



Projectile/Mortar Disassembly System

The [Projectile/Mortar Disassembly](#) (PMD) system at the [Pueblo Chemical Agent-Destruction Pilot Plant](#) (PCAPP) consists of three identical robotic systems that ensure the safety of the workforce and the environment. This system dismantled 155mm rounds during the first destruction campaign, and is currently disassembling 105mm munitions stored at the [U.S. Army Pueblo Chemical Depot](#). The PMD allows very precise munitions placement and parts removal. All three PMDs remove the munitions' energetic components (bursters, boosters and fuzes) before the munitions are transferred to the Agent Processing Building, where mustard agent is drained and [neutralized](#).

The PMDs are positioned in three Explosion Containment Rooms (ECR) within the Enhanced Reconfiguration Building. Each ECR – with 25-inch thick concrete walls and ceilings, as well as a 4-foot thick concrete floor – is designed to contain a blast in the unlikely event one should occur. The PMDs pick up munitions one by one from a conveyor system and move them through three different disassembly stations. Each station performs a specific function to remove parts from the munition body. The fourth station checks to make sure no residual explosive material remains in the munition body. Control Room operators, who have extensive experience and training with robotic systems, operate and monitor the PMD, which can process munitions in 60-80 seconds.

Here is how the system works:

Station #1: The nose closure, or fuze, is unscrewed from the munition.

Station #2: Miscellaneous parts are removed from the munition, including the fuze well cup, and, in some munitions, an energetic booster.

Station #3: The burster is removed in this station.

Station #4: The munition is checked to ensure no explosive material remains.

Non-contaminated energetics, or explosive parts, are packaged for transport to the Energetics Service Magazine where they await shipment to the Anniston Disposal Facility, Alabama, for final destruction.

The proven technology of the PMD provides PCAPP operators a state-of-the-art advantage as they oversee the safe elimination of the U.S. chemical weapons stockpile.

Some munitions will not be easily processed through the main destruction plant. Problematic rounds include those that have leaked, are overpacked, and "rejects" whose condition does not allow for automated processing. These munitions, along with contaminated energetics, will be safely processed in the PCAPP [Static Detonation Chambers](#).



The Projectile/Mortar Disassembly system's robotic technology ensures the safe and efficient removal of the explosive components from the chemical munitions.

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