



RECOVERED CHEMICAL MATERIEL DIRECTORATE FACT SHEET

RCMD OPERATIONS AT DOVER AIR FORCE BASE (DAFB)

The U.S. Army Chemical Materials Activity (CMA) Recovered Chemical Materiel Directorate (RCMD) has partnered with Dover Air Force Base (DAFB) for nine missions to assess and destroy recovered chemical weapons. Most recently, in January 2019, a 75mm projectile, dredged from the ocean during clamming/fishing operations, was recovered at a seafood processing facility in Delaware. An explosive ordnance disposal response team safely moved the item to DAFB, the closest military installation, for assessment and storage of Munitions and Explosives of Concern (MEC). In January 2020, RCMD destroyed the recovered munition using the transportable Explosive Destruction System (EDS).

Since 2004, RCMD has assessed and destroyed 20 recovered chemical munitions at DAFB. Seventeen of the recovered items were destroyed at DAFB, but the initial assessment data for three items did not result in a mustard agent finding. In 2015, those three items were safely transported from DAFB to Aberdeen Proving Ground (APG) for further analysis, which concluded



The 75mm projectile measures approximately 11 inches in length, three inches in diameter and weighs up to 12.5 pounds, depending on the type of chemical agent it contains. It also includes an adapter and booster casing that screw into the nose of the shell.



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.

one item contained residual mustard and two contained chloropicrin. The items were ultimately destroyed at APG as part of a treatability study.

Chemical weapons assessment and destruction technologies and expertise developed by RCMD have played a critical role in the mission to destroy recovered chemical warfare materiel (RCWM) at DAFB. Transportable assessment technologies, which use X-ray and non-intrusive chemical analysis, enable experts from RCMD and 20th CBRNE Command (Chemical, Biological, Radiological, Nuclear and Explosive) to identify the contents of the MEC without opening the munition. 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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RCMD OPERATIONS AT DAFB (CONTINUED)

The Materiel Assessment Review Board (MARB) 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. In the case of the latest recovered item, the MARB determined the munition contained mustard agent.

When the MARB confirms a MEC contains chemical agent, it may recommend “explosive system demilitarization.” RCMD’s Explosive Destruction System (EDS) 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.

RCMD AT DAFB AT-A-GLANCE

