

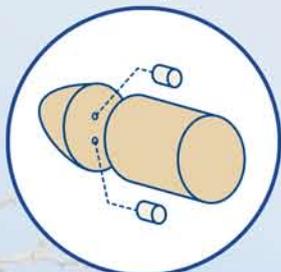
PUEBLO

A PARTNERSHIP FOR SAFE CHEMICAL WEAPONS DESTRUCTION

The Assembled Chemical Weapons Alternatives program, the U.S. Army Pueblo Chemical Depot and the community worked together to select neutralization followed by biotreatment to destroy the chemical weapons stockpile at the depot.

NEUTRALIZATION FOLLOWED BY BIOTREATMENT

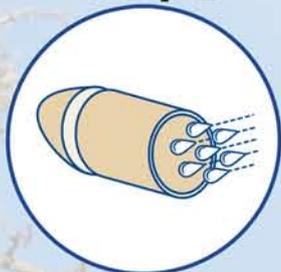
Step 1



REMOVAL OF ENERGETICS

Robotic equipment removes energetics (explosives) from the weapon. The energetics will be disposed of at a permitted facility off site.

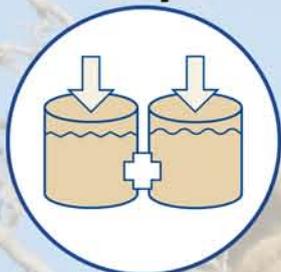
Step 2



REMOVAL OF MUSTARD AGENT

The inside of the weapon is remotely accessed, and mustard agent is washed out with high-pressure water.

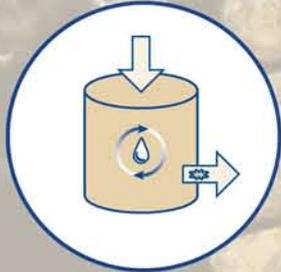
Step 3



NEUTRALIZATION OF MUSTARD AGENT

The mustard agent is neutralized with caustic solution and hot water. The byproduct is called hydrolysate.

Step 4



BIOTREATMENT

The hydrolysate is treated with microbes that break down the solution into water and biosludge. Water is recycled in the plant, and biosludge is shipped for disposal at a permitted facility.

Step 5



DISPOSAL OF METAL PARTS

Metal parts are heated to 1,000 degrees Fahrenheit for 15 minutes and can then be recycled.



Pueblo Chemical Agent
Destruction Pilot Plant