



Pueblo Chemical Agent-Destruction Pilot Plant

FOR MORE INFORMATION CONTACT:

Pueblo Chemical Stockpile Outreach Office
104 West B Street
Pueblo, CO 81003
(719) 546-0400
PuebloOutreach@em.com

Pueblo Chemical Agent-Destruction Pilot Plant Public Affairs
(719) 549-4959

U.S. Army Pueblo Chemical Depot Public Affairs Office
(719) 549-4135
usarmy.pueblo.usamc.list.pa.o@mail.mil



A Partnership for Safe Chemical Weapons Destruction



www.peocwa.army.mil

Static Detonation Chamber Overview

The Program Executive Office, Assembled Chemical Weapons Alternatives, or ACWA, is exploring Static Detonation Chambers (SDCs), manufactured by Dynasafe AB of Karlskoga, Sweden, to aid in the destruction of the chemical weapons stockpile at the Pueblo Chemical Agent-Destruction Pilot Plant, or PCAPP, located on the U.S. Army Pueblo Chemical Depot (PCD)

What is the Static Detonation Chamber?

SDCs use thermal destruction methods to destroy munitions. An SDC is a nearly spherical, armored, high-alloy stainless steel vessel. The heat produced in this electrically-heated containment vessel detonates the munition in order to destroy the agent and munitions components. Applications of the SDC include, Destruction of recovered chemical munitions in Munster, Germany; Anniston Chemical Agent Disposal Facility in Alabama; and the Blue Grass Chemical Agent-Destruction Pilot Plant in Kentucky (chosen method for mustard projectiles).

How does it work?

Chemical munitions are placed in a carrier, conveyed to the top of the SDC vessel and fed into the electrically-heated detonation chamber. High temperature (approximately 600 degrees Celsius or 1,100 degrees Fahrenheit) detonates or deflagrates the munition, and the chemical agents are destroyed by shock and thermal decomposition.

Gases generated from the detonation or deflagration are treated by an Off-gas Treatment System (OTS) that includes a thermal oxidizer that converts carbon monoxide and hydrogen to carbon dioxide, water and acid gases (hydrochloric and sulfuric). Gases from the thermal oxidizer are cooled and filtered to remove any contaminants.

The SDC produces no liquid waste. Scrap metal removed from the vessel may be recycled. Salts from the OTS are treated and disposed of in accordance with state and federal laws.

For additional information on the SDC, and its application, please visit:

<https://www.peocwa.army.mil/bgcapp/bgcapp-destruction-technologies/static-detonation-chamber/>

