Funding Execution

The FY 2011 Chemical Agents and Munitions Destruction, Defense (CAMD,D) appropriation was \$1,467.3 million and the Chemical Demilitarization Construction, Defense appropriation was \$125.0 million. The ACWA Program received \$385.9 million and the \$125.0 million for the Military Construction (MILCON) funding.

An estimated \$1,652 million of FY 2011 and prior year funds for CDP activities carried out under section 1421 of PL 111-383. Disbursed amounts differ from appropriated funding because funds appropriated with multi-year authority may be obligated and disbursed in following years, or some funds were obligated but not disbursed during FY 2011. The following table reflects disbursements as of September 30, 2011. The table in Appendix C shows the funds disbursed by project and location as of September 30, 2011.

FY 2011 Disbursements

Purpose	Funds Disbursed (\$ in thousands)
Construction of and equipment for chemical agent disposal facilities (includes systemization)	600,755
Operation of chemical agent disposal facilities	751,333
Dismantling and closure of chemical agent disposal facilities	65,418
Research and development	5,549
Program Management (includes Chemical Demilitarization Training Facility)	52,121
Travel and associated travel costs for CAC members (detailed in the following paragraphs)	44
Chemical Stockpile Emergency Preparedness Program	100,729
Non-stockpile chemical materiel disposal	76,485
TOTAL	1,652,434

Note: Total ±1 thousand dollars due to rounding

Source: Defense Finance and Accounting System 218 report with data, as of September 30, 2011.

Chemical Demilitarization Citizens' Advisory Commissions (CACs), in accordance with section 1421 (m) of PL 111-383, continued to be important partners of the CMA and ACWA programs. The following table details funds expended for travel and associated travel costs incurred by CAC members during FY 2011. Alabama, Arkansas, Oregon, and Utah CAC travel funds are approved by the Deputy Assistant Secretary of the Army for the Elimination of Chemical Weapons. Colorado and Kentucky CAC travel funds are approved by the Office of the Assistant to the Secretary of Defense for Nuclear and Chemical and Biological Defense Programs.

State	Expenditures
Alabama	\$6,803
Arkansas	\$7,178
Colorado	\$1,000
Kentucky	\$2,309
Oregon	\$23,020
Utah	\$4,000
TOTAL	\$44,310

VI. Chemical Stockpile Emergency Preparedness Program

The Director, CSEPP, continued to maintain emergency preparedness and improve operational readiness at chemical weapons storage installations and worked with the Department of Homeland Security (DHS)/Federal Emergency Management Agency (FEMA) and state, tribal, and local governments to provide assistance to the surrounding communities. DHS/FEMA conducts the off-post emergency preparedness program supported by the Army, which provides DHS/FEMA with funding for state/tribal cooperative agreements and technical assistance. DHS/FEMA will provide a separate report to Congress outlining accomplishments and issues in participating civilian communities, pursuant to section 1421(e) of PL 111-383.

Annual CSEPP exercises were held at all five remaining stockpile sites. The final Deseret, Anniston, and Umatilla CSEPP community exercises were conducted on February 16, 2011, March 2, 2011, and April 12, 2011, respectively. Preparations continued for close out of CSEPP at those sites. The Pine Bluff CSEPP community successfully closed out their program during FY11. The Director, CSEPP, conducted the CSEPP National Workshop in Portland, Oregon, from June 21 to 23, 2011.

APPENDIX A
ABBREVIATIONS AND SYMBOLS

APPENDIX A ABBREVIATIONS AND SYMBOLS

ACAT	Acquisition Category
ACWA	Assembled Chemical Weapons Alternative
ANCA	Anniston Chemical Activity
ANCDF	Anniston Chemical Agent Disposal Facility
APB	Acquisition Program Baseline
APG	Aberdeen Proving Ground
ATB	Agent Trial Burn
ATLIC	Area 10 Liquid Incinerator
BGCA	Blue Grass Chemical Activity
BGCAPP	Blue Grass Chemical Agent-Destruction Pilot Plant
CAC	Citizens' Advisory Commission
CAMD,D	Chemical Agents and Munitions Destruction, Defense
CAMDS	Chemical Agent Munitions Disposal System
CDF	chemical agent disposal facility
CDP	Chemical Demilitarization Program
CMA	U.S. Army Chemical Materials Agency
CPT	Comprehensive Performance Test
CSEPP	Chemical Stockpile Emergency Preparedness Program
CWC	Chemical Weapons Convention
CWM	chemical warfare materiel
DAVINCH	Detonation of Ammunition in a Vacuum Integrated Chamber
DCD	Deseret Chemical Depot
DFS	Deactivation Furnace System
DHS	Department of Homeland Security
DoD	Department of Defense
EA	Environmental Assessment
EDS	Explosive Destruction System
EDT	Explosive Destruction Technology
EPA	U.S. Environmental Protection Agency
ERB	Enhanced Reconfiguration Building
FEMA	Federal Emergency Management Agency
FOAK	first-of-a-kind
FONSI	Finding of No Significant Impact
FY	Fiscal Year [October 1 through September 30]
GA	military symbol for the nerve agent tabun

H	military symbol for the mustard agent
HD	military symbol for the mustard agent (distilled)
HT	military symbol for the mustard agent mixture of bis(2-chloroethyl) sulfide and bis[2-(2-chloroethylthio)-ethyl]ether
L	military symbol for the agent lewisite
LPMD	Linear Projectile /Mortar Disassembly
M55	military model number for nerve agent GB or VX 115mm rockets
MARB	Materiel Assessment Review Board
MILCON	Military Construction
MPF	Metal Parts Furnace
NECD	Newport Chemical Depot
NSCM	Non-Stockpile Chemical Materiel
NSCMP	Non-Stockpile Chemical Materiel Project
OPCW	Organisation for the Prohibition of Chemical Weapons
OSD	Office of the Secretary of Defense
OSHA	Occupational Safety and Health Administration
PAUC	Program Acquisition Unit Cost
PBCA	Pine Bluff Chemical Activity
PBCDF	Pine Bluff Chemical Agent Disposal Facility
PBEDS	Pine Bluff Explosive Destruction System
PCAPP	Pueblo Chemical Agent-Destruction Pilot Plant
PCB	polychlorinated biphenyl
PCD	Pueblo Chemical Depot
PINS	portable isotopic neutron spectroscopy
PL	Public Law
PMNSCM	Project Manager for Non-Stockpile Chemical Materiel
RCRA	Resource Conservation and Recovery Act of 1976
RCWM	recovered chemical warfare materiel
RIR	Recordable Incidence Rate
SC	Systems Contractor
SDC	Static Detonation Chamber
TC	ton container
TOCDF	Tooele Chemical Agent Disposal Facility
TSCA	Toxic Substances Control Act
UMCD	Umatilla Chemical Depot
UMCDF	Umatilla Chemical Agent Disposal Facility
USC	United States Code

VPP
VX

Voluntary Protection Program
military symbol for a persistent nerve agent, which is
o-ethyl S-(2-diisopropylaminoethyl)methylphosphonothioate

(This page intentionally left blank.)

APPENDIX B
OCCURRENCES OF LEAKING CHEMICAL MUNITIONS

APPENDIX B OCCURRENCES OF LEAKING CHEMICAL MUNITIONS

Fiscal Year	Leaker Occurrences by Type				Leaker Occurrences by State ^a									
	M55 Rockets ^b	SUPLECAM Samples ^c and Overpack Containers	All Other Munitions	TOTAL	AL	AR	CO	IN	JI	KY	MD	OR	UT	Other
2011	0	0	5	5	0	0	5	0	0	0	0	0	0	0
2010	1	3	13	17	0	0	5	0	0	7	0	5	0	0
2009	4	1	345	350 ^d	184 ^e	0	2	0	0	9	0	154 ^e	1	0
2008	0	3	62	65 ^d	40	1	0	0	0	2	0	14	8	0
2007	0	7	59	66 ^{d/f}	5	0	1	0	0	1	0	25	34	0
2006	3	6	57	66 ^d	4	2	0	0	0	1	0	45	14	0
2005	14	28	131	173 ^d	14	1	16	0	0	8	0	20	114	0
2004	34	46	77	157 ^d	33	0	9	0	0	0	1	11	103	0
2003	15	7	25	47	15	0	1	0	0	2	0	8	21	0
2002	45	18	32	95 ^d	40	6	0	0	0	0	0	8	41	0
2001	58	35	187	280 ^d	58	0	1	0	2	6	0	8	205	0
2000	68	142	35	245 ^d	51	2	0	0	0	6	0	6	180	0
1999	72	69	222	363 ^d	65	1	0	0	0	8	0	4	286	0
1998	27	27	45	99 ^d	17	2	0	0	0	0	0	5	74	0
1997	61	11	46	118 ^d	62	2	12	0	1	2	0	6	33	0
1996	153	3	98	254 ^d	119	0	2	0	70	7	0	3	53	0
1995	107	11	17	135	66	0	0	0	0	1	0	13	55	0
1994	144	29	27	200	82	4	2	0	0	6	0	5	103	0
1993	82	3	37	122	37	1	1	0	2	11	0	7	61	0
1992	81	139	52	272	52	1	1	1	6	21	0	7	183	0
1991	68	3	42	113	28	3	0	0	5	6	0	8	63	0
1990	76	5	27	108	17	11	1	0	7	2	0	12	58	0
1980 ^g - 1989	851 ^h	60	922	1,833	317	15	26	0	70	105	0	280	993	27
TOTAL	1,964	656	2,563	5,183	1,306	52	85	1	163	211	1	654	2,683	27
Qty Destroyed	1,832	468	2,362	4,662	1,306	52	48 ⁱ	1	163	48 ^h	1	654	2,362	27

Notes:

- ^a AL Alabama (ANCA)
AR Arkansas (PBCA)
CO Colorado (PCD)
IN Indiana (NECD) (Operations completed in 2008)
JI Johnston Island (includes the storage site and Johnston Atoll Chemical Agent Disposal System; operations completed in 2000)
KY Kentucky (BGCA)
MD Maryland (Edgewood Area of APG) (Operations completed in 2006)
OR Oregon (UMCD)
UT Utah (DPG)
Other Germany (munitions from German retrograde program that were transferred to Johnston Island in December 1990)
- ^b Includes GB and VX rockets and rocket warheads.
- ^c Surveillance Program, Lethal Chemical Agents and Munitions (SUPLECAM) (leaks from drilled and plugged holes in munitions selected for ammunition stockpile reliability testing).
- ^d Some leaking munitions were detected during disassembly at the CDFs prior to destruction, rather than at the storage area (69 in FY 1996, 10 in FY 1997, 37 in FY 1998, 211 in FY 1999, 30 in FY 2000, 152 in FY 2001, 27 in FY 2002, 61 in FY 2004, 116 in FY 2005, 36 in FY 2006, 33 in FY 2007, 57 in FY 2008, and 333 in FY 2009). All leaks detected during these operations were under engineering controls.
- ^e The apparent spike in leakers at AL and OR in 2009 is due to the processing of M23 mines at those locations.
- ^f Leaker numbers were updated after the final submission of the FY 2007 Annual Report.
- ^g Specific totals for years prior to FY 1980 are not included, as early records are incomplete, and any total incorporating these timeframes cannot be considered accurate.
- ^h A large number of M55 GB rockets were inspected in 1984 and 1985, and a more sophisticated and more sensitive monitoring protocol was adopted. Quarterly storage monitoring inspections of M55 GB rockets were conducted thereafter.
- ⁱ These leakers were destroyed in the Drill and Transfer System (DATS) circa 1985/6.

APPENDIX C
PROGRAM DISBURSEMENTS SUMMARY

APPENDIX C
U.S. ARMY CHEMICAL DEMILITARIZATION PROGRAM
FY 2011 DISBURSEMENTS SUMMARY – AS OF SEPTEMBER 30, 2011
(INCLUDES FY 2011 AND PRIOR YEAR FUNDS)
(\$ IN THOUSANDS)

Project/Facility	Chemical Agents and Munitions Destruction, Defense				Military Construction ^a
	RDT&E	PROC	O&M	Total*	Total
Program Management (CMA)	-	-	15,638	15,638	-
Program Management (PMCSE)	-	(1)	32,081	32,080	-
Chemical Demilitarization Training Facility	-	-	4,441	4,441	-
CAMDS (Closure)	-	-	24,704	24,704	-
JACADS (Closure)	-	-	2,332	2,332	-
TOCDF (Operations)	-	11,591	222,373	233,964	-
ANCDF (Operations)	-	2,586	167,745	170,331	-
UMCDF (Operations)	-	3,110	186,297	189,407	-
PBCDF (Operations)	-	0	156,576	156,576	-
PBCDF (Closure)	-	-	17,208	17,208	-
Alternative Technologies and Approaches Project Program Management	-	-	3	3	-
ABCDF (Closure)	-	-	0	0	-
NECDF (Closure)	-	-	21,174	21,174	-
NECDF (Operations)	-	-	1,055	1,055	-
Non-Stockpile Chemical Materiel	5,549	27	76,458	82,034	-
ACWA Program Management	25,063	-	-	25,063	-
PCAPP (Construct, Equip & Systemize)	230,960	-	-	230,960	66,032
BGCAPP (Construct & Equip)	187,672	-	-	187,672	91,031
Chemical Stockpile Emergency Preparedness ^b	-	3,316	97,413	100,729	-
TOTAL*	449,244	20,629	1,025,498	1,495,371	157,063

*Totals ±due to rounding

Notes:

Source: Defense Finance and Accounting System 218 report with data, as of September 30, 2011.

^a Military Construction for Program Management refers to Planning and Design for various locations.

^b FY 2011CSEPP funding disbursements include \$65.3 million provided for direct grant funds and funding for contracts managed by DHS/Federal Emergency Management Agency Headquarters on behalf of states. For additional information, refer to the FY 2011 CSEPP Report to Congress.

ABCDF = Aberdeen Chemical Agent Disposal Facility (operations and closure complete)
ACWA = Assembled Chemical Weapons Alternatives
ANCDF = Anniston Chemical Agent Disposal Facility
BGCAPP = Blue Grass Chemical Agent-Destruction Pilot Plant
CAMDS = Chemical Agent Munitions Disposal System
CMA = U.S. Army Chemical Materials Agency
JACADS = Johnston Atoll Chemical Agent Disposal System (operations and closure complete)
NECDF = Newport Chemical Agent Disposal Facility (operations and closure complete)

O&M = Operations and Maintenance
PBCDF = Pine Bluff Chemical Agent Disposal Facility
PCAPP = Pueblo Chemical Agent-Destruction Pilot Plant
PMCSE = Project Manager for Chemical Stockpile Elimination
PROC = Procurement
RDT&E = Research, Development, Test and Evaluation
TOCDF = Tooele Chemical Agent Disposal Facility
UMCDF = Umatilla Chemical Agent Disposal Facility

(This page intentionally left blank.)