



**Annual Status Report
on the
Disposal of Chemical Weapons and Materiel
for Fiscal Year 2006**

September 30, 2006

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MESSAGE FROM MR. DALE ORMOND, DEPUTY ASSISTANT SECRETARY OF THE ARMY (ELIMINATION OF CHEMICAL WEAPONS)

The United States Chemical Demilitarization Program is eliminating the threat posed by continued storage of outdated chemical weapons, while continuing to meet exemplary standards in workplace safety and environmental protection. As of September 30, 2006, the United States has destroyed more than 40 percent of the original U.S. stockpile of chemical agent, including more than 1.7 million munitions. Numerous technical challenges have delayed our progress toward meeting the original Chemical Weapons Convention (CWC) 100 percent destruction deadline of April 29, 2007. As a result, the United States requested a 5-year extension, which will be formally approved in December 2006, moving the 100 percent deadline to April 29, 2012. The United States is currently on track to meet the revised CWC 45 percent destruction deadline of December 31, 2007.

The program continues to make progress on many fronts. Our neutralization facility in Aberdeen, Maryland, completed agent operations in February 2006 and is now undergoing closure. Our five operating facilities destroy chemical agent and munitions every day. The facility in Tooele, Utah, has destroyed more than 50 percent of its agent stockpile, including all sarin (GB) and VX nerve agent-filled munitions, decreasing risk to the local community by 99 percent. The Tooele site is currently destroying mustard blister agent in ton containers.

Our facility in Anniston, Alabama, has destroyed all GB-filled munitions in its stockpile and is currently processing M55 VX rockets. The Pine Bluff, Arkansas, site has destroyed two-thirds of its stockpile of M55 GB-filled rockets. Our facility in Umatilla, Oregon, destroyed all the GB rockets and bombs in its stockpile and began processing GB projectiles at the end of fiscal year 2006. Our facility in Newport, Indiana, has neutralized more than 340 tons of VX.

The Non-Stockpile Chemical Materiel Project also has made great strides in the past year. The United States is on track to meet the 100 percent destruction deadline for former chemical weapons production facilities in April 2007. The Pine Bluff Binary Destruction Facility completed destruction of binary precursors in 2006. Our Rapid Response System at Pine Bluff Arsenal completed destruction of the largest known inventory of K941 chemical agent identification sets in August 2006. The Explosive Destruction System at Pine Bluff continues to operate, destroying 4.2-inch mortars and German Traktor Rockets.

Every chemical munition safely destroyed by one of our facilities or systems makes our nation a safer place to live. The Army is implementing initiatives to identify and mitigate the effects of events that may lead to cost and schedule growth. Over the past years, the demilitarization sites operating today benefit from lessons learned, including: (1) lessons that reduce costs, (2) shorten destruction timelines, and (3) enhance our ability to proceed with the important mission of destroying all U.S. chemical warfare materiel in a safe, efficient, and environmentally sound manner.

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**MESSAGE FROM MR. MICHAEL A. PARKER, PROGRAM MANAGER
ASSEMBLED CHEMICAL WEAPONS ALTERNATIVES**

The Assembled Chemical Weapons Alternatives (ACWA) Program made great strides during fiscal year 2006. Redesign activities at Pueblo, Colorado, and Blue Grass, Kentucky, continued as the Systems Contractors (SCs) worked toward new guidance requirements to balance cost, schedule, and performance. This effort was prompted in 2005 by the Defense Acquisition Executive (DAE), who noted that life cycle costs (LCCs) had exceeded what had been certified to Congress. The SCs were instructed to identify potential changes to the existing designs to better balance cost and schedule objectives, as well as contain LCC estimates (LCCEs). Design changes were incorporated based on design considerations and trade studies, and revised LCCEs were submitted to ACWA headquarters. ACWA personnel used these LCCEs to develop a revised Program Office Estimate, which was submitted to the DAE and the Office of the Secretary of Defense Cost Analysis Improvement Group.

All of these activities were part of an overall program review, culminating in a Defense Acquisition Board review in August 2006, at which the DAE directed ACWA to execute the program within current fiscal guidance. The LCCEs are being updated to reflect this direction while design and construction efforts continue.

I remain committed to taking all steps possible to implement the ACWA portion of the U.S. Chemical Demilitarization Program (CDP) in accordance with Department of Defense guidance of balancing cost, schedule, and performance. At the same time, I am equally committed to ensuring that safety is not compromised and all applicable laws are followed.

Considering the nature of the CDP, and the history of the ACWA Program, it is imperative that stakeholders are kept informed of activities and actions regarding the ACWA sites. Stakeholder involvement has been a priority since the ACWA Program's inception. Forums have been hosted at each site to ensure information is shared in an open manner and to allow community members the opportunity to provide feedback on issues and concerns. Grassroots organizations were established in both communities to facilitate this exchange. The Kentucky Citizens' Advisory Commission (CAC) and the Chemical Demilitarization Citizens' Advisory Board, a subgroup of the Kentucky CAC established in 2003, represent the views and concerns of all sectors of the local community regarding chemical weapons disposal in Kentucky. The Colorado CAC represents community interests in Colorado. This cooperative environment will prove helpful as the program continues to work through construction, systemization, and operation of the demilitarization facilities in Pueblo and Blue Grass.

In closing, I would like to express my gratitude to all those who have been involved with the ACWA Program. Your contributions have made the program the success that it is. Your continued efforts and support will sustain the program as we move toward the goal of destroying the Pueblo and Blue Grass stockpiles of chemical weapons. My heartfelt thanks and admiration go out to all of you.

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MESSAGE FROM MR. KEVIN J. FLAMM, PROGRAM MANAGER FOR THE ELIMINATION OF CHEMICAL WEAPONS

The Chemical Stockpile Elimination (CSE) Project and Non-Stockpile Chemical Materiel Project (NSCMP) continued to strive toward accomplishment of the national imperative of eliminating the risk and expense associated with the storage of the chemical stockpile and related materiel in a safe, environmentally sound, and cost efficient manner.

I would like to emphasize our commitment to safety and stress that progress toward this nationally important and internationally significant imperative has been achieved while maintaining the safety of the workers, the public, and the environment. This commitment to safety is evidenced in the recordable injury rate for chemical weapons storage and disposal sites, which is consistently below similar industries.

The chemical agent and munitions stockpile inventory continues to be reduced through the CSE's ongoing disposal operations at five chemical agent disposal facilities in Utah, Alabama, Oregon, Indiana, and Arkansas. In February 2006, the Aberdeen Chemical Agent Disposal Facility in Maryland, now in the facility closure phase, became the first facility in the continental United States to complete destruction of its chemical stockpile and eliminate all public risk from stockpile storage.

As of September 30, 2006, 37.9 percent of the declared Category 1 chemical warfare materiel (CWM) (or 40.3 percent of the original stockpile) has been destroyed, and work continues toward the extended deadline of December 2007 for destruction of 45 percent of Category 1 chemical weapons.

Former (chemical weapons) production facilities (FPFs) destruction is on track to meet the 100 percent destruction milestone by the required date of April 29, 2007. As of September 30, 2006, 98.9 percent of FPFs have been destroyed. Another NSCMP milestone was met with the destruction of all U.S. binary precursors. In addition, a variety of activities were carried out to destroy CWM not classified as part of the U.S. chemical stockpile.

The program performance goals and planned activities we have developed for fiscal year 2007 pave the way for our future progress as facilities continue disposal operations and the Maryland facility continues closure activities. Efforts toward complete destruction of FPFs and disposal of non-stockpile CWM will remain a cornerstone of the NSCMP.

In conclusion, I would personally like to thank all those who have been instrumental in helping the program achieve its successes thus far. Although we may face unique challenges as we strive to reach future milestones, we will maintain our commitment to this national imperative—destroying our nation's chemical weapons safely and expeditiously.

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EXECUTIVE SUMMARY

Introduction

The Department of Defense (DoD) is submitting this annual report for fiscal year (FY) 2006 to the U.S. Congress pursuant to Title 50, U.S. Code (USC), Section 1521(g). The report documents the status of the U.S. Chemical Demilitarization Program (CDP) as of September 30, 2006.

Programmatic Activities

The U.S. Army Chemical Materials Agency (CMA) manages this nationally important and internationally significant program. The CMA mission encompasses safe and secure storage and destruction of all U.S. chemical warfare materiel (CWM) while providing maximum protection to the public, workers, and environment. The Assistant Secretary of the Army for Acquisition, Logistics, and Technology and Commanding General, U.S. Army Materiel Command (AMC) provide joint oversight of the program. The Program Manager Assembled Chemical Weapons Alternatives (PMACWA) manages chemical stockpile disposal efforts in Colorado and Kentucky in accordance with Public Law (PL) 107-248, Section 8122. PMACWA reports directly to the Under Secretary of Defense for Acquisition, Technology, and Logistics (USD(AT&L)) in accordance with PL 105-261, Section 142.

The USD(AT&L) formed a Strategic Governance Board in June 2006 to oversee the CDP strategic planning and monitor execution against annual destruction and performance goals. The *Strategic Plan for Destruction of Lethal Chemical Agents and Munitions*, prepared jointly by the Office of the Secretary of Defense (OSD) and the Army pursuant to 50 USC, Section 1521(d) and dated April 2005, documents the goals and objectives monitored by the Strategic Governance Board.

CMA completed the annual update to the *U.S. Army Chemical Materials Agency Strategic Plan* in September 2006. The plan contains 21 strategic objectives supporting the top-level goals in the DoD plan in the areas of core competencies, sound business practices, personnel learning and growth, and resources. The update ensures alignment with performance measures developed for the Office of Management and Budget Program Assessment Rating Tool (PART).

In addition to participation in the PART process, CMA and PMACWA use the Department of the Army (DA) Strategic Management System and a balanced scorecard methodology to track the accomplishment of strategic goals.

During FY 2006, CMA developed the *U.S. Army Chemical Materials Agency Integrated Risk Management Plan*, dated May 2006. The purpose of the Integrated Risk Management Plan is to ensure that critical safety, environmental, schedule, cost, and other programmatic risks are continually addressed and incorporated into program planning and budget projections.

The chemical weapon stockpile monitoring and inspection program ensures that munition storage remains safe. During FY 2006, a total of 66 leaking chemical munitions were discovered and overpacked without incident in accordance with long-standing procedures. For historical leaker information, see appendix B.

While the stockpile can be safely stored for the indeterminate future, over time, the weapon components tend to develop leaks. Although munition and container leaks continue to occur throughout the stockpile, the risks posed by these occurrences are diminishing as the stockpile is destroyed. Leaks occurring in storage igloos are extremely unlikely to endanger off-post communities in the vicinity of the storage sites. CMA is working to eliminate this risk by pursuing the expeditious destruction of the chemical weapons stockpile while maintaining its commitment to safety and protection of the environment. A rigorous safe conduct of operations philosophy is the central premise of chemical agent disposal operations; this philosophy is embraced by the entire workforce. Under the Chemical Stockpile Emergency Preparedness Program (CSEPP), CMA continues to maintain emergency preparedness, enhance emergency response capabilities, and provide assistance to communities in partnership with the Department of Homeland Security and state and local governments.

Programmatic activities during FY 2006 included environmental compliance and environmental management, as well as public affairs activities. CMA and PMACWA continued to work with the DoD, DA, U.S. Environmental Protection Agency, and state and local regulatory agencies to ensure continued compliance with environmental regulations.

The CMA Public Affairs Office continued its efforts to reach out to all program stakeholders. CMA Public Affairs provided a variety of informational materials and opportunities for stakeholders to interact with agency personnel and provide input and feedback on CMA activities. Citizens' Advisory Commissions (CACs) continued to be an important partner of CMA. The agency spent a total of \$15,300 in FY 2006 to reimburse CAC members for mission-related travel expenses.

PMACWA Public Affairs continued its focus on public outreach and involvement by reaching out to stakeholders, conveying program information, and soliciting feedback. The primary stakeholder information needs addressed in FY 2006 included facility redesign and the program's funding status. The monthly Colorado CAC and the quarterly Kentucky CAC and Chemical Demilitarization Citizens' Advisory Board meetings continued to serve as tools to provide the community updates on these issues. Outreach teams at both sites also used various working group meetings, community roundtables, and individual briefings to engage stakeholders on these key issues.

The FY 2006 Chemical Agents and Munitions Destruction, Army appropriation was \$1,386.8 million, which included \$52.5 million for PMACWA. During FY 2006, \$1,480 million of FY 2006 and prior year funds were disbursed for activities carried out under Title 50 USC, Section 1521. Disbursed amounts are higher than appropriated funding levels due to multi-year fund obligation or single-year funds that were obligated

but not disbursed during FY 2005. The following table reflects disbursements as of September 30, 2006. Funds were disbursed as shown.¹

Purpose	Funds Disbursed (\$ in thousands)
Construction of and equipment for chemical disposal facilities (includes systemization)	67,515
Operation of chemical disposal facilities	873,638
Dismantling and closure of chemical disposal facilities	5,342
Research and development	173,552
Program Management (includes Chemical Demilitarization Training Facility)	101,401
Non-stockpile chemical materiel disposal	130,075
Chemical Stockpile Emergency Preparedness Program	128,748
Travel and associated travel costs for CAC members (detailed in the following paragraphs)	15
Total	1,480,286

The table in appendix C shows the funds disbursed by project and location. The total estimated cost of the program is \$32.6 billion, as reported in the December 2005 Selected Acquisition Reports for Chemical Demilitarization-CMA, Chemical Demilitarization-CMA Newport, and Chemical Demilitarization-ACWA.

Chemical Weapons Convention

CMA remains committed to the United States' obligations under the Chemical Weapons Convention (CWC), maintaining compliance during FY 2006. As of September 30, 2006, CMA has destroyed 37.9 percent of the declared Category 1 CWM and is working toward the extended deadline of December 2007 for destruction of 45 percent of Category 1 chemical weapons. In addition, as of September 30, 2006, CMA has destroyed 98.9 percent of U.S. former (chemical weapons) production facilities (FPFs) and is working toward the April 2007 deadline for destruction of 100 percent of FPFs.

In April 2006, the Secretary of Defense notified Congress that the United States would request that the CWC 100 percent chemical weapons destruction deadline be extended to April 29, 2012, the latest date allowable under the CWC. Additionally, Congress was notified that, based on current projections, the United States does not expect to meet the extended deadline but will continue to request the resources necessary to complete destruction as close to April 2012 as practicable.

On April 19, 2006, the United States formally requested extension of the 100 percent chemical weapons destruction deadline. The Organisation for the Prohibition of Chemical Weapons (OPCW) Conference of the States Parties will consider this request for extension during its Eleventh Session in December 2006.

¹ Source: Defense Finance and Accounting System 218 report.

Chemical Stockpile Disposal

During FY 2006, CMA CDFs destroyed approximately 1,026 U.S. tons of chemical agent (3.3 percent) out of the original U. S. stockpile of 31,496 U.S. tons.² As of September 30, 2006, the United States has destroyed a total of 12,685 U.S. tons (40.3 percent) of the original U.S. stockpile. The status of the facilities is as follows:

Tooele Chemical Agent Disposal Facility, Utah. During FY 2006, the Tooele Chemical Agent Disposal Facility (TOCDF) resumed destruction of chemical weapons with the beginning of the mustard (HD) campaign after having completed agent campaign changeover from nerve agent VX to HD. In FY 2006, TOCDF destroyed 52 U.S. tons of chemical agent.

Anniston Chemical Agent Disposal Facility, Alabama. The Anniston Chemical Agent Disposal Facility (ANCDF) continued destruction of chemical weapons during FY 2006, destroying 60,177 sarin (GB) 105mm projectiles, 2 GB ton containers (TCs), and 12,373 VX M55 rockets, containing approximately 112 U.S. tons of nerve agents GB and VX.

Umatilla Chemical Agent Disposal Facility, Oregon. The Umatilla Chemical Agent Disposal Facility (UMCDF) continued destroying chemical weapons during FY 2006, destroying 60,344 M55 rockets, 2,406 MC-1 bombs, 27 MK-94 bombs, 4 Drill and Transfer System GB TCs, and 73 8-inch projectiles, which contained 591 U.S. tons of nerve agent GB.

Pine Bluff Chemical Agent Disposal Facility, Arkansas. The Pine Bluff Chemical Agent Disposal Facility (PBCDF) continued chemical weapon destruction operations during FY 2006, processing 40,903 M55/56 rockets, which contained 211 U.S. tons of nerve agent GB.

Aberdeen Chemical Agent Disposal Facility, Maryland. The Aberdeen Chemical Agent Disposal Facility (ABCDF) destroyed 61 U.S. tons of mustard during FY 2006, completing agent destruction operations on February 13, 2006. ABCDF became the first facility in the continental United States to complete destruction of its chemical stockpile and eliminate all public risk from chemical weapons stockpile storage. The facility closure phase has begun; decommissioning and decontamination work on the Process Neutralization Building and TC cleanout facility continues.

Newport Chemical Agent Disposal Facility, Indiana. The Newport Chemical Agent Disposal Facility (NECDF) continued chemical agent neutralization operations during FY 2006. The facility drained a total of 464 TCs and neutralized 320 U.S. tons of nerve agent VX.

² The original tonnage of the total stockpile reported in the FY 2005 Annual Report (31,498 U.S. tons) has been revised to reflect changes submitted in a March 1, 2006 Supplemental Data Declaration.

Pueblo Chemical Agent-Destruction Pilot Plant, Colorado. Redesign efforts for the Pueblo Chemical Agent-Destruction Pilot Plant (PCAPP) continued during FY 2006. Early construction is ongoing.

Blue Grass Chemical Agent-Destruction Pilot Plant, Kentucky. Redesign efforts for the Blue Grass Chemical Agent-Destruction Pilot Plant (BGCAPP) continued during FY 2006. Early construction is ongoing.

Non-Stockpile Chemical Materiel Disposal

The Project Manager for Non-Stockpile Chemical Materiel (PMNSCM) carried out a variety of activities to destroy CWM not classified as part of the U.S. chemical stockpile, including the following:

Recovered Chemical Warfare Materiel. PMNSCM supported activities to recover and destroy CWM at the Edgewood Area of Aberdeen Proving Ground (APG), Maryland; Dillsburg, Pennsylvania; Dover Air Force Base (AFB), Delaware; Dugway Proving Ground, Utah; former Camp Sibert, Alabama; Fort Benning, Georgia; Fort Bragg, North Carolina; Fort Wainwright, Alaska; Francis E. Warren AFB, Wyoming; Mountain Home, Arkansas; Schofield Army Barracks, Hawaii; Spring Valley, Washington, District of Columbia; and Tulalip Munitions Depot, Washington.

Binary Chemical Weapons Disposal. Binary components are being destroyed via neutralization at a facility in a portion of the former Integrated Binary Production Facility (IBPF) at Pine Bluff Arsenal (PBA), Arkansas. Binary destruction operations at PBA include campaigns to destroy both DF and QL.³ Operations began in December 2005, and the DF campaigns (M20 canisters and bulk containers) were completed in March and April 2006. The QL campaign began in June 2006 and was completed in September 2006. Binary neutralent is scheduled for disposal by December 2007. Destruction of the neutralent, required for CWC treaty credit, will complete the binary chemical weapons disposal effort.

Former (Chemical Weapons) Production Facilities. PMNSCM completed destruction of the former Nerve Agent VX Production Facility, Newport Chemical Depot, Indiana, receiving 100 percent treaty verification in July 2006. The IBPF DF Facility, Multiple Launch Rocket System Building at PBA, is expected to be destroyed by February 2007. PMNSCM identified 13 ancillary buildings at the Edgewood Area of APG that were not declared as FPFs and not subject to CWC destruction milestones but were planned for destruction due to potential contamination. In April 2006, a single building was declared to the OPCW as an FPF, upon review of discovered historical documents. Destruction of that building began in August 2006 and was completed in September 2006.

³ DF is the military symbol for methylphosphonic difluoride, the critical binary precursor of the nerve agent in what would have been the GB₂ binary munition (the M687 binary projectile). QL is the military symbol for an organophosphorus ester, the critical binary precursor to form nerve agent in what would have been the VX₂ binary munition (the Big Eye bomb).

Miscellaneous Chemical Warfare Materiel. Miscellaneous CWM includes empty TCs, Category 3 chemical weapons, and chemical samples. Activities during FY 2006 included destruction of chemical samples at the Edgewood Area of APG; destruction of chemical samples and TCs at ANCDF; destruction of TCs at Umatilla Chemical Depot, Oregon; and continued operation of the Pine Bluff TC Decontamination Facility.

Incidents

During FY 2006, four Category II chemical events (as defined in accordance with Army Regulation 50-6, *Chemical Surety*; see appendix E) occurred at CMA facilities. In addition, 33 Category I chemical events occurred at CMA and PMACWA facilities and PMNSCM sites. None of the events resulted in agent exposure to personnel or agent release to the environment. Event details are discussed in the sections for the site at which they occurred. No Category III chemical events occurred during FY 2006.

Fiscal Year 2007 Performance Goals and Planned Activities

Fiscal Year 2007 Performance Goals

CMA has instituted formal mechanisms (including an annual performance plan, a balanced scorecard for quarterly reporting of progress against key metrics, and a strategic governance board) to continuously track performance against cost, schedule, and performance goals. Progress is routinely monitored by OSD, DA, AMC, and CMA leadership resulting in unity of direction, improved performance, and a continued focus on achieving results.

Planned Activities for Fiscal Year 2007

During FY 2007, chemical agent disposal operations will continue at existing CDFs in Utah, Alabama, Oregon, Indiana, and Arkansas. The Maryland facility will continue closure activities. Redesign work and construction will continue at the facilities in Colorado and Kentucky. Efforts will continue toward complete destruction of FPFs and disposal of non-stockpile CWM including destruction of the remaining binary weapon components.

I. CHEMICAL DEMILITARIZATION PROGRAM

Introduction

The Department of Defense (DoD) is submitting this annual report for fiscal year (FY) 2006 to the U.S. Congress pursuant to Title 50, U.S. Code (USC), Section 1521(g). The report documents the status of the U.S. Chemical Demilitarization Program (CDP) as of September 30, 2006. The CDP is in place to destroy the U.S. stockpile of lethal chemical agents and munitions, as well as non-stockpile chemical materiel (NSCM). Disposal of chemical warfare materiel (CWM) reduces public and environmental risk stemming from continued storage and serves to meet international obligations under the Chemical Weapons Convention (CWC).

Program Management

The U.S. Army Chemical Materials Agency (CMA) continues to manage chemical stockpile storage at all storage locations, and chemical agent disposal at all locations except Pueblo, Colorado, and Blue Grass, Kentucky, which are managed by the Program Manager, Assembled Chemical Weapons Alternatives (PMACWA) in accordance with Public Law (PL) 107-248, Section 8122.

The CDP is divided into three Major Defense Acquisition Programs: (1) Chemical Demilitarization-CMA, (2) Chemical Demilitarization-CMA Newport, and (3) Chemical Demilitarization-ACWA. Chemical Demilitarization-CMA includes chemical stockpile disposal operations at Deseret Chemical Depot (DCD), Utah; Anniston Army Depot (ANAD), Alabama; Umatilla Chemical Depot (UMCD), Oregon; Pine Bluff Arsenal (PBA), Arkansas; and the Edgewood Area of Aberdeen Proving Ground (APG), Maryland. It also includes the NSCM Project (NSCMP) and Chemical Stockpile Emergency Preparedness Program (CSEPP) for all sites and their surrounding communities. The mission of Chemical Demilitarization-CMA Newport is to destroy the chemical stockpile stored at Newport Chemical Depot (NECD), Indiana. Chemical Demilitarization-ACWA includes chemical stockpile destruction at Pueblo Chemical Depot (PCD), Colorado, and Blue Grass Army Depot (BGAD), Kentucky.

Chemical Demilitarization-CMA and Chemical Demilitarization-CMA Newport are under Army management as acquisition category (ACAT) ID programs. DoD manages Chemical Demilitarization-ACWA as an ACAT ID program.

Revised Chemical Demilitarization-CMA and Chemical Demilitarization-CMA Newport Acquisition Program Baselines (APBs) were approved by the Defense Acquisition Executive on April 5, 2006.

A Defense Acquisition Board (DAB) review of cost and schedule options for Assembled Chemical Weapons Alternatives (ACWA) was held on August 22, 2006. A revised ACWA APB is scheduled to be completed in the second quarter of FY 2007.

During FY 2006, CMA developed the *U.S. Army Chemical Materials Agency Integrated Risk Management Plan*, dated May 2006. The purpose of the Integrated

Risk Management Plan is to ensure that critical safety, environmental, schedule, cost, and public and political influence risks are addressed with mitigating actions and are incorporated into program planning and budget projections.

Strategic Planning

The Under Secretary of Defense for Acquisition, Technology, and Logistics formed a Strategic Governance Board in June 2006 to oversee the CDP strategic planning and to monitor execution against annual destruction and performance goals. The purpose of the Board, which consists of Office of the Secretary of Defense (OSD) leadership and stakeholders, is to do the following: (1) synthesize information regarding the program to support acquisition, management, and fiscal decisions at the DoD level, (2) enhance the oversight role of OSD, (3) more fully understand the challenges that impact performance, and (4) advise the program during the annual planning, programming, budgeting, and execution cycle. The Board meets quarterly to review the status of the program. At each meeting, CMA and PMACWA provide scorecards with clearly defined performance metrics that address, at a minimum, safety; performance against goals; cost, schedule, and performance trends; and risk mitigation.

The goals and objectives monitored by the Strategic Governance Board are documented in the *Strategic Plan for Destruction of Lethal Chemical Agents and Munitions*, dated April 2005, which was prepared jointly by OSD and the Army pursuant to 50 USC 1521(d).

CMA completed the annual update to the *U.S. Army Chemical Materials Agency Strategic Plan* in September 2006. The plan contains 21 strategic objectives supporting the top-level goals in the DoD plan in the areas of core competencies, sound business practices, personnel learning and growth, and resources. The update ensures alignment with performance measures developed for the Office of Management and Budget Program Assessment Rating Tool (PART).

In addition to participation in the PART process, CMA and PMACWA use the Department of the Army (DA) Strategic Management System and a balanced scorecard methodology to track the accomplishment of strategic goals.

Safety of the Chemical Stockpile

CMA continued to evaluate the safety and integrity of the chemical stockpile through a monitoring and inspection program, as well as through analytical sampling and analysis. While the stockpile can be safely stored for the indeterminate future, over time, the weapon components tend to develop leaks. Although munition and container leaks continue to occur throughout the chemical stockpile, these occurrences are diminishing consistent with stockpile destruction. Leaks occurring in storage are extremely unlikely to endanger off-post communities in the vicinity of the storage sites.

During FY 2006, a total of 66 leaking munitions were discovered and overpacked without incident, in accordance with long-standing procedures. CMA uses high

performance overpack containers to safely store leaking containers and munitions. For historical leaker information, see appendix B.

Environmental Compliance and Chemical Agent Monitoring

CMA and PMACWA continued to work with the DoD, DA, U.S. Environmental Protection Agency (EPA), and state and local regulatory agencies to ensure continued compliance with environmental regulations. In addition, CMA continued implementation of, and compliance with, an ISO 14001¹ Environmental Management System (EMS) at chemical agent disposal facilities (CDFs).

In November 2005, the Tooele Chemical Agent Disposal Facility (TOCDF) received third party verification from the U.S. Army Center for Health Promotion and Preventive Medicine (CHPPM) that they were ISO 14001 conformant. All CDFs had an EMS that was ISO 14001 conformant prior to the Army's December 2005 deadline. Annual audits are conducted at all CDFs to ensure continued EMS conformances with ISO 14001.

CMA chemical agent monitoring systems continue to provide more than adequate protection to the workforce, public, and environment. Monitoring-related efforts during FY 2006 included incremental upgrades and implementation of validated improvements to existing systems. In addition, evaluation of new monitoring technologies continued as part of the ongoing CMA mission to conduct such evaluations, as well as to comply with provisions of PL 108-136, Section 1056(b).

Chemical Stockpile Emergency Preparedness

The Director, CSEPP, continued to maintain emergency preparedness and improve operational readiness at chemical agent storage installations, as well as worked with the Department of Homeland Security (DHS) and state and local governments to provide assistance to the surrounding communities. DHS conducts the off-post emergency preparedness program and is supported by the Army, which provides DHS with funding for state grants and technical assistance. According to PL 105-261, Section 141, the Director of DHS will provide a separate report to Congress outlining accomplishments and issues in participating civilian communities.

Annual exercises were held at seven of the eight stockpile sites; the exercise at the Edgewood Area of APG was omitted due to the completion of demilitarization operations. Fielding of WebPuff 2.1, the latest version of the automated plume dispersion model², began in September 2006 and will be completed at all seven sites early in December 2006. This is the first version of WebPuff that is installed and runs

¹ ISO 14001 is the International Organization for Standardization standard for Environmental Management Systems.

² Atmospheric dispersion models (plume dispersion models) predict the location and extent of the chemical plumes that could result from an accidental release of chemical warfare agents. The WebPuff model determines which specific areas could be impacted, the time at which the plume could arrive, and the potential concentrations. WebPuff also helps determine which protective action (e.g., evacuation or sheltering) would be the best option for this particular scenario.

entirely on a server at each CSEPP jurisdiction. The Director, CSEPP, conducted the CSEPP National Workshop in Indianapolis, Indiana, from June 27 to 29, 2006. More than 400 federal, state, county, and industry representatives attended.

Public Outreach

During FY 2006, CMA Public Affairs continued implementation of its FY 2005 through FY 2010 overarching strategic communications plan. The plan is based on five strategic communications goals, which guide management decisions and provide a consistent framework for communications action plans, outreach initiatives, and performance measures.

CMA identified specific objectives and measures of success for each goal that formed the foundation for the development of a public outreach balanced scorecard; it was fully implemented during FY 2006. This balanced scorecard, which is aligned with the overarching CMA scorecard, served as a performance management system to evaluate and monitor progress toward achieving and validating effective outreach and communications efforts with the agency's many stakeholders. The FY 2006 balanced scorecards demonstrated that CMA Public Affairs successfully addressed each of the five strategic communications goals.

CMA Public Affairs evaluation data for the five active CMA chemical weapons storage and disposal sites show a 14.5 percent decrease in the number of public outreach contacts for FY 2006, compared to FY 2005. The decrease in contacts was an expected result of the advanced stage of the program, specifically the successful elimination of the chemical stockpile in Maryland and the operational status of the remaining five sites as of FY 2005. Data from comment forms (a tool used to obtain stakeholder feedback during outreach activities) at these sites indicate that 97.4 percent of external stakeholders trust CMA's ability to safely store and destroy CWM, and 98.7 percent of respondents reported increased knowledge of the mission as a result of CMA's outreach and communications efforts.

Report card mailers, another feedback tool, distributed to external stakeholder mailing lists at the five sites resulted in 1,012 responses with 85.5 percent indicating confidence that CWM is being stored and eliminated in a safe manner and 84.2 percent expressing confidence in the accuracy of information received from CMA regarding the chemical weapons storage and disposal missions.

As a result of the high standards CMA Public Affairs works to maintain, it continues to receive positive feedback from peers in the public affairs and communications fields. Communication campaigns and CMA-developed stakeholder engagement products earned the agency more than 20 communications industry awards during FY 2006. Among them was the "*Best in Show*" acknowledgement from the Public Relations Society of America, Maryland Chapter, for the Aberdeen Chemical Agent Disposal Facility's (ABCDF's) year-long "*A Safer Maryland Today*" internal and external stakeholder communications initiative, as the State's most outstanding communications program of the year. CMA also earned a Public Relations Society of America national Bronze Anvil Award of Commendation for a series of editorials it

produced for use by newspapers to help communicate CMA's efforts to keep communities and the environment safe while fulfilling its important mission.

Program Funding and Expenditures

The FY 2006 Chemical Agents and Munitions Destruction, Army appropriation was \$1,386.8 million, which included \$52.5 million for PMACWA.

During FY 2006, \$1,480 million of FY 2006 and prior year funds were disbursed for activities carried out under Title 50 USC, Section 1521. Disbursed amounts are higher than appropriated funding levels due to multi-year fund obligation or single-year funds that were obligated but not disbursed during FY 2005. The following table reflects disbursements as of September 30, 2006. Funds were disbursed as shown.

Purpose	Funds Disbursed (\$ in thousands)
Construction of and equipment for chemical disposal facilities (includes systemization)	67,515
Operation of chemical disposal facilities	873,638
Dismantling and closure of chemical disposal facilities	5,342
Research and development	173,552
Program Management (includes Chemical Demilitarization Training Facility)	101,401
Non-stockpile chemical materiel disposal	130,075
Chemical Stockpile Emergency Preparedness Program	128,748
Travel and associated travel costs for CAC members (detailed in the following paragraphs)	15
Total	1,480,286

Source: Defense Finance and Accounting System 218 report.

The table in appendix C shows the funds disbursed as of September 30, 2006, by project and location.

The current life cycle cost estimate (LCCE), as reported in the December 2005 Selected Acquisition Reports for Chemical Demilitarization-CMA, Chemical Demilitarization-CMA Newport, and Chemical Demilitarization-ACWA, is \$32.6 billion. CMA continued to implement and refine cost control initiatives; these include the Earned Value Management System and award fee and performance-based incentives for chemical demilitarization Systems Contractors (SCs).

Citizens' Advisory Commissions Travel Cost Summary

The following table details funds expended for travel by CAC members during FY 2006 at the invitation of the Deputy Assistant Secretary of the Army (Elimination of Chemical Weapons) (ECW).

State	Expenditures
Alabama	\$1,680
Arkansas	\$3,010
Colorado	\$890
Indiana	\$846
Kentucky	\$1,350
Oregon	\$6,119
Utah	\$1,405
TOTAL	\$15,300

Program Reviews

The Government Accountability Office (GAO) responded in March 2006 via letter to a 2005 request from Senator Mitch McConnell (R-KY) requesting an investigation to determine if the DoD was impounding funds earmarked for the ACWA sites at Blue Grass, Kentucky, and Pueblo, Colorado. The GAO found that funds appropriated for chemical weapons demilitarization were not being impounded by the DoD.

CMA requested that the National Research Council (NRC) conduct a study entitled *Continuing Operability of Chemical Agent Disposal Facilities and Equipment*, specifically to assess and evaluate current and proposed policies and approaches by the Army and its contractors to adequately anticipate and address equipment/facilities obsolescence at chemical demilitarization facilities. The assessment will examine the extent to which these policies and approaches are consistent with generally accepted practices in the chemical process industry. A final report will be issued at the completion of the project.

The Centers for Disease Control and Prevention (CDC) issued a follow-on report (*Review of the Revised Plan for Off-Site Treatment of Newport Chemical Agent Disposal Facility's Caustic VX Hydrolysate at the DuPont Secure Environmental Treatment Facility in Deepwater, New Jersey: Summary of the Report to Congress*, July 2006) that addressed outstanding issues from the 2005 report. The additional information, provided by the Army and DuPont, adequately addresses CDC and EPA concerns regarding toxicity, transportation, and treatment of caustic wastewater (hydrolysate) and ecological impacts to the Delaware River; therefore, the CDC reported it had no critical technical issues with the Army's plan to treat Newport Chemical Agent Disposal Facility's (NECDF's) VX hydrolysate at an approved facility, like DuPont.

In FY 2006, the Army requested that the NRC establish a committee to review and evaluate international technologies for the destruction of NSCM. The committee will provide independent scientific and technical evaluations of international systems, facilities, and disposal technologies currently employed or under research and development in countries with inventories of NSCM for their treatment and destruction. The committee will compare these technologies with those utilized by the Project Manager for NSCM (PMNSCM) in an overall effort to determine and further define state-of-the-art technologies for NSCM destruction worldwide. Further details are provided in the Non-Stockpile Section of this report.

On December 8, 2005, the Assistant to the Secretary of Defense (Nuclear and Chemical and Biological Defense Programs) directed PMACWA to develop a Working Integrated Product Team (IPT) structure to support an ACWA Program Review. The purpose of the Program Review was to assess the ACWA designs, program office cost and schedule estimates, and acquisition documentation. During the Program Review, the NRC completed independent assessments of the SCs' designs; the U.S. Army Materiel Systems Analysis Activity (AMSAA) completed an assessment of the LCCE methodology; Mitretek Systems completed an evaluation of hydrolysate disposal options; and a Lean Six Sigma Project Team developed a recommendation for treatment of hydrolysate based on existing data (e.g., environmental assessments for ABCDF and NECDF, Pueblo and Blue Grass redesign LCCEs, technical position papers for offsite shipment of hydrolysate). The results of the NRC assessments are outlined in the site reports. AMSAA concluded that PMACWA's approach for LCCE was reasonable and appropriate. Mitretek Systems concluded that there appears to be no significant cost advantage to offsite hydrolysate treatment at either site. The Lean Six Sigma Project Team recommended hydrolysate be processed onsite at Pueblo and Blue Grass.

The results of the Program Review and the findings, conclusions, and recommendations of the NRC, AMSAA, Mitretek Systems, and Lean Six Sigma Project Team were presented to the DAB on August 22, 2006. A revised ACWA APB is scheduled to be completed in the second quarter of FY 2007.

Fiscal Year 2007 Performance Goals and Planned Activities

Fiscal Year 2007 Performance Goals

The program has instituted formal mechanisms (including an annual performance plan, balanced scorecard, and strategic governance board) to continuously track achievement of cost, schedule, and performance goals. Progress is routinely monitored by the OSD, DA, U.S. Army Materiel Command, and CMA leadership resulting in unity of direction, improved performance, and a continued focus on achieving results.

FY 2007 program-wide performance goals, which are described in more detail in the Chemical Demilitarization Program FY 2007 Annual Performance Plan, include the following:

- Achieve and maintain a program-wide Reportable Injury Rate with an aggregate goal below 2.0 recordable cases per 200,000 hours worked
- Reduce through disposal the risk to the public of continued storage of the chemical stockpile to a cumulative 55 percent from the risk posed by the original stockpile
- Obligate and disburse funds by budget activity in accordance with OSD obligation and disbursement goals

- Maintain an annual cost index of one or greater (ratio of cumulative planned Operations and Maintenance funding cost against cumulative actual cost to meet the CWC 45 percent destruction milestone of December 31, 2007) for each operating site and for the PMNSCM
- Maintain an annual schedule index of one or greater (ratio of cumulative actual tons of chemical agent destroyed against tons planned to be destroyed to meet the CWC 45 percent destruction milestone) for each operating site and for the PMNSCM
- Destroy 1,959 U.S tons of chemical agent based on the annual schedule to achieve 45 percent destruction by December 31, 2007. FY 2007 annual destruction goals are shown in the following table.

Destruction Goals	TOCDF/ CAMDS	ANCDF	ABCDF	UMCDF	PBCDF	NECDF	PBBDF	Other NSCMP
FY 2007	1,319	102	33	145	153	80	124	3

Note: The FY 2007 annual destruction goals are based on a schedule that supports achievement of the CWC 45 percent destruction milestone of December 31, 2007. Currently, facilities are performing ahead of this plan; in fact, ABCDF has completed agent destruction.

- Increase the statistical level of confidence of achieving the CWC 45 percent destruction milestone of December 31, 2007, toward the ultimate objective of 100 percent confidence by December 31, 2007
- Maintain the actual cost per ton of agent destroyed below \$493.9K per ton for Chemical Demilitarization-CMA and \$544.7K per ton for Chemical Demilitarization-CMA Newport.

Fiscal Year 2007 Planned Activities

During FY 2007, CMA and PMACWA are scheduled to continue or complete the following activities:

- Chemical Stockpile Elimination Project:
 - ABCDF: Continue facility closure activities
 - Anniston Chemical Agent Disposal Facility (ANCDF): Complete processing of VX M55 rockets, and conduct a munition changeover and begin processing VX 155mm projectiles
 - NECDF: Continue ton container (TC) draining and agent neutralization, as well as TC Cleanout (TCC) operations
 - Pine Bluff Chemical Agent Disposal Facility (PBCDF): Continue destruction of nerve agent sarin (GB) M55 rockets

- TOCDF: Continue sampling the mustard (HD) TC stockpile and continue processing low-mercury, low-heel TCs; continue planning activities to prepare for processing of high-mercury, high-heel TCs.
- Umatilla Chemical Agent Disposal Facility (UMCDF): Complete the GB 8-inch and GB 155mm projectile campaigns; commence GB-to-VX agent changeover activities.
- NSCMP:
 - Complete destruction of former (chemical weapons) production facilities (FPFs) at the pace required to achieve the 100 percent destruction milestone by April 29, 2007, in accordance with the CWC
 - Continue recovered CWM (RCWM) destruction operations using the Pine Bluff Explosive Destruction System (PBEDS)
 - Complete German Traktor Rocket (GTR) motor separation at PBA
 - Continue demolition of ancillary buildings at the Edgewood Area of APG
 - Complete installation of wet air oxidation (WAO) unit and begin destruction of binary neutralent
 - Continue TC decontamination operations at Pine Bluff TC Decontamination Facility
 - Continue procurement of additional Explosive Destruction System (EDS) Phase 2 and complete procurement of a Mobile Munitions Assessment System (MMAS) Phase II unit
 - Support assessment and emergency destruction of RCWM and recovered chemical agent identification sets (CAIS).
- ACWA Program:
 - Pueblo Chemical Agent-Destruction Pilot Plant (PCAPP): Complete the final design; complete Stage I construction (access control point, site preparation, and underground utilities) and begin Stage II construction (non-process structures)
 - Blue Grass Chemical Agent-Destruction Pilot Plant (BGCAPP): Continue development of the final design along with early construction activities (site preparation, earthworks, fencing, utilities, and construction of access road and access control point).
- CSEPP:
 - Conduct the annual CSEPP exercise at each operating site.

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II. CHEMICAL WEAPONS CONVENTION

The United States continued to fully comply with the requirements of the Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on Their Destruction, commonly known as the CWC.

Of the original U.S. Category 1 chemical materiel, consisting of 32,191 U.S. tons of chemical agent (31,496 stockpile³ and 695 non-stockpile U.S. tons), 1,582 U.S. tons were destroyed prior to entry into force of the CWC on April 29, 1997. Thus, the declared Category 1 chemical materiel consists of 30,609 U.S. tons of chemical agent including 695 U.S. tons of NSCM. Category 1 chemical weapons include the unitary chemical stockpile, binary components, and some chemical samples and recovered chemical weapons. For CWC purposes, 37.9 percent of the declared Category 1 chemical materiel has been destroyed as of September 30, 2006. The United States is working toward meeting the extended deadline of December 31, 2007, for destruction of 45 percent of Category 1 chemical weapons. As reported previously, the formal U.S. request for this extension was granted by the Organisation for the Prohibition of Chemical Weapons (OPCW) Conference of State Parties on October 3, 2003.

In April 2006, the Secretary of Defense notified Congress that the United States would request that the CWC 100 percent chemical weapons destruction deadline be extended to April 29, 2012, the latest date allowable under the CWC. Additionally, Congress was notified that, based on current projections, the United States does not expect to meet the extended deadline but will continue to request the resources necessary to complete destruction as close to April 2012 as practicable.

On April 19, 2006, the United States formally requested extension of the 100 percent chemical weapons destruction deadline. The OPCW Conference of the States Parties will consider this request for extension during its Eleventh Session in December 2006.

In addition to destruction of chemical weapons, the CWC also requires destruction of FPFs or conversion of FPFs for purposes not prohibited under the Convention by April 29, 2007. As of September 30, 2006, the U.S. has destroyed 98.9 percent of its capacity to produce chemical weapons.

The United States continued to support the presence of CWC inspectors to monitor the destruction of unitary chemical weapons at CDFs, as well as host periodic inspections at chemical storage facilities and FPFs. During FY 2006, CMA hosted 12 chemical weapons storage facility inspections, and 3 FPF inspections, and more than 9,300 inspection days at CDFs.

CMA prepared numerous documents that were submitted by the United States to the OPCW in accordance with CWC requirements including *The Annual Reports for*

³ The original tonnage of the total stockpile reported in the FY 2005 Annual Report (31,498 U.S. tons) has been revised to reflect changes submitted in a March 1, 2006, Supplemental Data Declaration.

Destruction of Chemical Weapons and CW Production Facilities for calendar year 2005 and corresponding plans for calendar year 2006.

CMA supported the negotiation and implementation of optimized verification measures by the OPCW at the CDFs. These optimized measures have better focused verification of chemical weapons destruction while eliminating no-value-added inspection activities, thereby allowing the OPCW to reduce inspection team sizes. This has, in turn, allowed CMA disposal facilities to continue to fully demonstrate their compliance while providing substantial cost savings to the U.S. Army Chemical Treaty Compliance Program.

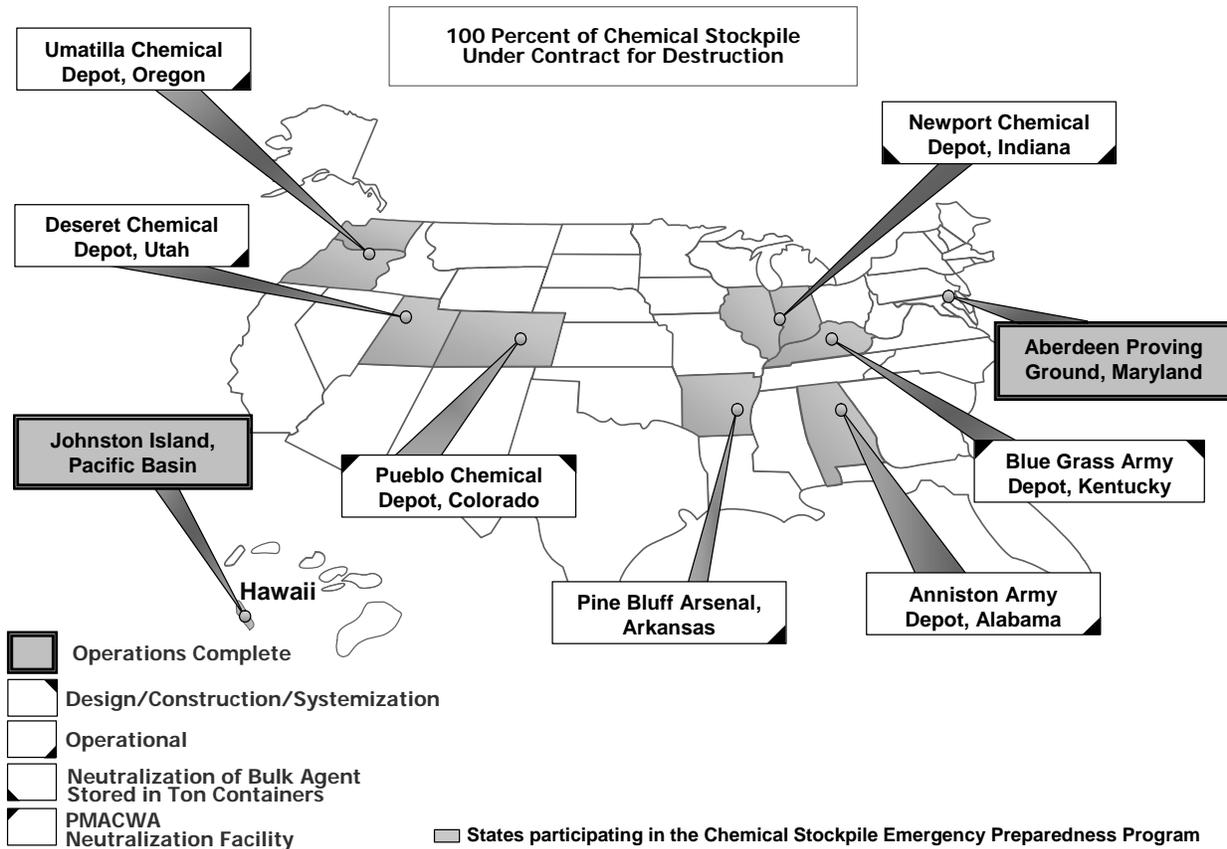
CMA continued to maintain its CWC compliance readiness through workshops, sharing lessons learned, and conducting exercises to prepare for CWC inspections.

Fiscal Year 2007 Planned Activities

The DoD will continue to demonstrate its compliance and meet all obligations under the CWC regarding submission of required documentation and supporting OPCW inspections at U.S. chemical storage, disposal, and FPFs. In particular, CMA fully expects to conclude the verification regime for FPFs with the complete destruction of the last such U.S.-declared facility.

III. CHEMICAL STOCKPILE DISPOSAL

National Chemical Stockpile Distribution by Storage Location



Notes: Unless annotated, destruction technology is incineration.

All chemical agent stored at Aberdeen Proving Ground has been destroyed and the CSEPP program was terminated.

CMA continued destruction of the chemical weapons stockpile during FY 2006. All CMA-managed disposal facilities were operational during FY 2006. The facility in Maryland completed chemical agent disposal operations in February 2006, thus becoming the first site in the continental United States to completely eliminate the risk associated with chemical weapons stockpile storage. In addition, CMA reached a significant milestone in August 2006—eliminating half of the total number of munitions in the original national chemical weapons stockpile more than 1.7 million munitions destroyed.

During FY 2006, CMA destroyed approximately 1,026 U.S. tons of chemical agent (3.3 percent) out of the original U.S. stockpile of 31,496 U.S. tons. As of September 30, 2006, the U.S. has destroyed a total of 12,685 U.S. tons (40.3 percent) of the original U.S. stockpile. CMA initiatives to address processing challenges include those outlined in the following paragraphs.

Mustard Processing Strategy

Sampling and analysis of approximately one percent of the HD TCs at DCD has determined that some HD TCs are contaminated with varying concentrations of mercury and some contain high solid heels (some TCs have formed layers of solid material called “heels,” that were formed from the impurities present within the agent when the containers were filled; high heels are defined as those heels that are too large to be efficiently processed in the MPF). This may be the case at ANAD, PBA, and UMCD, as well. CMA is using a two-step approach to address this issue: (1) implementing a sampling and analysis program, which will help determine the exact extent of the mercury contamination in the stockpile and enable processing of the low-mercury (defined as those containers with less than one milligram per kilogram mercury concentration in the liquid mustard as identified by a one milliliter sample), low-heel TCs (defined as those heels that can be efficiently processed through the MPF) through the baseline process; and (2) addressing the specific issues that may arise with the analytical results. The current strategy being implemented at the TOCDF entails segregation of the TCs by identifying low-mercury TCs through liquid sampling in Area 10 and proceeding with installation of an additional mercury pollution abatement system filtration system (PFS) on the liquid incinerator (LIC) and MPF for processing of high-mercury TCs. Each of the other three baseline incineration CDFs are already fitted with a PFS.

Mustard TC sampling equipment was installed in an igloo in Area 10 to support TOCDF’s HD sampling strategy to identify low-mercury, low-heel TCs through liquid and heel height for processing through the MPF and LIC, while proceeding with installation of an additional mercury PFS on the LIC and MPF for the high-mercury sampled TCs. On April 24, 2006, the Operational Readiness Review (ORR) process began for the mercury sampling operations in Area 10. After successfully resolving ORR findings on June 5, 2006, the first HD TCs were sampled on June 6, 2006. As of September 30, 2006, a total of 691 HD TCs have been sampled. Of sampled TCs, 519 can be destroyed through the baseline process prior to installation of the PFS.

Based on current analytical results, approximately 75 percent of the sampled TCs can be processed via the baseline incineration method (that is, without the need for a PFS). The process and analytical results have been shared with other sites with HD TCs, enabling evaluation of the strategy and enhancing campaign preparations.

M55 Rocket Task Force

In FYs 2005 and 2006, both UMCDF and PBCDF experienced several fires while processing drained nerve agent GB M55 rockets. In each case, when a fire occurred, the systems and safeguards designed into the facility—the explosive containment room (ECR) in particular—functioned as intended. In addition, workers trained for such incidents followed specified safety protocols. No personnel were injured or exposed to chemical agent, and there was no release of agent to the environment. The resulting downtime associated with the rocket fires has been significantly reduced through mitigating measures and the establishment of a recovery plan. Typically, the

non-processing time associated with a fire event is approximately 6 hours for a rocket line.

CMA formed a rocket fire task force to conduct an in-depth investigation into the fires that started during FY 2005. As part of this investigation, workers at UMCDF and PBCDF shipped the motors from 18 GB M55 rockets to the U.S. Army Armament Research, Development, and Engineering Center at Picatinny Arsenal, New Jersey, for analysis. While the analyses did not pinpoint one direct root cause, the evaluation of the various potential sources of ignition assisted in the development of activities and modifications to preclude or reduce fire occurrences. The U.S. Army Corps of Engineers (USACE) recertified the structural integrity of the ECRs. In addition, a risk assessment of ECR rocket fires determined these incidents resulted in no measurable increase in public risk from disposal operations. In May 2006, the CDC reviewed the Army's investigation into the fires and concurred that there are no immediate concerns for worker and public health that would preclude the continued processing of rockets and that modifications made by the SC appear sufficient to potentially minimize the frequency of fires and contain or suppress the fires that do occur.

VX Hydrolysate Treatment and Disposal

The nerve agent VX neutralization process employed at NECDF produces a caustic wastewater (hydrolysate) that is regulated as hazardous waste and requires additional treatment to meet final CWC destruction requirements. Private industry has a wealth of experience treating similar commercial wastes and is being evaluated, rather than pursuing onsite treatment at NECDF. Final treatment and disposal of the hydrolysate at a permitted commercial treatment, storage, and disposal facility (TSDF) is the preferred alternative for this waste stream, given that on-going analyses support that alternative. Specifically, TSDFs such as DuPont's Secure Environmental Treatment (SET) Facility, located in Deepwater, New Jersey, can effectively treat the NECDF-produced hydrolysate.

During FY 2006, the Army worked with DuPont, CDC, and EPA to address concerns raised by the EPA and other concerns raised by the CDC in a report submitted to Congress on April 5, 2005. EPA issued a press release on February 24, 2006, stating that the EPA's ecological concerns regarding the DuPont SET facility phosphonate removal process had been resolved. In a follow-on report dated July 27, 2006, the CDC concluded that the Army/DuPont proposal sufficiently addresses all critical issues regarding shipping NECDF hydrolysate including all ecological concerns. The CDC has no critical technical issues with the Army proceeding with its plan to treat hydrolysate from NECDF at an approved facility, such as the DuPont SET facility.

The government is preparing revised National Environmental Policy Act (NEPA) documentation for public comment. Pending approval of a permit modification request and completion of the NEPA process, DuPont could be awarded a contract to begin receiving hydrolysate shipments.

Section 922 of the Defense Authorization Act for FY 2007 includes a requirement for the GAO to submit a report to Congress no later than December 1, 2006, containing a review of the cost-benefit analysis prepared by the Secretary of the Army on offsite versus onsite treatment and disposal of Newport hydrolysate. The requirement further stipulates that hydrolysate may not be shipped from NECD to the State of New Jersey until 60 days after submittal of the GAO's review, or February 1, 2007.

Deseret Chemical Depot, Tooele Chemical Agent Disposal Facility, and Chemical Agent Munitions Disposal System, Utah

Highlights

During FY 2006, TOCDF completed agent campaign changeover from VX to HD and successfully began the HD campaign in August 2006. During FY 2006, a total of 57 HD TCs and 52 U.S. tons of chemical agent were destroyed. Nerve agent GB and VX processing at TOCDF is complete.

Tooele Chemical Agent Disposal Facility Operations

TOCDF began FY 2006 processing VX hydrolysate waste contained in 12 VX *in situ* hydrolysate TCs, which was completed on October 3, 2005. Decontamination activities continued while agent campaign changeover activities progressed and equipment modifications to support HD operations were completed.

TOCDF completed changeover and started the HD campaign ahead of original projections (as outlined in the May 2005 Army Cost Position [ACP]). The first HD agent-filled TC was punched and drained on August 18, 2006. As of September 30, 2006, a total of 57 HD TCs have been processed through the MPF.

The HD campaign is the last major destruction campaign at TOCDF. There are nearly 6,194 U.S. tons of HD agent stored at DCD. Most are in TCs at the remote depot, located 60 miles southwest of Salt Lake City, Utah. This is the largest chemical agent destruction campaign the CMA will undertake to eliminate aging stockpiles and meet the nation's commitment under the CWC.

Environmental Compliance

During FY 2006, all necessary permit requirements have been and are being maintained. Approval was obtained for permit modifications necessary to begin the HD campaign. TOCDF received third party verification from CHPPM that they were in conformance with ISO 14001.

Chemical Stockpile Safety

The remainder of the chemical stockpile at DCD continues to be stored safely. During FY 2006, 13 leaking munitions and overpack containers were identified at DCD and 1 at TOCDF for a total of 14 (see the summary table in appendix B). Leakers were handled in accordance with chemical surety procedures, and there was no release of chemical agent to the environment. Ongoing disposal has resulted in greater than a 99 percent reduction of risk to the public stemming from the potential for a low-probability, high-consequence accident associated with the storage of chemical munitions and agent at DCD at the end of FY 2006.

Public Outreach

During FY 2006, the DCD public affairs team researched, planned, and implemented an outreach campaign to proactively address stakeholder questions and concerns about the TOCDF HD campaign strategy. This included poster sessions and stakeholder briefings to provide details of the strategy to dispose of the HD stockpile. In addition, the team distributed information and directly interacted with the media regarding the start and progress of HD sampling efforts and, ultimately, the start of HD destruction operations, which was widely covered by local, national, and international media.

Chemical Stockpile Emergency Preparedness

Emergency preparedness continued with a high degree of cooperation among stakeholders. The chemical activity has all CSEPP enhancements in place and is in sustainment. The DCD command staff, local community officials, Public Affairs Officers, and Public Information Officers received media spokesperson training on August 14 through 16, 2006.

The annual CSEPP exercise took place on September 13, 2006. A new Joint Information Center (JIC) was established in Tooele County, Utah, creating easier media access than the former JIC located on the depot. Throughout the year, community emergency preparedness was maintained by making upgrades to the depot Emergency Operations Center (EOC). A robust training program was maintained for emergency responders.

Chemical Agent Munitions Disposal System Operations

The Chemical Agent Munitions Disposal System at DCD is undergoing partial closures as processing units become available and has no future use. CMA is developing an integrated closure plan for submittal to the Utah Department of Environmental Quality (DEQ) by the first quarter of FY 2008.

Incidents

During FY 2006, there were four Category II chemical events (defined in accordance with Army Regulation (AR) 50-6, *Chemical Surety*; see appendix E) at Utah facilities. All four were liquid leakers. There were two Category I chemical events. At no time was the community or environment at risk of exposure to chemical agent.

Fiscal Year 2007 Planned Activities

During FY 2007, TOCDF is scheduled to continue sampling the HD TC stockpile and continue processing low-mercury, low-heel TCs. TOCDF will also continue planning activities to prepare for processing of high-mercury, high-heel TCs.

Anniston Chemical Activity and Anniston Chemical Agent Disposal Facility, Alabama

Highlights

ANCDF continued destruction of chemical weapons during FY 2006, destroying 60,177 GB 105mm projectiles, 2 GB TCs, and 12,373 VX M55 rockets, which contained 112 U.S. tons of nerve agents GB and VX. ANCDF completed processing of their last GB munition on March 2, 2006, and proceeded to conduct and complete GB-to-VX agent changeover and training, beginning VX operations on July 23, 2006.

Anniston Chemical Agent Disposal Facility Operations

On March 2, 2006, ANCDF successfully processed the last GB 105mm projectile in the ANAD stockpile marking the completion of ANCDF's entire GB campaign.

ANCDF conducted and completed GB-to-VX agent changeover activities. On June 16, 2006, the Alabama Department of Environmental Management approved two major Resource Conservation and Recovery Act (RCRA) permit modifications, as well as the VX Agent Trial Burn (ATB) Plans, Waste Analysis Plan, Inspection Plan, and Laboratory Analysis and Monitoring Plan. Approval of these permit modifications was necessary to begin VX rocket processing. ANCDF also submitted a request for a permit modification to ship secondary waste to commercial treatment facilities, which was approved in June 2006. Upon completion of the agent changeover and necessary readiness assessments, the VX M55 rocket campaign commenced on July 23, 2006, with the processing of the first VX rocket through the Rocket Shear Machine. There are 35,662 M55 VX rockets in ANAD's stockpile to be destroyed.

ANCDF operations remain ahead of the contract schedule; however, due to unexpected downtime caused by pressure fluctuations in the deactivation furnace system (DFS) and double pulls on some of the fuses during GB projectile processing, some schedule gains from the processing of GB M55 rockets have been lost. On May 8, 2006, a section of the DFS afterburner separated at the middle flange. At the time of the separation, the DFS was ramping up to operating temperature following agent campaign changeover maintenance and rebricking activities. A root cause analysis team found that the brick lining had been replaced incorrectly. The bricks, which expand in the furnace's intense, 2,100°F heat, were installed with insufficient expansion gaps, which caused the bolts to shear. The bricks were installed using an older design developed for the afterburner's original construction. Engineers had updated the design allowing more room for expansion of the bricks, but drawings provided to bricklayers did not contain updated specifications. ANCDF completed the required corrective actions and repaired and rebricked the afterburner. The DFS was relit on July 10, 2006. CMA ensured that the lesson was communicated to personnel at the other CDFs.

ANCDF reached a major safety milestone on August 2, 2006, recording 9 million consecutive hours without a lost-time injury. The safety record began on May 19, 2000. The span covers more than 2,266 consecutive days without a lost-time injury.

Environmental Compliance

During FY 2006, approval was obtained for major permit modifications necessary to begin VX rocket processing. All necessary permitting requirements have been met, and the permits are being maintained.

Chemical Stockpile Safety

The remainder of the chemical stockpile at ANAD continues to be stored safely. During FY 2006, no leaking munitions and overpack containers were identified at ANAD, but four were identified at ANCDF for a total of four (see summary table in appendix B). Leakers were handled in accordance with chemical surety procedures, and there was no release of chemical agent to the environment. Ongoing disposal operations have resulted in a 59 percent reduction of risk to the public stemming from the potential for a low-probability, high-consequence accident associated with the storage of chemical munitions and agents at ANAD at the end of FY 2006. As disposal operations continue, such risk at ANAD will be further reduced. The main risk driver in the remaining chemical stockpile at ANAD is the potential for auto-ignition of VX M55 rockets due to a lightning strike or earthquakes. CMA has completed mitigation activities to address these issues, including placement of dielectric barriers in storage igloos, as well as reduction of stack height and banding of rocket pallets.

Public Outreach

Outreach efforts focused on the successful completion of the GB-filled munition disposal campaign and the equally successful startup of the VX-filled munition disposal campaign during FY 2006. The site concentrated on outreach activities geared toward the safe elimination of the remainder of the GB stockpile during the first half of the FY. The balance of the year was more proactive as the outreach team informed the public of the start of a new agent campaign. The CMA Public Affairs Office (PAO) supported the ANAD public affairs team for the DFS afterburner separation incident, which was successful in keeping the public and stakeholders informed. Public outreach has been successful at the ANAD because it is built upon a solid foundation of trust generated over the preceding years through elected official and stakeholder briefings; monthly roundtable luncheons; speakers bureau presentations to area and regional civic organizations, agencies, and church groups; and timely and accurate news releases, e-mail updates, and commercial advertisements. The collaborative efforts of government, SC, and outreach personnel to immediately address issues and concerns keeping the public and stakeholders informed.

Chemical Stockpile Emergency Preparedness

The Anniston Chemical Activity (ANCA) has all CSEPP enhancements in place and is in sustainment. A public awareness survey and media campaign were conducted in the Alabama CSEPP community during FY 2006. The Anniston CSEPP IPT continues as the critical focal point for successful resolution of emergency preparedness issues. The Army and ANCA proposed a new munitions delivery rule/procedure to the community, which requested additional information and study of

the proposal based on the Personal Protection Criterion established and agreed upon by the Army and community. The IPT has started to focus on CSEPP close-out issues, anticipating the successful elimination of chemical weapons.

The annual CSEPP emergency response exercise took place on March 1, 2006, and was held in conjunction with the biennial Army Service Response Force Exercise to demonstrate Army preparedness and interaction with other federal agencies, as well as state and local governments. This exercise, the Chemical Incident Management Exercise, enabled the community to demonstrate the successful resolution of significant recovery issues. This was the first Army Service Response Force Exercise conducted under National Incident Command System (ICS) guidelines.

Incidents

During FY 2006, there were no Category II chemical events (as defined in accordance with AR 50-6, *Chemical Surety*; see appendix E). There was one Category I chemical event at Alabama facilities. At no time was the community or the environment at risk of exposure to chemical agent.

Fiscal Year 2007 Planned Activities

During FY 2007, ANCDF is scheduled to complete processing of VX M55 rockets and conduct a munition changeover to process VX 155mm projectiles. VX 155mm projectile processing will continue throughout the remainder of FY 2007.

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Umatilla Chemical Depot and Umatilla Chemical Agent Disposal Facility, Oregon

Highlights

UMCDF continued destruction of chemical weapons during FY 2006, destroying 60,344 M55 rockets, 27 MK-94 bombs, and 2,406 MC-1 bombs, 4 Drill and Transfer System GB TCs, and 73 8-inch projectiles, which contained 591 U.S. tons of nerve agent GB. UMCDF completed processing of the entire stockpile of MK-94 and MC-1 bombs on June 9, 2006, eliminating the last of the nation's entire chemical agent bomb stockpile. UMCDF also destroyed four non-stockpile TCs containing GB agent.

Umatilla Chemical Agent Disposal Facility Operations

UMCDF successfully completed the DFS ATB, LIC 1 ATB, and DFS Toxic Substances Control Act trial burn and submitted the trial burn reports to the Oregon DEQ (ODEQ) for approval in October and November 2005. Following submittal of the reports, UMCDF was able to increase its processing rate to 75 percent of the demonstrated trial burn feed rate. On June 23, 2006, the ODEQ approved the GB DFS ATB report. UMCDF is required to complete a health risk assessment before processing at a 100 percent rate in the DFS will be permitted. The LIC 1 ATB report is anticipated to be approved in the third quarter of FY 2007.

The UMCDF stockpile contained 2,791 suspect gelled M55 GB rockets. UMCDF processed these rockets under normal processing conditions without the need for special handling or a separate trial burn resulting in a reduction in cost and schedule requirements. On October 21, 2005, UMCDF successfully completed processing the gelled M55 GB rockets.

UMCDF processed the GB agent from four non-stockpile TCs through the LIC after required sampling and analyses were completed and approved by ODEQ. Details on this operation are in the Non-Stockpile section of this report. The four empty TCs remain in the Buffer Storage Area awaiting thermal decontamination in the MPF.

Parallel to processing GB M55 rockets, UMCDF successfully destroyed its entire stockpile of 27 GB MK-94 bombs in May 2006 and completed processing the stockpile of GB MC-1 bombs on June 9, 2006. With the successful completion of UMCDF GB bomb destruction, all GB bombs in the U.S. stockpile have now been destroyed.

On August 9, 2006, UMCDF safely destroyed the last of 91,442 GB M55 rockets and warheads originally stockpiled at UMCD. This significant milestone resulted in more than a 90 percent reduction in risk to the public from the original munitions stockpile at UMCD.

Twelve fires occurred in the ECR during processing of M55 rockets during FY 2006. In each case, the fires were quickly extinguished and resulted in minimal impact to processing time. Downtime was significantly reduced to approximately

6 hours per fire event through mitigating measures and the establishment of a recovery plan in coordination with ODEQ.

UMCDF began the GB projectile campaign on September 28, 2006, with the processing of 8-inch GB-filled projectiles. Once the 8-inch projectiles are eliminated, the plant will retool for processing 155mm projectiles.

Environmental Compliance

During FY 2006, all necessary permit requirements have been met and are being maintained. A RCRA permit renewal application was prepared and submitted to ODEQ in July 2006.

Chemical Stockpile Safety

The remainder of the chemical weapons stockpile at UMCD continues to be stored safely. During FY 2006, 14 leaking munitions and overpack containers were identified at UMCD and 31 at UMCDF for a total of 45 (see summary table in appendix B). Leakers were handled in accordance with chemical surety procedures, and there was no release of chemical agent to the environment. Ongoing disposal operations have resulted in a 92 percent reduction of risk to the public stemming from the potential for a low-probability, high-consequence accident associated with the storage of chemical munitions and agents at UMCD at the end of FY 2006. The potential of an earthquake causing such an event remains the dominant risk driver at this location.

Public Outreach

During FY 2006, the UMCD and UMCDF public affairs team distributed information on the completion of two major program milestones: (1) eliminating the last GB bombs and (2) eliminating the last of GB rockets. The team is preparing for the completion of all GB agent processing expected in mid-2007 and assisting with community information on how the Base Realignment and Closure Act of 2005 will affect UMCD.

Chemical Stockpile Emergency Preparedness

UMCD has all CSEPP enhancements in place and is in sustainment. CMA Headquarters (HQ)-sponsored media training for Army and civilian officials, and their Public Affairs and Public Information officers, was held on April 25 and 26, 2006. U.S. Coast Guard Pacific Strike Team personnel presented ICS level 300 and 400 training to the on- and off-post CSEPP community decision-makers in September 2006; these courses will be offered again in 2007.

The annual CSEPP community exercise was conducted on June 6, 2006. Also in FY 2006, a survey of public awareness of protective actions was conducted, as was a media campaign designed to fill gaps in public awareness.

Incidents

During FY 2006, there were no Category II chemical events (as defined in accordance with AR 50-6, *Chemical Surety*; see appendix E). There were 19 Category I chemical events at Oregon facilities, 12 of which involved rocket fires. At no time was the community or environment at risk of exposure to chemical agent.

Fiscal Year 2007 Planned Activities

During FY 2007, UMCDF is scheduled to complete the GB 8-inch and GB 155mm projectile campaigns. UMCDF will then commence GB-to-VX agent changeover activities.

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Pine Bluff Chemical Activity and Pine Bluff Chemical Agent Disposal Facility, Arkansas

Highlights

PBCDF continued chemical weapon destruction operations during FY 2006, processing 40,903 M55/56 rockets, which contained 211 U.S. tons of nerve agent GB.

Pine Bluff Chemical Agent Disposal Facility Operations

PBCDF successfully completed the DFS and LIC ATBs on November 5, 2005. On December 27, 2005, the Arkansas DEQ authorized PBCDF to increase its feed rates for the DFS and LIC to 75 percent of the maximum rate listed in the RCRA permit. Approval of the DFS and LIC ATB reports is anticipated to be received in October 2006, accompanied by approval to process at 100 percent of the permitted feed rate. PBCDF continues to process GB rockets and to meet planned rates.

PBCDF began a 4-month maintenance outage on January 10, 2006, to replace the fiberglass-reinforced piping (FRP) with metal piping in the DFS and LIC PFS. The FRP replacement was completed within the scheduled time period, and on May 14, 2006, agent disposal operations were safely resumed. During the system enhancement, PBCDF began eliminating its secondary waste in the MPF, which has supported preparations for the MPF secondary waste processing ATB. The MPF shakedown demonstrations conducted from March 16 through March 18, 2006, were successfully completed and allow for the MPF secondary waste processing ATB planned in October 2006.

The SC continues to mitigate staffing shortfalls through employee retention incentives and relocation of employees from company projects experiencing a surplus. PBCDF staffing gains are challenging because of high attrition rates (10 to 15 percent). The staffing situation is slowly improving as a result of the mitigation strategies implemented.

Environmental Compliance

All necessary permitting requirements have been met, and the permits are being maintained, entailing no action during FY 2006.

Chemical Stockpile Safety

The chemical stockpile at PBA continues to be stored safely. During FY 2006, there were two leaking munitions identified at PBA and none at PBCDF for a total of two (see summary table in appendix B). The leaking munitions were handled in accordance with chemical surety procedures, and there was no release of chemical agent to the environment. Ongoing disposal operations have resulted in a 43 percent reduction of risk to the public stemming from the potential for a low-probability, high-consequence accident associated with the storage of chemical munitions and agents at PBA at the end of FY 2006. The potential of a lightning strike causing such an event through

auto-ignition of M55 rockets remains the dominant risk driver at this location and has been mitigated through the placement of dielectric barriers in storage igloos.

Public Outreach

During FY 2006, the PBA public affairs team used a variety of outreach tools to support the 1-year anniversary of PBCDF processing and the 50 percent GB rocket completion milestone. These events were well covered by local media. The team continues to provide coordinated information distributions, including weekly project updates and quarterly report card mailers, to program stakeholders.

Chemical Stockpile Emergency Preparedness

The Pine Bluff Chemical Activity has all CSEPP enhancements in place and is in sustainment. Construction of the new CSEPP-funded Emergency Operations Center should begin before the end of 2006. The U.S. Coast Guard presented ICS 300 and 400 training to on- and off-post CSEPP community decision-makers in August 2006.

The annual CSEPP community exercise was conducted on February 8, 2006. A media campaign and public awareness survey were conducted in the Pine Bluff area during the reporting period.

Incidents

During FY 2006, there were no Category II chemical events (defined in accordance with AR 50-6, *Chemical Surety*; see appendix E). There were three Category I chemical events at Arkansas facilities. At no time was the community or the environment at risk of exposure to chemical agent.

Fiscal Year 2007 Planned Activities

PBCDF is scheduled to continue destruction of nerve agent GB M55 rockets during FY 2007.

Aberdeen Chemical Agent Disposal Facility, Maryland

Highlights

ABCDF destroyed 61 U.S. tons of mustard during FY 2006, completing agent destruction operations on February 13, 2006. ABCDF became the first facility in the continental United States to complete destruction of its chemical stockpile and eliminate all risk to the public from chemical weapon stockpile storage. The facility closure phase has begun and decommissioning and decontamination work on the Process Neutralization Building (PNB) and TCC facility continues.

Aberdeen Chemical Agent Disposal Facility Operations and Closure

ABCDF is in the closure phase. Operations were completed 2 years earlier than projected in the FY 2005 ACP. On February 13, 2006, the ABCDF Complete Operations milestone was met with the final hydrolysate shipment to DuPont.

On May 13, 2006, a Preliminary Agent Monitoring test was conducted on the PNB, in an unventilated state, to determine current agent readings. This screening test confirmed the success of the decontamination.

On June 9, 2006, the ABCDF SC initiated a safety stand-down to identify and correct issues regarding safe plant operations and execution of closure activities. Work was safely ramped down while all tasks necessary for regulatory and procedural compliance were maintained. The stand-down was lifted once the government verified the implemented corrections and concurred with the SC that the criteria for resumption of work had been met.

TCC operations were completed on July 12, 2006. The last of the TCs were cleared and shipped to Rock Island Arsenal, Illinois, for smelting and recycling on February 9, 2006. ABCDF successfully shipped 1,613 drums of secondary waste to an offsite commercial TSD, where they were destroyed.

In September 2006, demolition of the TCC facility began. Decommissioning and decontamination work on the PNB and TCC facility continues. As of September 30, 2006, ABCDF has completed more than 80 percent of the decontamination and decommissioning work planned for the PNB and more than 90 percent for the TCC facility.

Environmental Compliance

A major permit modification application for treatment of ABCDF secondary waste via a steam autoclave system was submitted to the Maryland Department of the Environment (MDE) on April 11, 2005. The MDE did not issue the permit because ABCDF abandoned plans to install and use the steam autoclave system due to successful offsite shipment and destruction of secondary waste by a commercial TSD.

ABCDF submitted a RCRA Closure Plan to MDE on February 6, 2006, and a revision on August 24, 2006. ABCDF obtained approval from MDE to proceed with RCRA Closure on July 28, 2006.

Chemical Stockpile Safety

All chemical agent stored at the Edgewood Area of APG has been destroyed.

Public Outreach

Although the ABCDF outreach office was closed in September 2005, after the Edgewood Area of APG mustard chemical agent stockpile was destroyed, the outreach and public affairs efforts continue. During FY 2006, the ABCDF public affairs team (consisting of site management, public affairs personnel, and outreach personnel), supported several milestones, including the following: (1) the end of cleanout and decontamination operations at the TCC facility, (2) entry into the second and final phase of closing the ABCDF, and (3) the start of TCC facility demolition following removal of the TCC's air monitoring equipment after decontamination standards were met. These milestones marked significant steps in the CDF's closure phase and move CMA and the nation another step closer to fulfilling its commitment to dispose of the nation's chemical weapons stockpiles safely and in accordance with the CWC. The ABCDF public affairs team used a combination of news releases, progress updates, and report card mailers to keep the media, public, and other stakeholders informed of site closure progress.

Chemical Stockpile Emergency Preparedness

No CSEPP exercise was held at the Edgewood Area of APG in FY 2006, due to the elimination of risk to the public. Closeout issues, such as disposition of personnel and disposal of property, dominated the year's activities. The CSEPP program was successfully terminated at the site.

Incidents

During FY 2006, there were no Category II chemical events (defined in accordance with AR 50-6, *Chemical Surety*; see appendix E). There were two Category I chemical events at Maryland facilities. At no time was the community or environment at risk of exposure to chemical agent.

Fiscal Year 2007 Planned Activities

ABCDF is scheduled to continue facility closure in FY 2007.

Newport Chemical Depot and Newport Chemical Agent Disposal Facility, Indiana

Highlights

NECDF continues chemical agent neutralization operations. In FY 2006, a total of 464 TCs have been drained, 320 U.S. tons of agent have been neutralized, and 429 TCs have been processed through the decontamination facility. NECDF reached the 1-year anniversary of agent neutralization on May 5, 2006. On April 24, 2006, the site reached the 3 million man-hours without an accident resulting in a lost-workday milestone.

Newport Chemical Agent Disposal Facility Operations

In FY 2006, the NECDF neutralized 320 U.S. tons of chemical agent versus the FY 2005 ACP projected destruction of 87 U.S. tons, representing 25 percent (measured in U.S. tons of chemical agent) of the chemical agent stockpile located at NECDF. Hydrolysate must be destroyed before credit for destruction can be taken for CWC purposes.

NECDF is proceeding with its evaluation of the DuPont SET facility to treat the hydrolysate. DuPont is initiating discussions with the New Jersey regulators in preparation for submitting a permit modification request. Concurrently, the government is preparing a revised NEPA Environmental Assessment document for public comment. Once the permit modification has been approved and the NEPA process completed, a contract to treat the hydrolysate could be awarded.

Hydrolysate is being stored at NECDF in leased containers in anticipation of contract award to an offsite TSD for transportation and treatment. The current, plus planned, storage capacity is approximately 1.3 million gallons, equivalent to the hydrolysate produced by the draining and neutralizing of chemical agent from 1,401 TCs. A permit modification was received on June 24, 2006, from the Indiana Department of Environmental Management, based on additional technical responses provided by NECDF. The modified permit authorizes storage of hydrolysate in new containment areas.

On April 30, 2006, TCC operations using the TC Line-Enhanced Steam Decontaminator (TCL-ESD) were temporarily paused to allow investigation of recently observed flames emitting from the valve end of a TC upon withdrawal from the heating chamber. Chemical analyses have shown that crystal formations observed in 18 TCs prior to TCL-ESD processing are composed of urea compounds. Monitoring data also confirmed that VX was not present in any TC leaving the TCL-ESD. As of June 25, 2006, a total of 248 TCs were cleared to a 5X condition. The TCL-ESD was restarted on June 29, 2006, with new procedures in effect (among these, increasing the TCL-ESD processing time by approximately 50 percent). As of September 30, 2006, 429 TCs have been processed through the TCL-ESD.

Environmental Compliance

NECDF initiated discussions with the Indiana Department of Environmental Management to obtain a permit modification for increased hydrolysate storage capacity. The permit modification was approved. Areas 2 and 3 were constructed and are in use; Area 4 is under construction.

Chemical Stockpile Safety

The chemical stockpile at NECD continues to be stored safely. During FY 2006, no leaking munitions or overpack containers were identified. Ongoing neutralization operations have resulted in a 27 percent overall reduction of risk to the public stemming from the potential for a low-probability, high-consequence accident associated with the storage of chemical agent at NECD by the end of FY 2006. There are no new or outstanding safety issues regarding chemical stockpile storage at NECD.

Public Outreach

CMA's PAO has developed a multidisciplinary approach that provides for timely identification of issues facing CMA regarding disposal of NECDF hydrolysate and a strategic, integrated process to proactively address those issues. CMA's PAO will use this approach to quickly seize, minimize, and/or avoid risk that can impact NECDF operations.

Chemical Stockpile Emergency Preparedness

NECD has all CSEPP enhancements in place and is in sustainment. Cooperation between the Army, DHS, and local community continued to be successful in addressing emergency preparedness issues. The community IPT has begun close-out planning anticipating the successful elimination of chemical weapons. Efforts to separate the hydrolysate issue from CSEPP are proceeding and gaining acceptance by the community.

The annual CSEPP exercise took place on April 5, 2006. A media campaign was conducted to increase public awareness of protective actions. Crisis spokesperson training for on- and off-post CSEPP personnel was conducted February 14 through 16, 2006.

Incidents

During FY 2006, there were no Category II chemical events (defined in accordance with AR 50-6, *Chemical Surety*; see appendix E). There were three Category I chemical events at Indiana facilities. At no time was the community or environment at risk of exposure to chemical agent.

Fiscal Year 2007 Planned Activities

NECDF is scheduled to continue TC draining and agent neutralization, as well as TCC operations in FY 2007. CMA will continue actions to secure a contract with a TSDf including submitting a permit modification request if necessary, completing any NEPA documentation, and awarding a subsequent contract, which is projected to be completed in the second quarter of FY 2007. Shipments to the TSDf have been projected to begin in the fourth quarter of FY 2007.

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Pueblo Chemical Depot and Pueblo Chemical Agent-Destruction Pilot Plant, Colorado

Highlights

PCAPP is currently in the final design phase. Stage I construction (site preparation and underground utilities) is ongoing.

Pueblo Chemical Agent-Destruction Pilot Plant Design and Construction

Design activities continued at the PCAPP during FY 2006. The SC submitted the intermediate redesign in February 2006. An Incremental Critical Design Review (I-CDR) was conducted on May 8, 2006, to review the redesign and revised functional baseline, determine if the design balances cost and schedule, determine a path forward for design completion, and establish critical design review entry criteria. At the conclusion of the I-CDR, the Program Manager determined that all exit criteria for the I-CDR were met except for approval of the functional baseline. The Program Manager approved the functional baseline on June 29, 2006.

Stage I construction (site preparation and underground utilities) continued at PCAPP during FY 2006. The soils and concrete testing, surveying and civil testing, installation of perimeter fencing, and construction of the northwest access road were completed in FY 2006. Construction of the access control point and site clearing, grading, and underground utility work continues.

Environmental Compliance

All necessary permit requirements have been met and maintained during FY 2006. In February 2006, the PCD officially received a compliance order from the Colorado Department of Public Health and the Environment (CDPHE) declaring the entire chemical agent stockpile being stored at the depot as hazardous waste. Additionally, the compliance order required several deliverables on characterizing the stockpile, detailed storage and monitoring procedures, as well as a plan on how and when the stockpile will be treated. All deliverables were prepared and submitted to the CDPHE by the deadlines set in the compliance order.

On June 29, 2006, the CDPHE approved the Stage I, Class 1 RCRA Research, Development, and Demonstration (RD&D) permit modification to support Stage I construction. The PCAPP Stage II Class I RCRA RD&D permit modification to support Stage II construction (non-process structures) was submitted to CDPHE on June 29, 2006. CDPHE approved this modification on September 7, 2006.

The Defense Access Road program Environmental Assessment for the new access road is under review by the Colorado Department of Transportation and Federal Highway Administration. A decision document is scheduled to be published in the second quarter of FY 2007.

Chemical Stockpile Safety

The chemical weapons stockpile at PCD continues to be stored safely. During FY 2006, no leaking munitions or overpack containers were identified at PCD (see summary table in appendix B). The remote possibility of an earthquake causing a low-probability, high-consequence accident associated with the storage of chemical munitions and agents remains the dominant driver of risk to the public at this location. Mitigation measures, such as reduced stack height of munitions and banding of pallets, are being implemented.

Public Outreach

During FY 2006, the Pueblo outreach team continued to support the CAC and its working groups to provide program information on the key issues of funding status and facility redesign. The team coordinated a series of interviews with key stakeholders to support a Mitretek Systems independent study regarding the offsite shipment of hydrolysate; held four community roundtables with key stakeholders to specifically discuss key issues, as well as the Personnel Reliability Program; facilitated quarterly information briefings to key community officials; and continued its educational outreach program, which reached more than 7,000 students in the 2005-2006 school year. Further, during the last quarter of FY 2006, the outreach team executed a business outreach initiative designed to help local business leaders better understand the services and workforce required to build, operate, and close the Pueblo facility.

Chemical Stockpile Emergency Preparedness

PCD has all CSEPP enhancements in place and is in sustainment. Cooperation among the Army, DHS, State of Colorado, and local governments continued to be excellent. Community emergency preparedness was enhanced by improvements to the EOC that included a new phone system, an additional siren installed on the depot, and a lightning detection system. Spokesperson crisis communication training was provided for on- and off-post officials on March 23, 2006.

The annual CSEPP community exercise took place on May 10, 2006. A public awareness survey was conducted in the Colorado CSEPP community to measure gains in public knowledge of protective actions and to identify weaknesses to be addressed by outreach efforts.

Program Reviews

The NRC letter report, *Review and Assessment of the Proposals for Design and Operation of Designated Chemical Agent Destruction Pilot Plants (DCAPP-Pueblo)*, published in July 2006, provides an assessment of the PCAPP intermediate redesign. The NRC found that the proposed design will destroy the chemical weapons effectively with little technical risk provided that the testing of first-of-a-kind equipment is completed successfully, the design could be further simplified by treating agent hydrolysate offsite if institutionally feasible, and the schedule presented to the committee seems longer

than necessary. The report further states that the public involvement activities in Pueblo have been effective, and no serious permitting problems should be encountered.

Incidents

During FY 2006, there were no Category II or Category I chemical events (defined in accordance with AR 50-6, *Chemical Surety*; see appendix E) at Colorado facilities.

Fiscal Year 2007 Planned Activities

During FY 2007, development of the final design will continue. Stage I construction will be completed, and Stage II construction will begin. Stage II construction includes aboveground, non-process structures.

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Blue Grass Chemical Activity and Blue Grass Chemical Agent-Destruction Pilot Plant, Kentucky

Highlights

BGCAPP is currently in the final design phase. Early construction (site preparation, earthworks and construction of access road) is ongoing.

Blue Grass Chemical Agent-Destruction Pilot Plant Design and Construction

Design activities continued at the BGCAPP during FY 2006. The SC submitted the supercritical water oxidation (SCWO) intermediate design in November 2005 and the munitions demilitarization building redesign in May 2006. An I-CDR for BGCAPP was conducted on May 9, 2006, to review the BGCAPP design and revised functional baseline, determine if the design balances cost and schedule, determine a path forward for design completion, and establish critical design review entry criteria. At the conclusion of the I-CDR, the Program Manager determined that all exit criteria for the I-CDR were met except for approval of the functional baseline. The Program Manager approved the functional baseline on June 29, 2006.

Early construction activities began at BGCAPP in FY 2006. Tree cutting and clearing for the Chemical Limited Area, access road, and borrow area were completed. Earthworks and construction of the access road continues.

Environmental Compliance

The Kentucky Department of Environmental Protection (KDEP) issued the final RD&D permit on September 30, 2005, with an effective date of October 30, 2005. The KDEP Division for Air Quality issued the final BGCAPP Title V Air Permit on October 5, 2005.

Chemical Stockpile Safety

The chemical stockpile at BGAD continues to be stored safely. During FY 2006, there was one leaking munition identified (see summary table in appendix B). The leaker was handled in accordance with chemical surety procedures, and there was no release of chemical agent to the environment. The potential of a lightning strike causing a low-probability, high-consequence accident associated with the storage of chemical munitions and agents remains the dominant risk driver at this location. Studies of options to address this issue, including placement of dielectric barriers, have been completed.

Public Outreach

During FY 2006, PMACWA opened a new Blue Grass Chemical Stockpile Outreach Office. The office has since evolved into a focal point for community members, project staff, and depot leadership to meet and engage on disposal issues, and more than 10 project-related meetings have been hosted. The outreach team

continued to support the Kentucky CAC and its working groups to provide program information on the key issues of funding status and facility redesign. In addition to Secondary Waste and Permitting, a third CAC working group—the Economic Development Working Group—was established this year. The outreach team coordinated a series of interviews with key stakeholders to support a Mitretek Systems independent study regarding the offsite shipment of hydrolysate. The team also initiated planning of the BGCAPP Groundbreaking Open House, scheduled for October 2006.

Chemical Stockpile Emergency Preparedness

The BGAD EOC was over-pressurized, and enhanced sheltering of Patty A. Clay Hospital was completed in FY 2006 using CSEPP funds. A public address system was installed in the depot's chemical limited area, and 15 additional sirens were installed off the installation.

The annual CSEPP community exercise was held on October 25, 2006.

Program Reviews

The NRC letter report, *Review and Assessment of the Proposals for Design and Operation of Designated Chemical Agent Destruction Pilot Plants (DCAPP-Blue Grass)*, published in July 2006, provides an assessment of the BGCAPP SCWO intermediate design. The report states that the committee believes that although the SCWO technology being designed for BGCAPP is not technically mature, it can be used in the proposed application if adequate testing is performed; and at the proposed flow rates, the full-size SCWO unit could have an unacceptably high level of technical risk. The report further stated that the technical risk for the proposed full-size SCWO unit at the proposed flow rates could become acceptable if adequate additional testing is performed before the unit is used.

The NRC letter report, *Review and Assessment of the Proposals for Design and Operation of Designated Chemical Agent Destruction Pilot Plants (DCAPP-Blue Grass II)*, published in July 2006, provides an assessment of the BGCAPP munitions demilitarization building intermediate design. The report states that the committee is concerned about the number of design decisions that are still to be finalized for BGCAPP; the redesign effort has resulted in a potentially effective design provided that adequate and representative testing and development are performed prior to use.

Incidents

During FY 2006, there were no Category II chemical events (defined in accordance with AR 50-6, *Chemical Surety*; see appendix E). There were three Category I chemical events at Kentucky facilities. At no time was the community or environment at risk of exposure to chemical agent.

Fiscal Year 2007 Planned Activities

During FY 2007, development of the final design will continue along with early construction activities.

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IV. NON-STOCKPILE CHEMICAL MATERIEL

During FY 2006, the PMNSCM pursued the following activities to safely destroy NSCM.

Recovery and Destruction of Chemical Warfare Materiel

PMNSCM supported a variety of remediation operations in FY 2006. These activities include the recovery, assessment, and destruction of CWM and suspect CWM. PMNSCM also supports the USACE during site scoping studies, site remediation, and range clearance missions. PMNSCM has supported such activities at the following locations:

- *Edgewood Area of APG, Maryland.* On March 9, 2006, a World War I (WWI)-era 75mm projectile was recovered from the Wise Road area at the Edgewood Area of APG. The item was assessed by personnel from the 22nd Chemical Battalion (22nd CM BN) using the MMAS Phase II System 1 and determined to contain phosgene (CG). PMNSCM coordinated destruction of this item on June 7, 2006, using the Munitions Assessment and Processing System (MAPS).

In FY 2006, remediation efforts at the Westwood Study Area of the Edgewood Area of APG commenced. The Westwood Study Area is located in the extreme northwestern corner of the Edgewood Area of APG and covers approximately 850 acres of land. A Record of Decision was drafted in December 2005 by the U.S. Army Garrison, APG, addressing 32 sites of which 5 are remedial action sites. PMNSCM is currently supporting this remediation effort. Personnel from the 22nd CM BN provide recovery and assessment support for suspect materiel recovered at these sites.

- On May 11, 2006, a large metal cylinder was recovered. Based on assessment of the item, the Materiel Assessment and Review Board (MARB) determined the item was not CWM and recommended local disposition.
 - On June 22, 2006, three items were recovered: two 8-inch Livens projectiles and one 4.2-inch mortar. The three items were assessed with the MMAS Phase II System 1. The 4.2-inch mortar was determined to be empty (not CWM), and the two Livens projectiles were found to contain sulfur trioxide smoke. All items were recommended for local disposition.
 - On July 26, 2006, two 4.2-inch mortars were recovered and assessed and determined not to contain CWM. The mortars were recommended for local disposition.
- *Dillsburg, Pennsylvania.* On January 26, 2006, the MMAS Phase II System 1 and personnel from the 22nd CM BN were deployed to a private residence in Dillsburg, Pennsylvania, to assess a 75mm projectile. Following assessment, the item was determined to have never been filled and was turned over to

22nd CM BN personnel. The item is currently at the Edgewood Area of APG and will be used for training purposes.

- *Dover Air Force Base, Delaware.* On October 20, 2005, a WWI-era 75mm projectile was recovered from Sea Watch International, a clam shell processing plant in Milford, Delaware. The item was recovered by the 22nd CM BN and transported to Dover Air Force Base (AFB). The item was assessed by the MMAS Phase II System 1 and was found to contain HD. The EDS was deployed in late January 2006 to Dover AFB, and on February 15 and 16, 2006, the EDS successfully destroyed this munition.

Between February 24, and March 6, 2006, five additional suspect items were recovered from Sea Watch International, and on July 11, 2006, a sixth 75mm projectile was recovered. All six 75mm projectiles were determined to contain HD and were destroyed in the EDS Phase 1 Unit 3 at Dover AFB during August 15 through 22, 2006.

- *Dugway Proving Ground, Utah.* On March 8, 2006, five 4.2-inch mortars were recovered from a Solid Waste Management Unit Area. PMNSCM immediately deployed personnel from the 22nd CM BN to assess the items. All five items were determined not to contain CWM.
- *Former Camp Sibert, Gadsden, Alabama.* On March 8, 2006, two 4.2-inch mortars were recovered from a private residence near the former Camp Sibert, Alabama. These items were confiscated by state police and transported to ANAD to be assessed. The MMAS Phase I System 2 was deployed, and 22nd CM BN personnel determined that the items did not contain CWM and were handed over to the installation for local disposition.

PMNSCM is currently supporting USACE-Mobile District remediation activities at Site 8 (Toxic Munitions Impact Area) of the former Camp Sibert, Alabama. The former Camp Sibert is part of the Formally Used Defense Sites (FUDS) program established in 1986 by Congress to clean up former military properties. Remediation and clean up began in April 2006. In March 2006, PMNSCM deployed an interim holding facility (IHF) to support RCWM efforts during these activities. USACE-led remediation activities at this site are currently ongoing and are expected to conclude in FY 2008. As of September 30, 2006, five items have been recovered at this location and have been moved to the IHF pending a full assessment.

- *Fort Benning, Georgia.* The USACE-Huntsville District completed a site scoping study of the Harmony Church Site, located at Fort Benning, Georgia, in FY 2005. This site was formerly known as the Chemical Agent Burial Site. The site is approximately 2 acres in size and contains approximately 12 burial pits, 5 of which remain to be investigated. PMNSCM is supporting this effort with the recovery and assessment of suspect materiel and potential CAIS items. In 1992, while excavating one of the burial pits, 100 glass CAIS ampoules were

discovered. The ampoules contained dilute solutions of sulfur mustard (H), lewisite (L), CG, chloropicrin (PS), adamsite, and chloracetapherone.

- Excavation activities at Fort Benning were completed in July 2006. During the excavation, 4 CAIS package intransient gas containers and 16 loose CAIS bottles were recovered. All items were placed in an IHF for storage. Based on initial X-rays of the four package intransient gas containers, the majority of the bottles appear to be empty, although some bottles do appear to contain some residual materiel. PMNSCM is currently coordinating with state officials, agencies, and USACE to deploy the Single CAIS Access and Neutralization System (SCANS) to treat the recovered CAIS items. This effort is scheduled to occur in FY 2007.
- *Fort Bragg, North Carolina.* On March 30, 2005, approximately 30 suspect CAIS items were uncovered by a construction crew working at a new building site at Fort Bragg, North Carolina. Assessment of these items revealed that 22 ampoules contained the chemical agents (H or L) and 8 ampoules contained industrial chemicals; all items were moved to an IHF. In early May 2006, two additional items were recovered from the same construction location. These items were also placed in the IHF. PMNSCM has drafted a SCANS Destruction Plan to dispose of all 24 CAIS items containing chemical agent, and SCANS operations are planned for FY 2007.
- *Fort Wainwright, Alaska.* On July 26, 2006, two M47 bombs were recovered at an excavation site in a housing area at Fort Wainwright, Alaska. On July 31, 2006, two additional, M47 bombs were recovered from the same location. The M47 bomb is a 100-pound World War II-era munition, typically filled with H. Three of the four recovered bombs had been compromised and were determined to be empty. These three items were subsequently destroyed. The fourth bomb appeared to be crushed, but still intact. A local Explosive Ordnance Disposal unit X-rayed the item and determined it contained a liquid fill. PMNSCM deployed the 22nd CM BN personnel and non-intrusive assessment equipment in early August 2006. Based on the assessment, the item was determined to be empty and recommended for local disposition.
- *Francis E. Warren AFB, Wyoming.* On April 26, 2005, a single CAIS bottle from a K955 Navy Sniff-Set was recovered during range clearance activities. PMNSCM is working with the base to plan for additional investigation of the site under a Chemical Safety Submission. At the conclusion of the remediation investigation, all CAIS items containing chemical agent will be destroyed using the SCANS, possibly in FY 2007. (Note: In the past, this particular type of CAIS has not been successfully assessed via non-intrusive assessment equipment due to the agent-impregnated charcoal. CAIS bottles of this type can contain sulfur mustard (HS), L, and PS on charcoal, which interferes with assessment equipment). In the absence of additional information, PMNSCM is assuming this item contains HS or L due to the identification of charcoal. Coordination and disposal of this CAIS item is ongoing.

- *Mountain Home, Arkansas.* In June 2006, the MMAS Phase I System 2 and 22nd CM BN personnel were deployed to Mountain Home, Arkansas, to investigate a recovered aircraft spray tank. It was determined that the spray tank was empty and did not contain CWM.
- *Schofield Army Barracks, O'ahu, Hawaii.* The USACE-led range clearance effort at Schofield Army Barracks, Hawaii, concluded in March 2006. This location has been designated by the Army as a future training range for the Stryker Armored Combat Vehicle. Range clearance began in February 2004 and ended in March 2006 with the recovery of 269 items.

On March 14, 2006, the non-intrusive assessment of 99 potentially CWM-filled items was completed by 22nd CM BN personnel. Assessment of these items was conducted using the Portable Isotopic Neutron Spectroscopy (PINS) system and the Digital Radiographic Computed Tomography X-ray system. The inventory of recovered munitions consisted of 4-inch Stokes mortars, 4.2-inch mortars, 8-inch Livens projectiles, 75mm projectiles, 81mm mortars, 105mm projectiles, and 155mm projectiles. Of the 99 recovered suspected chemical items, 67 were recommended for Explosive System Destruction by the MARB. Sixty-six of these items contain CG fills, and one contains a PS fill. PMNSCM is currently coordinating with the State of Hawaii, the USACE, and environmental regulators to determine a path forward. PMNSCM has prepared a cost estimate for the prescribed treatment of these items and has forwarded it to the Deputy Assistant Secretary of the Army (Environment, Safety, and Occupational Health).

In June 2006, USACE returned to the range, along with a five-person team from the 22nd CM BN, for Explosive Ordnance Disposal support to clear failed grids and support construction of the range. Since the beginning of this operation, two liquid-filled munitions have been placed in the IHF. This effort is ongoing.

- *Spring Valley, Washington, District of Columbia.* The USACE-managed remediation effort at the former Camp American University, at Spring Valley, Washington D.C. (FUDS) is currently in its final stages. Efforts remained concentrated at the Lot 18 area, which has been ongoing since FY 2002. Investigations and remediation of this area was completed on January 22, 2006.

USACE conducted a low-probability investigation of anomalous areas at Lot 18 and surrounding area. This included the investigation of 84 single-point anomalies on 4 properties adjacent to Lot 18. These investigations yielded no recovered suspect material and were completed in July 2006.

USACE is in the process of over-excavating the Lot 18 area. Approximately 634 cubic yards of soil are slated to be removed. USACE is currently preparing work plans for future investigations of select areas of the Public Safety Building

at American University. Operations at this location are scheduled to begin in FY 2007.

- *Tulalip Munitions Depot, Washington.* On August 15, 2006, the USACE dig at Tulalip Munitions Depot (FUDS), Washington was stopped after several workers complained of a strange odor and stinging of the eyes. USACE immediately ceased intrusive activities at this site and is now in the process of preparing a Chemical Safety Submission. In support, PMNSCM is preparing an IHF Plan in the event an IHF is requested at this location. The dig site contained broken glassware and chemical cylinders. Tulalip Munitions Depot was formerly used for munition storage and chemical warfare training.

Recovered Chemical Warfare Materiel

- *MAPS.* MAPS is a fixed facility located at the Edgewood Area of APG, Maryland, designed to process RCWM by safely separating the chemical payload from the explosive component. MAPS received Operational Approval on October 27, 2005, and was approved to transition to Follow-On Test and Evaluation (FOT&E).
 - The MAPS began FOT&E on March 15, 2006, with the processing of an armed and fuzed, recovered 75mm CG-filled projectile. This item was recovered at D-Field at the Edgewood Area of APG on October 19, 2004.
 - On March 20, 2006, the MAPS began an APG-Garrison sponsored sulfur trioxide smoke campaign. This campaign consisted of 46 items and concluded on April 11, 2006, without incident.
 - On June 7, 2006, the MAPS successfully processed a second 75mm CG-filled round. This item was recovered on March 9, 2006, from the Wise Road area of the Edgewood Area of APG.
 - The MAPS is scheduled to enter a cold layaway status pending resolution of the Memorandum of Agreement between PMNSCM, APG-Garrison, and Edgewood Chemical Biological Center (ECBC). PMNSCM is currently coordinating with ECBC to implement several facility enhancements prior to this shutdown.
- *PBA, Arkansas.* Approximately 1,200 recovered munitions and 5,387 CAIS items are currently being stored at PBA. The stored munitions are predominantly 4.2-inch mortars and GTRs, while the CAIS items include both CWM and industrial chemicals. Several PMNSCM projects are underway to assess and dispose of these items and include the following:
 - *Pine Bluff Munitions Assessment System (PBMAS).* Processing of 677 4.2-inch mortars was conducted from July 20 through October 27, 2005. Assessments and MARB review identified 95.3 percent of the items for local disposition. A pre-operational survey for

miscellaneous munitions and GTR assessment was held the week of December 5, 2005, and operations began on January 17, 2006, with non-explosively configured GTRs. Assessment of all 275 non-explosively configured GTRs was completed by May 15, 2006. Assessment of the explosively-configured GTRs was completed August 25, 2006, and assessment of 35 miscellaneous munitions was completed in July 2006.

- *Rapid Response System (RRS)*. PMNSCM has deployed the RRS to PBA to dispose of CAIS items in storage at PBA that have been assessed and *segregated*, by type, through use of PBMAS. CAIS treatment and disposal began in August 2005 and is scheduled to be completed by October 2006. All 4,906 K941 bottles had been processed by August 23, 2006. The K951 campaign (459 items) is scheduled to begin in October 2006; the K955 campaign (22 items) is scheduled to begin in October 2006, as well. Site closure is planned for December 2006.
- *PBEDS*. PBEDS consists of three separate EDS units (two operating continually, one as back-up), at one location, to destroy the current stock of RCWM at PBA. Site construction was completed in March 2006. A pre-operational survey was conducted May 8 through 12, 2006, and operations began on June 13, 2006. As of September 30, 2006, 214 4.2-inch mortars have been processed.
- *GTR Separation System (GTRSS)*. The GTRSS, a water jet cutting system, will be used to separate GTR warheads from their rocket motors to *facilitate* destruction of the warheads in PBEDS. System testing for the water jet cutter was completed in January 2006 at APG. Documentation in support of operations is currently being drafted. This system was transported to PBA in May 2006. Operations are scheduled to begin in the second quarter of FY 2007.
- *Large Item Transportable Access and Neutralization System (LITANS)*. The LITANS mission is to access and neutralize the chemical fills of RCWM, both explosively and non-explosively configured, sized beyond the current PMNSCM treatment system capabilities. After reviewing an analysis of alternatives (AoA), PMNSCM granted permission to redesign the access mechanism, containment, and reactor skid to overcome inadequacies in the original design. Fabrication of the redesigned system was completed and delivered to the Edgewood Area of APG in December 2005. Engineering design testing and an In-Process Review (IPR) were conducted, which resulted in the approval to continue with developmental testing/operational testing in January 2007.
- *Mobile Cleaning System (MCS)*. The MCS is a stand-alone, transportable, self-contained 5X decontamination surface treatment facility designed by ECBC. The MCS would process metal parts (that is, TCs, waste accessed chemical ordnance processed from PMNSCM treatment systems or equipment), which may be potentially contaminated with minute quantities of liquid chemical agent. After demonstration and validation (DEM/VAL) testing, a Data Authentication

Group reviewed the results, and a MCS DEM/VAL Test IPR was held in March 2006, and the program findings were presented along with a recommended path forward.

An AoA was finalized on May 5, 2006. The AoA for a Transportable 5X Cleaning System in lieu of the MCS was submitted, which considered six systems, including an Acid Digestion Process, Autoclave, Electric Resistance Heating (ERH), Incineration, Macroencapsulation and Landfill, and upgrades to the existing MCS. This analysis found that an autoclave or ERH system would best meet the stated mission requirements. The MCS program was cancelled.

Binary Chemical Weapons Disposal

Binary components (56,764 binary M20 DF canisters, 7 bulk drums of DF, and 291 drums of QL⁴) were destroyed via neutralization at a facility in a portion of the former Integrated Binary Production Facility (IBPF) at PBA. Neutralization wastes will be shipped to a commercial TSDF for final disposition.

Construction and systemization of the binary destruction facility (BDF) was completed in August 2005. Operations began in December 2005, with completion of the DF M20 canister campaign on March 31, 2006, followed by completion of the DF Bulk Drum campaign on April 6, 2006. The QL campaign began on June 5, 2006, and was completed on September 27, 2006.

Binary neutralent is scheduled for disposal by December 2007 using the WAO unit, fabrication of which was completed in April 2006. Installation and construction activities are scheduled to be complete in October 2006 with systemization commencing in November 2006 and operations beginning in March 2007.

CWC credit for the destruction of the binary components will not be received until the neutralent is destroyed. Once the neutralent is destroyed, the binary chemical weapons disposal mission will be completed.

Former Chemical Weapons Production Facility Destruction

Activities at the CWC-declared FPFs during FY 2006 included the following:

- *Newport Former Production Facility (NE-FPF), Newport, Indiana.* Step 3 destruction operations⁵ at the NE-FPF continued during FY 2006. All treaty

⁴ DF is the military symbol for methylphosphonic difluoride, the critical binary precursor of the nerve agent in what would have been the GB₂ binary munition (the M687 binary projectile). QL is the military symbol for an organophosphorus ester, the critical binary precursor to form nerve agent in what would have been the VX₂ binary munition (the Big Eye bomb).

⁵ NE-FPF manufactured VX in a 4-step process (labeled Steps, 0-3). Steps 0-2 converted raw chemical into the precursor QL, and Step 3 converted QL into VX. Step 3 destruction operations included the chemical control area where Step 3 manufacturing took place.

destruction activities at NECD were completed in April 2006, and treaty verification of destruction was received in July 2006. Currently, an autoclave is being installed and permitted for use in decontamination of pipe. Non-treaty decontamination activities are expected to continue through FY 2008.

- *IBPF, PBA, Pine Bluff, Arkansas.* Destruction of the IBPF began in October 2004 and continued until June 2005. Destruction of the DC⁶ and DF facilities, with the exception of the Multiple Launch Rocket System (MLRS) building, was completed in June 2005. Closeout of the DF facility will not be complete until the MLRS building, which was converted for use in binary destruction, is destroyed. The task for the destruction of the MLRS building was awarded in March 2006. The MLRS building will be destroyed immediately after closure of the Pine Bluff BDF and is currently planned for completion by February 2007.
- *Ancillary Buildings, Edgewood Area of APG, Maryland.* PMNSCM identified 13 ancillary buildings at the Edgewood Area of APG that were not declared as FPFs (and not subject to CWC destruction milestones) but were planned for destruction due to potential contamination. PMNSCM initially planned to destroy all 13 ancillary buildings; however, current funding only supports destruction of 6 buildings. Recently discovered historical documents resulted in a single building, the Edgewood Area of APG HD Production, Distillation, and Fill Facility, being declared to OPCW as an FPF in April 2006. Destruction of that building began in August 2006 and was completed in September 2006. Notification will be forwarded to the OPCW announcing destruction of the facility and requesting a closeout inspection for verification/confirmation of destruction.

CWC verified destruction is at 98.9 percent. PMNSCM continues to toward the April 2007 deadline for destruction of 100 percent of FPFs.

Miscellaneous Chemical Warfare Materiel Disposal

Activities during FY 2006 to destroy miscellaneous CWM, which includes empty TCs, Category 3 chemical weapons,⁷ and chemical samples, included the following:

- *Edgewood Area of APG, Maryland.* The annual disposal of chemical samples at Edgewood Area of APG began in September 2000 and continued through FY 2006. On August 24, 2006, ECBC began destruction operations at the Chemical Transfer Facility (located at the Edgewood Area of APG) to destroy the remaining chemical samples at Edgewood Area of APG (499 pounds of GB agent). This operation was completed on September 25, 2006, and marks the complete destruction of all NSCMP chemical samples at the Edgewood Area of APG.

⁶ DC is the military symbol for a binary precursor, which is methylphosphonyl dichloride.

⁷ Category 3 chemical weapons include unfilled munitions and devices and equipment designed specifically to employ chemical weapons.

- *ANAD, Alabama.* On December 9 and 10, 2005, 36 GB chemical sample vials and two GB TCs were processed at ANCDF. These items constitute all the GB NSCMP chemical samples in storage at ANAD.
- *UMCD, Oregon.* In November 2005, PMNSCM coordinated the disposal of four GB TCs (NSCMP chemical samples) at UMCDF. There are currently no remaining GB chemical samples in storage at UMCD.
- *Chemical Samples Stored at Other Locations.* Pending issuance and/or modification of applicable environmental permits, disposal of chemical samples is scheduled to occur between FY 2006 and FY 2011 in the chemical stockpile disposal facilities at the following sites: Anniston, Alabama; Blue Grass, Kentucky; Pine Bluff, Arkansas; Pueblo, Colorado; and Tooele, Utah.
- *PBA, Pine Bluff, Arkansas.* Operations using a 20 percent sodium permanganate rinse, followed by sodium sulfite and hot water rinses resumed at the Pine Bluff TC Decontamination Facility in September 2005. Operations were suspended in August 2006 to pursue development of a thermal decontamination process. A technology demonstration of the thermal option is planned for October 2006.
- No Category 3 items were discovered in FY 2006. To date, all known Category 3 items are destroyed.

Technology Test Program

The "Partnering With Industry" approach (to establish a partnership with one or more TSDFs to transport and dispose of secondary wastes using treatment technologies that are non-incineration-based) resulted in a contract awarded to Texas Molecular (TM) Deer Park Services Limited Partnership in FY 2005. WAO technology will be used to treat DF and QL neutralent. Fabrication of the WAO unit was completed in April 2006 with site construction to be completed in early FY 2007.

PMNSCM completed field tests in May 2005 evaluating two non-intrusive neutron analyzers, the PINS and Pulsed Elemental Analysis with Neutrons (PELAN), on CWM fills and simulant fills with the final independent evaluation report completed in December 2005. No further evaluation of the PELAN will be conducted. PMNSCM is pursuing short-term improvements to the PINS and developing an advanced design concept PINS that will meet all NSCM mission requirements. PMNSCM will also evaluate two new commercial portable Raman spectroscopy units.

Treatability testing of EDS-generated VX/monoethanolamine (MEA) neutralent using the WAO process was completed in April 2006, and the material of construction testing was completed in July 2006. The Test Report and Independent Evaluation Report will be issued in October 2006. Preliminary results indicate that the VX/MEA neutralent can be treated effectively in the TM WAO unit and without significant corrosion.

Environmental Compliance

During FY 2006, approval was obtained for the RCRA permit modification for WAO operations at TM, Deer Park, Texas, and the permit modification for the NECD FPF autoclave operations has been submitted and is expected to be approved in October 2006. All other necessary permitting requirements have been met, and the permits are being maintained.

Public Outreach

During FY 2006, CMA PAO continued its support of NSCMP activities throughout the United States. CMA PAO continues efforts to involve the public; communicate important information to interested stakeholders; and highlight success in the safe identification, storage, and destruction of CWM. Tools utilized to accomplish these efforts, include:

- *Media relations.* The office issued more than 10 media releases on subjects ranging from assessment and treatment technologies to destruction of the former VX Production Facility at NECD, Indiana. NSCMP media relations were accentuated by the in-house development of media b-roll reels, enabling media to illustrate CMA stories with current, accurate images.
- *Public outreach.* Public outreach remains a key component of NSCMP support. Highlights include a public availability session in May 2006 in Newport, Indiana, where NSCMP technical personnel joined NECD officials to discuss a proposal to decontaminate and recycle metal piping from the FPF. The event drew positive input from attendees and favorable media attention for CMA.

Interaction with citizens and interested parties was facilitated through an NSCMP Core Group meeting in 2006 and a membership and outreach subcommittee meeting in 2007.

- *Communication tools.* In addition to a thorough review of the information paper inventory, work concluded on videos featuring EDS, SCANS, and RRS. Designed to explain these proven treatment technologies, the videos appear on the CMA Web site for public view and media reference.

The portable exhibit inventory was refined and updated with a total of seven subjects available for poster sessions and other public events. The portable exhibits and videos were recognized for their quality and effectiveness by several regional and national organizations.

Program Reviews

In FY 2006, the Army requested that NRC establish a committee to review and evaluate international technologies for the destruction of NSCM. The committee will provide independent scientific and technical evaluations of international systems,

facilities, and disposal of technologies currently employed or under research and development in countries with inventories of NSCM for their treatment and destruction. The committee will compare these technologies with those utilized by PMNSCM in an overall effort to determine and further define state-of-the-art technologies for destruction worldwide of NSCM.

As part of the analysis, the committee will do the following: (1) evaluate and assess the technical feasibility and maturity of the foreign technologies and systems, (2) consider implementation and deployment issues related to cost, safety, risk, and protection of the environment of these foreign technologies and systems, and (3) address the acceptability of such systems and technologies to U.S. regulators and stakeholders.

The NRC committee completed its European visits in February 2006, which included visits to Porton Down, England; Munster, Germany; The Hague, Netherlands; and Brussels, Belgium. The international technologies study report, *Review of International Technologies for Destruction of Recovered Chemical Warfare Materiel*, has been completed and delivered to PMNSCM.

Incidents

There were no chemical events during FY 2006.

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APPENDIX A
ABBREVIATIONS AND SYMBOLS

APPENDIX A ABBREVIATIONS AND SYMBOLS

22nd CM BN	22nd Chemical Battalion
ABCDF	Aberdeen Chemical Agent Disposal Facility
ACAT	acquisition category
ACP	Army Cost Position
ACWA	Assembled Chemical Weapons Alternatives
AEL	airborne exposure limit
AFB	Air Force Base
AMC	U.S. Army Materiel Command
AMSAA	U.S. Army Materiel Systems Analysis Activity
ANAD	Anniston Army Depot
ANCA	Anniston Chemical Activity
ANCDF	Anniston Chemical Agent Disposal Facility
AoA	analysis of alternatives
APB	Acquisition Program Baseline
APG	Aberdeen Proving Ground
AR	Army Regulation
ATB	agent trial burn
BDF	binary destruction facility
BGAD	Blue Grass Army Depot
BGCAPP	Blue Grass Chemical Agent-Destruction Pilot Plant
CAC	Citizens' Advisory Commission
CAIS	chemical agent identification set
CAMDS	Chemical Agent Munitions Disposal System
CDC	Centers for Disease Control and Prevention
CDF	chemical agent disposal facility
CDP	Chemical Demilitarization Program
CDPHE	Colorado Department of Public Health and Environment
CG	phosgene
CHPPM	Center for Health Promotion and Preventive Medicine
CMA	U.S. Army Chemical Materials Agency
CSE	Chemical Stockpile Elimination
CSEPP	Chemical Stockpile Emergency Preparedness Program
CWC	Chemical Weapons Convention
CWM	chemical warfare materiel
DA	Department of the Army
DAB	Defense Acquisition Board
DAE	Defense Acquisition Executive
DC	military symbol for a binary precursor, which is methylphosphonyl dichloride
DCD	Deseret Chemical Depot
DEM/VAL	demonstration and validation

DEQ	Department of Environmental Quality
DF	military symbol for the critical binary precursor for GB ₂ , which is methylphosphonic difluoride
DFS	deactivation furnace system
DHS	Department of Homeland Security
DoD	Department of Defense
ECBC	Edgewood Chemical Biological Center
ECR	explosive containment room
EDS	Explosive Destruction System
EMS	Environmental Management System
EOC	Emergency Operations Center
EPA	U.S. Environmental Protection Agency
ERH	Electric Resistance Heating
FOT&E	Follow-On Test and Evaluation
FPF	former (chemical weapons) production facility
FRP	fiberglass-reinforced piping
FUDS	Formally Used Defense Sites
FY	fiscal year [October 1 through September 30]
GAO	Government Accountability Office
GB	military symbol for the nonpersistent nerve agent sarin
GB ₂	military symbol for the nonpersistent nerve agent sarin formed from the binary munition
GTR	German Traktor Rocket
GTRSS	German Traktor Rocket Separation System
H	mustard
HD	mustard agent (distilled)
Hg	mercury
HS	sulfur mustard
I-CDR	Incremental Critical Design Review
IBPF	Integrated Binary Production Facility [Pine Bluff Arsenal, Arkansas]
ICS	Incident Command System
IHF	interim holding facility
IPT	Integrated Product Team
IPR	In-Process Review
ISO 14001	International Organization for Standardization's standard for environmental management systems
JIC	Joint Information Center
KDEP	Kentucky Department of Environmental Protection
L	lewisite
LCC	life cycle cost

LCCE	life cycle cost estimate
LIC	Liquid Incinerator
LITANS	Large Item Transportable Access and Neutralization System
M20	military model number for DF canister portion of the binary nerve agent GB ₂ projectile, M687
M55	military model number for nerve agent GB or VX 115-millimeter rocket
MAPS	Munitions Assessment and Processing System
MARB	Materiel Assessment and Review Board
MCS	Mobile Cleaning System
MDE	Maryland Department of the Environment
MEA	monoethanolamine
MLRS	Multiple Launch Rocket System
MMAS	Mobile Munitions Assessment System
MPF	Metal Parts Furnace
NECD	Newport Chemical Depot
NECDF	Newport Chemical Agent Disposal Facility
NE-FPF	Newport Former Production Facility
NEPA	National Environmental Policy Act
NRC	National Research Council
NSCM	non-stockpile chemical materiel
NSCMP	Non-Stockpile Chemical Materiel Project
ODEQ	Oregon Department of Environmental Quality
OPCW	Organisation for the Prohibition of Chemical Weapons
ORR	Operational Readiness Review
OSD	Office of the Secretary of Defense
PAO	Public Affairs Office
PART	Program Assessment Rating Tool
PBA	Pine Bluff Arsenal
PBCDF	Pine Bluff Chemical Agent Disposal Facility
PBEDS	Pine Bluff Explosive Destruction System
PBMAS	Pine Bluff Munitions Assessment System
PCAPP	Pueblo Chemical Agent-Destruction Pilot Plant
PCD	Pueblo Chemical Depot
PELAN	Pulsed Elemental Analysis with Neutrons
PFS	pollution abatement system filtration system
PINS	Portable Isotopic Neutron Spectroscopy
PL	Public Law
PMACWA	Program Manager Assembled Chemical Weapons Alternatives
PMNSCM	Project Manager for Non-Stockpile Chemical Materiel
PNB	Process Neutralization Building
PS	chloropicrin

QL	military symbol for the critical binary precursor for VX ₂ , which is O-Ethyl O-2-diisopropylaminoethyl methylphosphonite
RCRA	Resource Conservation and Recovery Act
RCWM	recovered chemical warfare materiel
RD&D	Research, Development, and Demonstration
RRS	Rapid Response System
SC	Systems Contractor
SCANS	Single CAIS Access and Neutralization System
SCWO	supercritical water oxidation
SET	Secure Environmental Treatment
TC	ton container
TCC	Ton Container Cleanout
TCL-ESD	TC Line-Enhanced Steam Decontaminator
TM	Texas Molecular
TOCDF	Tooele Chemical Agent Disposal Facility
TSDF	treatment, storage, and disposal facility
USD(AT&L)	Under Secretary of Defense for Acquisition, Technology, and Logistics
UMCD	Umatilla Chemical Depot
UMCDF	Umatilla Chemical Agent Disposal Facility
USACE	U.S. Army Corps of Engineers
USC	U.S. Code
VX	military symbol for a persistent nerve agent, which is o-ethyl S-(2-diisopropylaminoethyl)methylphosphonothioate
VX ₂	military symbol for a persistent nerve agent VX formed from the binary munition
WAO	wet air oxidation
WWI	World War I

APPENDIX B
OCCURRENCES OF LEAKING CHEMICAL MUNITIONS

**APPENDIX B
OCCURRENCES OF LEAKING CHEMICAL MUNITIONS**

Fiscal Year	Leaker Occurrences by Type			TOTAL	Leaker Occurrences by State ^a									
	M55 Rockets ^b	SUPLECAM Samples ^c and Overpack Containers	All Other Munitions		AL	AR	CO	IN	JI	KY	MD	OR	UT	Other
2006	3	6	55	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 ^d	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 ^d	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
1989	131	9	44	184	19	5	3	0	12	7	0	14	124	0
1988	50	5	26	81	14	2	3	0	2	0	0	20	40	0
1987	44	22	45	111	41	3	0	0	6	3	0	6	52	0
1986	82	18	28	128	40	0	11	0	12	4	0	10	51	0
1980 ^f - 1985	544 ^e	6	779	1,329	203	5	9	0	38	91	0	230	726	27
TOTAL	1,959	642	2,077	4,678	1,077	51	72	1	163	192	1	454	2,640	27
Qty Destroyed	1,832	467	1,651	3,950	971	7	47 ^g	1	163	45 ^g	1	334	2,354	27

Notes:

The inventory of leaking munitions continues to be reduced at sites with operating CDFs.

- ^a AL Alabama (ANAD)
- AR Arkansas (PBA)
- CO Colorado (PCD)
- IN Indiana (NECD)
- JI Johnston Island (includes the storage site and Johnston Atoll Chemical Agent Disposal System; mission completed in 2000)
- KY Kentucky (BGAD)
- MD Maryland (Edgewood Area of APG)
- 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 their destruction, rather than at the storage area (5 in 1995, 64 in 1996, 11 in 1997, 102 in 1998, 161 in 1999, 24 in 2000, 168 in 2001, 6 in 2002, 16 in 2003, 45 in 2004, 116 in 2005, and 36 in 2006). All leaks detected during these operations were under engineering controls.
- ^e 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.
- ^f 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.
- ^g 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 2006 DISBURSEMENTS SUMMARY - AS OF SEPTEMBER 30, 2006
(INCLUDES FY 2006 AND PRIOR YEAR FUNDS)
(\$ IN THOUSANDS)

Project/Facility	Chemical Agents and Munitions Destruction, Army				Military Construction
	RDT&E	PROC	O&M	Total	Total
Program Management (CMA)	619		28,786	29,405	353
Program Management (PMCS D)		6,457	52,300	58,757	
Chemical Demilitarization Training Facility			7,833	7,833	
CAMDS (Operations)			21,773	21,773	
JACADS (Closure)			5,342	5,342	
TOCDF (Operations)		14,737	166,042	180,779	
ANCDF (Operations)		1,424	148,805	150,229	22
UMCDF (Operations)		9	148,357	148,366	3
PBCDF (Operations)		1,610	142,195	143,805	3,261
Alternative Technologies and Approaches Project Program Management	142		6,040	6,182	
ABCDF (Operations)	61		104,099	104,160	35
NECDF (Construction/Systemization)	2,037		124,587	126,624	1,987
Non-Stockpile Chemical Materiel	28,305	46	130,029	158,380	5,263
ACWA Program Management	16,626			16,626	
PCAPP (Design)	60,489			60,489	33,278
BGCAPP (Design)	65,273			65,273	23,313
Chemical Stockpile Emergency Preparedness		14,994	113,754	128,748	
TOTAL	173,552	39,277	1,199,942	1,412,771	67,515

Notes:

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

ABCDF = Aberdeen Chemical Agent Disposal Facility
ACWA = Assembled Chemical Weapons Alternatives
ANCDF = Anniston Chemical Agent Disposal Facility
BGCAPP = Blue Grass Chemical Agent-Destruction Pilot Plant
CAMDS = Chemical Agent Munition Disposal System
CMA = U.S. Army Chemical Materials Agency
JACADS = Johnston Atoll Chemical Agent Disposal Facility
NECDF = Newport Chemical Agent Disposal Facility
O&M = Operations and Maintenance
PBCDF = Pine Bluff Chemical Agent Disposal Facility
PCAPP = Pueblo Chemical Agent-Destruction Pilot Plant
PMCS D = Project Manager for Chemical Stockpile Disposal
RDT&E = research, development, test and evaluation
TOCDF = Tooele Chemical Agent Disposal Facility
UMCDF = Umatilla Chemical Agent Disposal Facility

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APPENDIX D
CONGRESSIONAL SUPPORT

APPENDIX D CONGRESSIONAL SUPPORT

The U.S. Army Chemical Materials Agency (CMA) and the Program Manager for Assembled Chemical Weapons Alternatives continue to implement and maintain initiatives to facilitate safe and efficient mission accomplishment. Congressional support is requested in the following areas to support those initiatives.

Continue to support funding, consistent with the President's budget, of the Chemical Demilitarization Program (CDP)

In FY 2007, the program is funded by the Chemical Agents and Munitions Destruction, Army (CAMD,A) Appropriation to execute current requirements. Reductions in future President's Budget requests may delay agent destruction and reduce the ability of the program to mitigate cost and schedule risks. This would likely result in increased life-cycle costs and extends the risk posed by continued storage. Program schedule delays will also impact the ability to meet Chemical Weapons Convention (CWC) destruction milestones.

Continue to support Off-Post Chemical Stockpile Emergency Preparedness Program (CSEPP) 2-year O&M obligation authority.

The Department of Defense Appropriations Act, 2007, provided 2-year obligation authority (OA) for off-post CSEPP Operation & Maintenance funds within the CAMD,A appropriation. These funds are managed by FEMA and provided to the states for execution. Two year OA for this funding provides FEMA and the states sufficient time to effectively manage and execute the funds.

Continue to support future efficiency initiatives as they are identified and requested by the Program.

The Department of Defense continues to investigate cost and schedule savings initiatives for the program without sacrificing safety or environmental compliance. The John Warner National Defense Authorization Act for Fiscal Year 2007 included the enabling language requested by the Department to support the shared savings concept designed to motivate the systems contractors to reduce schedule while maintaining highest safety standards.

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APPENDIX E
CHEMICAL EVENT CATEGORIES

APPENDIX E CHEMICAL EVENT CATEGORIES

Category I: Non-surety emergency (informational)

- Unexpected chemical surety related occurrences reported to State or local jurisdictions as provided in local agreements but not mandated by law.
- Any unexpected occurrences (without release of chemical agent to the atmosphere) which has a potential for negative reactions by the news media, State, or local officials towards chemical agent operations at Army installations during storage, transportation, or demilitarization. This includes circumstances where in the judgment of the reporting installation commander, the occurrence could cause embarrassment to the Army.
- Workers reporting that they were exposed to chemical agent, regardless of whether the postulated exposure is confirmed by clinical or laboratory evaluation.
- Confirmed detection of chemical agent exceeding the established airborne exposure limits cited in AR 385-61, outside of the primary engineering controls but within secondary engineering controls.
- Discovery of Recovered Chemical Warfare Materiel (RCWM).

Category II: Limited area/post only emergency (site response)

- Confirmed presence of liquid agent outside munitions, bulk containers, or overpack containers.
- Confirmed detection of agent occurring for any period of time outside of engineering controls into the environment, exceeding the AEL source emission limit cited in AR 385-61. This includes agent operations conducted in a closed system (filtered bunkers, filtered igloos, overpack containers, on site containers, demilitarization operating facilities and outdoor glovebox operations) designed to protect unprotected workers or the ambient environment.
- Any known release of chemical agent above the AEL cited in AR 385-61 for unmasked agent workers where unprotected or inadequately protected personnel have been present or likely to have been present at the time of release.
- Personnel exhibiting signs or symptoms associated with chemical agent exposure.
- A deliberate attempt to release Army chemical agents that is unauthorized or during the commission of a criminal act.

Category III: Community emergency (external response).

- Explosion or fire where chemical agents are involved, resulting in personnel injury or substantial structure damage.
- Actual theft of chemical agent material.

- Any release of chemical agent into the atmosphere that is projected by approved downwind hazard projection methods, which indicate a hazard greater than no effects, will extend beyond the installation boundary.
- Any release of chemical agent into the atmosphere, confirmed by an approved detection method, which exceeds the general population AEL in AR 385–61, which may extend beyond the installation boundary.