



Program Executive Office, Assembled Chemical Weapons Alternatives Overview

Summary

The Program Executive Office, Assembled Chemical Weapons Alternatives (PEO ACWA) is the Department of War (DoW) organization responsible for the destruction of the final 10% of the declared United States chemical weapons stockpile, formerly stored at the Blue Grass Army Depot (BGAD) in Kentucky and the U.S. Army Pueblo Chemical Depot (PCD) in Colorado.

The final declared munition in the U.S. stockpile, a GB M55 rocket, was destroyed July 7, 2023, in Kentucky. This event marked the conclusion of destruction operations in Kentucky, following the completion of destruction operations in Colorado June 22, 2023. PEO ACWA continues to oversee the destruction facilities in both states through their closure phases, estimated to conclude in Fiscal Year 2028. After extensive decontamination and cleaning activities, the U.S. Army has determined there is no chemical-agent liability at the facilities in Colorado and Kentucky.

The U.S. Army Chemical Materials Agency (now Activity) (CMA) eliminated approximately 90 percent of the original U.S. stockpile, which was safely stored at U.S. sites in Alabama, Arkansas, Indiana, Maryland, Oregon, Utah and Johnston Atoll in the Pacific Ocean. CMA completed its stockpile destruction mission in January 2012 but continued managing the storage and security of the remaining stockpile in Colorado and Kentucky until completion of destruction in 2023.

Background

In 1996, the United States Congress established the Assembled Chemical Weapons Assessment, or ACWA, program under Public Law 104-208 to test and demonstrate alternative technologies to baseline incineration for the destruction of chemical weapons. Upon ACWA's successful demonstration of several alternative technologies from 1997 to 2000, the Department of Defense (DOD), now known as the Department of War (DoW), selected neutralization followed by biotreatment in 2002 for destruction of the stockpile in Colorado, and neutralization in 2003 for the stockpile in Kentucky. Explosive Destruction Technologies were later selected to augment the chemical weapons demilitarization process.

The ACWA program oversaw the design and construction of the two chemical weapons destruction pilot plants – the Pueblo Chemical Agent-Destruction Pilot Plant (PCAPP) in Colorado and the Blue Grass Chemical Agent-Destruction Pilot Plant (BGCAPP) in Kentucky. Once ACWA took on the responsibility for the demilitarization process in Kentucky and Colorado, the organization's focus shifted from assessing chemical weapon disposal technologies to implementing full-scale pilot testing. In 2003, ACWA changed its name from Assembled Chemical Weapons Assessment to Assembled Chemical Weapons Alternatives to reflect its new program goals; in 2007, it was activated as a U.S. Army Element; and in 2012, ACWA was redesignated a Program Executive Office.

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Chain of Responsibility

PEO ACWA is aligned under the U.S. Army Acquisition Support Center. This designation provides PEO ACWA with the necessary support and resources as an Army organization under the direct command and control of the DoW.



Oversight

In 1997, the United States formally agreed to destroy its chemical weapons stockpile by ratifying the Chemical Weapons Convention, a multilateral arms control treaty that prohibits worldwide the production, stockpiling and use of chemical weapons. The treaty is enforced by the Organisation for the Prohibition of Chemical Weapons (OPCW) in The Hague, the Netherlands, which oversaw the destruction process at the PEO ACWA sites with international inspectors. The July 7, 2023, destruction of the last chemical weapon in the U.S. declared stockpile also marked the completion of destruction of all declared stockpiles in the world, according to the OPCW.

Locations

PEO ACWA

PEO ACWA is located at Aberdeen Proving Ground (APG), Maryland, and was responsible for selecting and providing government oversight to the contractors that designed, built, tested, operated and are currently closing the final two destruction facilities.



PCAPP

PCAPP was the state-of-the-art pilot plant developed to destroy the U.S. stockpile of chemical weapons formerly stored at PCD (deactivated in 2024 and now known as the U.S. Army Chemical Materials Activity-West) in Pueblo, Colorado. PCAPP used neutralization followed by biotreatment, an Explosive Destruction System destroyed a number of problematic munitions that could not be easily destroyed by the plant’s automated equipment, and SDC technology was used to destroy 4.2-inch mortar rounds and any projectiles that were found unsuitable for processing through the main plant. The follow-on process, biological treatment, consisted of breaking down the product of neutralization, called hydrolysate, by microbial digestion. Some hydrolysate was also destroyed at an offsite permitted hazardous waste treatment, storage and disposal facility (TSDF). Non-contaminated energetics removed from the munitions as part of the destruction process were destroyed in the Anniston, Alabama, SDC unit. The Bechtel Pueblo Team is the systems contractor that designed, built, tested, operated and is closing PCAPP.



PCAPP Facility Aerial Perspective

Operations:

- March 18, 2015, through June 22, 2023: 2,613.2 U.S. tons of mustard agent contained in 780,078 mortar rounds and projectiles



Illustration of chemical weapons of the U.S. stockpile formerly in Colorado

Munition	Agent Type	Quantity	Destruction Technology
4.2-inch Mortar Round	HD	76,722	EDS*/SDC**
4.2-inch Mortar Round	HT	20,384	EDS*/SDC**
105mm Projectile	HD	383,418	EDS*/SDC**/Neutralization Followed by Biotreatment
155mm Projectile	HD	299,554	EDS*/SDC**/Neutralization Followed by Biotreatment
DOT*** Bottle	HD/HT	11***	EDS*
TOTAL		780,078	

* Explosive Destruction System

** Static Detonation Chamber

*** Department of Transportation (DOT) bottles are not included in the original declaration quantities, since they contain samples/waste from declared stockpile



BGCAPP

BGCAPP was the state-of-the-art pilot plant developed to destroy the U.S. stockpile of chemical weapons formerly stored at BGAD near Richmond, Kentucky, and secured and monitored by the Blue Grass Chemical Activity (BGCA), another depot tenant. BGCAPP used neutralization to destroy nerve agents GB and VX in rockets and projectiles while SDC technology was used to destroy mustard agent-filled projectiles; containerized, drained, and undrained nerve agent rocket warheads; M55 rocket overpacks; and rockets not suitable for processing in the main plant. Hydrolysate was destroyed at an offsite permitted hazardous waste TSDf. Non-contaminated rocket motors removed as part of the destruction process were destroyed in the Anniston, Alabama, SDC. Part of the plant's closure phase included the destruction of containerized, drained GB and VX rocket warheads, considered agent-contaminated secondary waste, in the plant's SDC units, completed Sept. 11, 2025. Bechtel Parsons Blue Grass is the systems contractor that designed, built, tested, operated and is closing BGCAPP.



BGCAPP Facility Aerial Perspective

Operations:

- November 2007 to April 2009: Operation *Swift Solution* – three deteriorating steel containers containing a mixture of chemical agent GB and its breakdown products
- June 7, 2019, through July 7, 2023: 523.4 U.S. tons of mustard agent in projectiles and nerve agent in projectiles and rockets (101,764 munitions)

Munition	Agent Type	Quantity	Destruction Technology
M55 Rocket	GB	51,740	Neutralization/SDC*
M55 Rocket	VX	17,739	Neutralization
8-inch Projectile	GB	3,977	Neutralization
155mm Projectile	VX	12,816	Neutralization
155mm Projectile	H	15,492	SDC*
DOT Bottles	H	2**	SDC*
DOT Bottle	VX	1**	Neutralization
TOTAL		101,764	

* Static Detonation Chamber

** Department of Transportation (DOT) bottles are not included in the original declaration quantities, since they contained samples/waste from declared stockpile

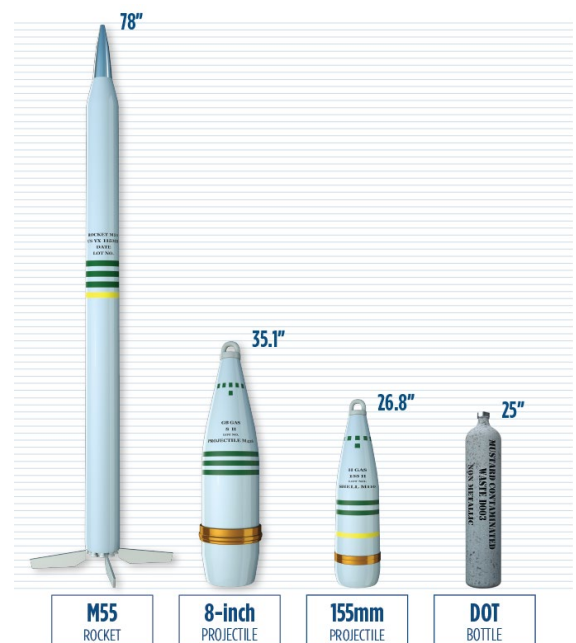


Illustration of chemical weapons of the U.S. stockpile formerly in Kentucky



Anniston Field Office (AFO)

To ensure the program maintained technical expertise following the closure of the former Anniston Chemical Agent Disposal Facility, PEO ACWA established the AFO at the Anniston Army Depot, Alabama, in 2014. The AFO led engineering development, design evaluation, contracting coordination and system testing efforts to improve the processing systems at the Colorado and Kentucky destruction facilities. In addition, the Anniston SDC augmented the facilities by destroying more than one million non-contaminated explosive components removed from the chemical weapons in Colorado and Kentucky, which the team concluded in April 2025. The SDC was demolished in May 2025 as part of facility closure, which ended in early 2026. AFO personnel will continue to support the PEO ACWA program into 2027.

Operations:

- Nov. 16, 2016, through Aug. 2, 2023: 978,531 bursters and fuzes from Colorado projectiles and mortar rounds
- March 29, 2022, through April 3, 2025: 68,757 motors from Kentucky rockets

Environmental Protection

PEO ACWA's highest priority has been and always will be to ensure the utmost protection to the workforce, community and environment. The destruction process at the plants was principally governed under hazardous waste permits issued by the Colorado Department of Public Health and Environment for PCAPP and the Kentucky Department for Environmental Protection for BGCAPP, under the Resource Conservation and Recovery Act (RCRA), as well as other applicable environmental regulations and permits administered by state regulatory agencies and the U.S. Environmental Protection Agency, including the Clean Air Act, National Environmental Protection Act and Toxic Substances Control Act. During closure, the facilities continue to operate under local, state and federal laws and regulations. The end stage of the closure phase for each facility is the close-out of the RCRA and other permits, a major part of the administrative closeout phase following demolition.

Program Partners

Multiple organizations regulated, interacted with or supported the PEO ACWA program, including:

- Centers for Disease Control and Prevention
- Chemical Stockpile Emergency Preparedness Program
- Defense Threat Reduction Agency
- DoW
- Joint Project Manager for Elimination
- OPCW
- U.S. Army Chemical Materials Agency (now Activity)
- U.S. Army Combat Capabilities Development Command Chemical Biological Center (formerly Edgewood Chemical Biological Center)
- U.S. Army Joint Munitions Command
- U.S. Army Materiel Command
- U.S. Congress
- U.S. Department of State
- U.S. Environmental Protection Agency



Public Participation

Governor-appointed state Chemical Demilitarization Citizens' Advisory Commissions (CACs) and their various subcommittees were the primary means for interested citizens to have a voice regarding the chemical destruction projects in Colorado and Kentucky. Since their inception by Congressional mandate in 1996, the CACs have given local communities the opportunity to become involved through all project phases, issues and achievements. The CACs are curtailing or discontinuing their activity now the chemical weapons are destroyed.

Closure

Closure is the final phase of the program, following completion of chemical weapons destruction operations in 2023, and is sequenced to occur in compliance with all permits, regulations and requirements. At the plants, any buildings used directly for chemical agent destruction will be decontaminated and demolished, while others may remain for future use. As part of the disposition process, personal property, such as uncontaminated equipment, tools, excess parts and office furniture, will follow government dispositioning regulations.

In Colorado, the local redevelopment authority PuebloPlex has been working with Base Realignment and Closure personnel to take control of the CMA-West property, declared surplus to the federal government in 2013, and leverage it to promote sustainable, long-term economic development for the Pueblo area. In Kentucky, BGAD will resume control of the property occupied by the BGCAPP facility and will continue its conventional weapons and other missions beyond the closure of BGCAPP and BGCA. When the Colorado and Kentucky destruction facilities have completed closure, the PEO ACWA program will conclude, following an administrative close-out period. Closure activities are expected to conclude in Fiscal Year 2028.