

CMA RCMD OPERATIONS AT DOVER AIR FORCE BASE

The U.S. Army Chemical Materials Activity Recovered Chemical Materiel Directorate (CMA RCMD) has partnered with Dover Air Force Base, Delaware, for more than ten missions to assess and destroy recovered chemical weapons. CMA RCMD maintains the U.S. Army expertise and technology to conduct these operations in a safe, environmentally compliant manner.

Since 2004, CMA RCMD has assessed and destroyed 26 recovered chemical munitions at DAFB. These items were disposed of at sea and recovered during commercial fishing operations. They were moved to DAFB, the nearest military installation, but did not originate there. In 2015, three items were safely transported from DAFB to Aberdeen Proving Ground, Maryland, for further analysis, which concluded one item contained residual mustard and two contained chloropicrin. The items were ultimately destroyed at APG as part of a treatability study.



A 75mm projectile is approximately 11 inches long, three inches in diameter and weighs up to 12.5 pounds, depending on its liquid fill. This barnacle-encrusted munition was recovered at sea during commercial fishing operations.



The EDS, seen here during the first DAFB mission in 2004, uses cutting charges to explosively access the chemical agent inside a munition and eliminate its explosive components before neutralizing the chemical agent.

Chemical weapons assessment and destruction technologies and expertise developed by CMA RCMD have played a critical role in the mission to destroy recovered chemical warfare materiel (RCWM) at DAFB. Transportable assessment technologies that use X-ray and non-intrusive chemical analysis enable experts from CMA RCMD and 20th CBRNE (Chemical, Biological, Radiological, Nuclear and Explosive) Command to identify the contents of the munition without opening it. These technologies also help the assessment team determine whether a recovered munition has explosive components. Identifying the contents and explosive condition of a recovered item assists in safe handling, treatment and disposal, ensuring the protection of workers, citizens and the environment.

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The Materiel Assessment Review Board convenes to analyze the assessment results. The MARB consists of subject matter experts from a cross-section of Army specialty units involved in chemical research and operations. The MARB issues a final report based on analysis of the assessment data and makes a recommendation on disposal.

When the MARB confirms a munition contains chemical agent, it may recommend “explosive system demilitarization.” CMA RCMD’s Explosive Destruction System was specifically developed to perform this type of RCWM demilitarization.

The EDS uses cutting charges to explosively access the chemical agent inside the munition and eliminate its explosive components. Operators then add neutralization chemicals to eliminate the chemical agent. The system’s main component – a sealed, stainless-steel vessel – contains all blast, vapor and fragments from the process. Treatment is confirmed by sampling residual liquid and air from the vessel prior to reopening the EDS.

CMA RCMD AT DAFB AT-A-GLANCE

