Program Executive Office, Assembled Chemical Weapons Alternatives Overview

The last chemical munition in the declared U.S. stockpile was destroyed July 7, 2023. The Program Executive Office, Assembled Chemical Weapons Alternatives (PEO ACWA) was responsible for the destruction of the declared U.S. chemical weapons stockpile formerly stored in Colorado and Kentucky. PEO ACWA is now overseeing the closure of the chemical weapons destruction facilities in Colorado and Kentucky. When the closure phase is complete, the PEO ACWA program will conclude.

Background

In 1997, Congress established the ACWA program to safely test and demonstrate at least two alternative technologies to the baseline incineration process for the destruction of the U.S. stockpile of assembled chemical weapons. Such weapons are configured with fuzes, explosives, propellants, chemical agents, shipping and firing tubes and packaging materials.

Congress authorized ACWA to manage the development and pilot-scale testing of these technologies in 1999. Public Law 104-208 stated that funds would not be allocated for a chemical weapons disposal facility at the Blue Grass Army Depot until the Secretary of Defense certified demonstration of six incineration alternatives.

After successfully demonstrating three technologies in 1999 and three more in 2000, ACWA determined that four were viable for pilot testing.

The ACWA program was assigned responsibility for destroying the U.S. chemical weapons stockpile in Colorado and Kentucky in October 2002 under Public Law 107-248. In July 2002, the Department of Defense (DOD) selected neutralization followed by biotreatment to destroy the chemical weapons stockpile in Colorado. In November 2002, the DOD selected neutralization followed by supercritical water oxidation (SCWO), to destroy the chemical weapons stockpile in Kentucky.

ACWA shifted its focus from assessing chemical weapons disposal technologies to implementing full-scale pilot testing of the selected alternative technologies at these sites. As a result, the program changed its name from Assembled Chemical Weapons Assessment to Assembled Chemical Weapons Alternatives in June 2003 to better reflect new program goals.

In 2007, ACWA was formally activated as the U.S. Army Element, Assembled Chemical Weapons Alternatives under the U.S. Army Materiel Command from which it received administrative and logistical support while continuing to report directly to the DOD.

Effective Oct. 1, 2012, ACWA was designated Program Executive Office, Assembled Chemical Weapons Alternatives and administratively assigned to the U.S. Army Acquisition Support Center. This transition was directed to raise the program's visibility in the Defense establishment to help obtain the support

Program Executive Office, Assembled Chemical Weapons Alternatives Public Affairs
(410) 306-4024

and resources necessary for the increasingly dynamic progress of PEO ACWA. As mandated by law, the program's direct reporting connection to the DOD remained unchanged.

Blue Grass Chemical Agent-Destruction Pilot Plant

Workers destroyed the final declared chemical munition in Kentucky and in the U.S. chemical weapons stockpile July 7, 2023, at the Blue Grass Army Depot. The original stockpile stored at the depot consisted of 523 U.S. tons of nerve and mustard agents in rockets and projectiles. PEO ACWA used neutralization as the technology to destroy the chemical weapons stored at the depot. Static Detonation Chamber (SDC) units were selected to augment the main plant technology to destroy all mustard agent projectiles, many of which were unsuitable for processing through the main plant. The units were also selected to process drained and undrained rocket warheads, overpacked rockets, M55 rockets that were unsuitable for processing in the main plant during operations and overpacked contaminated and non-contaminated rocket motors from the nerve agent stockpile.

In June 2003, Bechtel Parsons Blue Grass was selected as the systems contractor responsible for the design, construction, systemization, operation and closure of the Blue Grass Chemical Agent-Destruction Pilot Plant. The Blue Grass SDC began operations on June 7, 2019, and completed the mustard agent projectile campaign on Sept. 4, 2022. Agent destruction operation occurred at the main plant from Jan. 17, 2020, through July 7, 2023. In 2020, the decision was made not to use the SCWO system to process plant wastewater because multiple issues were discovered during testing that raised safety and reliability concerns. As such, the hydrolysate produced from the neutralization of chemical agent was shipped to a permitted treatment, storage and disposal facility.

The Kentucky Chemical Demilitarization Citizens' Advisory Commission serves as a bridge between the community and the DOD by providing a forum for exchanging information about the closure of the BGCAPP facility. The commission has an independent subcommittee, the Chemical Destruction Community Advisory Board, which is made up of a diverse group of community leaders who represent the local community on issues regarding Kentucky's chemical weapons destruction program. The board's primary objectives are to share information with the community and provide input to government decision-makers.

Pueblo Chemical Agent-Destruction Pilot Plant

Workers destroyed chemical weapons stored at the U.S. Army Pueblo Chemical Depot in Colorado from March 18, 2015, to June 22, 2023. The original stockpile stored at the depot consisted of 2,613 U.S. tons of mustard agent in projectiles and mortar rounds. PEO ACWA worked with the community to select neutralization followed by biotreatment to destroy the chemical weapons stockpile stored at the depot. In addition, SDC technology was selected to augment the baseline technology to destroy problematic chemical munitions that could not be easily processed through the main plant. The Explosive Destruction System, a type of explosive destruction technology, destroyed problematic munitions in Pueblo from March 18, 2015 to Dec. 5, 2018.

In September 2002, Bechtel Pueblo was selected as the systems contractor responsible for the design, construction, systemization, pilot testing, operations and closure of the Pueblo Chemical Agent-Destruction Pilot Plant (PCAPP). Workers initiated agent destruction operations in the main plant on Sept. 7, 2016, and completed operations June 22, 2023.

The Colorado Chemical Demilitarization Citizens' Advisory Commission represents community interests related to the destruction of the chemical weapons stockpile. It provides a vital link between the Pueblo community and the DOD by providing a forum for exchanging information about the closure of the PCAPP facility.

PEO ACWA Headquarters and Anniston Field Office

PEO ACWA headquarters is located at Aberdeen Proving Ground (APG), Maryland. The U.S. Army established the proving ground in 1917 to support U.S. warfighters, and in 1918, the Edgewood Arsenal, now part of APG, began production and testing of chemical weapons. In 2006, the U.S. Army Chemical Materials Agency (now Activity) completed the destruction of the chemical weapons stockpile at the Edgewood Arsenal.

In 2014, PEO ACWA established the Anniston Field Office (AFO) at the Anniston Army Depot, Alabama. The Anniston team brought technical expertise and experience to the program after destroying the chemical weapons stockpile at the Anniston Army Depot. The SDC in Anniston provided opportunities for Blue Grass and Pueblo operators to work with experienced employees and complete training to operate SDC technology during agent-destruction operations at their plants, and led engineering development, design evaluation, contracting coordination and system testing efforts to improve the processing systems at the two facilities. In addition, the Anniston SDC augmented the PCAPP and BGCAPP facilities by destroying non-contaminated explosive and energetic components, which the team concluded in April 2025. With the completion of destruction activities, the Anniston SDC facility will be decommissioned, demolished and closed.