



Chemical Weapons Destruction at the U.S. Army Pueblo Chemical Depot

The U.S. Army Pueblo Chemical Depot (PCD) in southeastern Colorado encompassed approximately 23,000 acres. It safely and securely stored a portion of the declared U.S. stockpile of chemical weapons, mustard agent in projectiles and mortar rounds, while protecting the environment, workforce and surrounding communities. The obsolete chemical weapons, stored and monitored at the depot since the 1950s, were destroyed in compliance with the [Chemical Weapons Convention](#). This chemical weapons destruction program extensively involved the local community, in addition to state and federal regulators.



These specially designed earth-covered magazines on the former U.S. Army Pueblo Chemical Depot, now known as the U.S. Army Chemical Materials Activity-West, commonly referred to as storage igloos or bunkers, formerly stored chemical munitions.

Pueblo Chemical Agent-Destruction Pilot Plant

Located within the depot, the [Pueblo Chemical Agent-Destruction Pilot Plant](#) (PCAPP) included various facilities for agent processing, energetic processing, control and storage, munitions storage, biotreatment, entry control, utility, laboratory, personnel maintenance and other support tasks. The Bechtel Pueblo Team was awarded the systems contract to design, construct, systemize, pilot test, operate and close the facilities. The plant is now in the closure phase after completing destruction of the chemical weapons stockpile June 22, 2023.

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The [Program Executive Office, Assembled Chemical Weapons Alternatives](#), known as PEO ACWA, was responsible for completing destruction operations by the [Chemical Weapons Convention](#) treaty commitment of Sept. 30, 2023. PEO ACWA is now focused on the safe and environmentally compliant closure of the plant.

Technology

In 2002, Department of Defense officials selected [neutralization followed by biotreatment](#) as the disposal technology used at PCD. It used warm water to neutralize chemical agent, effectively destroying the mustard agent molecules. The resulting hydrolysate was mostly water and thiodiglycol, a common industrial chemical that is readily consumed by ordinary sewage treatment bacteria, or microbes. Besides being a common phenomenon in nature, the science of using microbes to help dispose of hazardous waste has existed for decades. Sewage treatment facilities across the country use microbes every day to help break down raw sewage.

Some munitions could not be easily processed in the main destruction plant. These munitions included those that had leaked or were sampled and then overpacked and those rejected because their deteriorated condition did not allow for automated processing. These munitions were safely destroyed at PCAPP's [Static Detonation Chamber](#) complex, along with a portion of the 4.2-inch mortar rounds. The [Explosive Destruction System](#), another type of explosive destruction technology, was also used to destroy a number of problematic munitions in Colorado.

U.S. Army Chemical Materials Activity-West (CMA-West)

Once the chemical weapons stockpile destruction in Colorado was complete, the PCD mission ended as well. The depot was deactivated in a Sept. 12, 2024, ceremony, transitioning into CMA-West. This activity will support PCAPP closure and eventual turnover of the former depot property to the Local Redevelopment Authority, known as PuebloPlex.

Public Outreach

PCAPP outreach staff and the CMA-West Public Affairs Office keep the community informed about the closure of the destruction facilities. The [Colorado Chemical Demilitarization Citizens' Advisory Commission](#) also serves as a bridge between the community and the government, by providing a forum for exchanging information on the closure of PCAPP and representing community and state interests to the Army and Department of Defense. Additionally, project information can be found on the PEO ACWA website: <https://www.peoacwa.army.mil/pcapp/>.