



NEWS RELEASE

U.S. Army Chemical Materials Agency

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Green and Strong

U.S. Army project reduces waste, recycles more than six million pounds of steel

PINE BLUFF ARSENAL, Ark. -- The U.S. Army Chemical Materials Agency (CMA) recently completed a project that resulted in recycling more than 6.5 million pounds of steel.

In September 2003, CMA began operating the Pine Bluff Ton Container Decontamination Facility at Pine Bluff Arsenal, Ark., to decontaminate 4,307 ton containers (TCs) stored at the arsenal. Although empty, the 1,600-pound steel containers once held hazardous materials and required decontamination to eliminate possible residual chemical agent prior to recycling.

Initial efforts to decontaminate the TCs involved rinsing them; however, the residual chemical agent proved difficult to remove, so a new approach had to be found.

Enough steel to build 2,500 cars

When faced with producing an additional 660,000 gallons of hazardous liquid waste to rinse the containers, CMA personnel designed a magnetic induction heating process to decontaminate up to 10 containers simultaneously. Not only did this generate significantly less waste, but it also thoroughly decontaminated the TCs so they could be processed through a commercial recycling plant.

The 6.5 million pounds of steel recycled -- enough to build 26 Statues of Liberty -- supports the Army's commitment to protect the environment, as well as CMA's history of commitment to ridding the Nation of chemical weapons.

Carmen Spencer, Deputy Assistant Secretary of the Army (Elimination of Chemical Weapons), noted that this is just one more way that CMA is protecting the environment by destroying and decontaminating chemical agent.

"CMA's decades of expertise and success in eliminating chemical warfare materiel ranks the highest in the world," Mr. Spencer said. "This effort reinforces CMA's commitment to protecting the environment and creating a safer tomorrow."

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The project is in keeping with CMA's strong commitment to safety, added Conrad Whyne, CMA Director.

"It's not every day that a single project achieves such high marks in waste reduction and recycling efforts, while eliminating significant hazardous waste risks," Mr. Whyne said.

The process used an electrically energized copper coil, wrapped around the container, to generate a magnetic field that was absorbed by the iron in the container. This raised the temperature of the TC to more than 1,000 degrees Fahrenheit, where it was held for 60 minutes. Heating to 1,000 degrees destroys all chemical agents. The decontamination process also featured a carefully designed pollution abatement system to capture any residual material vented from the TCs.

"The decision to decontaminate these legacy containers using magnetic induction heating made the recycling of the containers possible," said Laurence Gottschalk, CMA's Project Manager for Non-Stockpile Chemical Materiel. "We greatly reduced the overall safety risk and environmental impact by using this simplified process, adopting a one-and-done method that reduced the amount of secondary waste generated to a minimum. Instead of taking up significant space in a landfill indefinitely, we found a solution that benefits our environment and the community, contributing more than six million pounds of recycled steel."

The result? A faster, more efficient process that produced less waste and achieved the goal of making the TCs eligible for recycling.

The U.S. Army Non-Stockpile Chemical Materiel Project, a part of the U.S. Army Chemical Materials Agency, leads the Nation in the assessment and treatment of recovered chemical warfare materiel. For more information on NSCMP, its personnel and success stories, please visit <http://www.cma.army.mil/nscmp.aspx>.

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