



EG&G Sampler/Operator Russ Peterson prepares to draw a chemical agent sample from the last DCD mustard agent-filled bulk container on Tuesday, July 29.

Mustard bulk container sampling ends

When it was first announced that workers at the U.S. Army's Deseret Chemical Depot (DCD) would sample the entire stockpile of mustard-filled bulk containers, there was plenty of skepticism. But by July 29, as the last of nearly 6,400 mustard bulk containers was sampled, those previous doubts had disappeared. The job was not only finished 14 months ahead of schedule; it was completed with outstanding safety and environmental compliance performance.

"This was a critical project, and a very successful one," said Ted Ryba, site project manager of the Tooele Chemical Agent Disposal Facility (TOCDF). "Everything we did was based on a need to know what was inside those bulk containers, and because of our joint EG&G/DCD sampling project, now we know. It is information we need to help us complete our mission of safely eliminating the entire DCD chemical weapons stockpile."

Each mustard bulk container was sampled to determine its level of mercury contamination and the amount of solid material, often referred to as "heel." The heel is the result of degradation of the mustard after many years of storage.

Samples confirmed approximately 15 percent of DCD's mustard agent-filled bulk containers are contaminated with elevated levels of mercury. As a result, construction is underway on an additional filtration system, which will use sulfur-impregnated carbon filters to capture mercury compounds from the furnace exhaust, ensuring maximum protection of the environment.

The approximate 3,000 bulk containers found to have large, heavy heels will be processed using the new Heel Transfer System (HTS). The HTS uses a high pressure hot water spray to break up and dissolve a portion of the heel so that it can be transferred from the original bulk container to an empty bulk container. The bulk containers can then be processed through the Metal Parts Furnace in compliance with the TOCDF's operating permit, which limits heel weight to a maximum of 630 pounds.

Workers involved in the sampling of the mustard bulk containers will soon start an even larger project: identifying, categorizing, monitoring and processing more than a million pounds of TOCDF secondary waste.

Tooele Chemical Agent Disposal Facility Processing (as of Aug. 17, 2008)	
Total number of mustard agent-filled bulk containers destroyed	2,271
Total number of mustard agent-filled 155mm projectiles destroyed	54,453
Percentage of total mustard agent stockpile destroyed	37.82%

Environmental Assessment to address proposed treatment of GA and Lewisite

Prior to disposal operations, Deseret Chemical Depot (DCD) was home to the nation's largest stockpile of chemical weapons. Since 1996, the Tooele Chemical Agent Disposal Facility (TOCDF) has safely destroyed the entire stockpile of GB and VX nerve agents. The majority of the remaining stockpile consists of mustard agent and small amounts of Tabun (GA) nerve agent and Lewisite.

Incineration is the preferred method of destruction for chemical agents stored at DCD as previously described and evaluated in an Environmental Impact Statement published in 1989. The U.S. Army Chemical Materials Agency (CMA) is preparing an Environmental Assessment (EA) for a proposed action to augment current operations under way at TOCDF. This augmentation would add a small-scale (See Environmental Assessment – *continued on next page*)

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Environmental Assessment

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liquid incinerator to thermally destroy GA and Lewisite, and the spent decontamination solutions generated during operations.

The proposed high-temperature incinerator will operate simultaneously as the existing TOCDF incinerators. The TOCDF will focus on the continued destruction of DCD's mustard agent munitions and secondary waste derived from agent processing.

The new incinerator will be required to demonstrate the ability to destroy the chemical agents, as well as the ability for the Pollution Abatement System to remove contaminants of concern such as metals to meet regulatory emission standards.

The issues to be analyzed in the EA include, but are not limited to:

- Mercury effluent management
- Arsenic effluent management
- The extent of additional resource needs, such as fuel and water
- Waste disposition considerations for any secondary or process-generated wastes

In preparation of the EA, the first of two public meetings was held on Aug. 19 at the Tooele Chemical Stockpile Outreach Office. A second meeting will be held on Aug. 21 from 5 – 7 p.m. at the Tooele Chemical Stockpile Outreach Office, 54 South Main, Tooele, Utah.

Upcoming Events

- **Aug. 21, 5:00 – 7:00 p.m.** – CMA Environmental Assessment public meeting. The meeting will be held at the Tooele Chemical Stockpile Outreach Office, 54 S. Main.
- **Sept. 9, 3:00 – 7:00 p.m.** – Come visit the Tooele Chemical Stockpile Outreach Office information booth at the Tooele County Chamber of Commerce Business Expo. The event will be held at the city's Veterans' Memorial Park on the corner of Main and Vine streets.
- **Sept. 11, 1:00 p.m.** – Utah Division of Solid and Hazardous Waste Control Board monthly meeting. The meeting will be held in Room 101 at the Department of Environmental Quality building, 162 N. 1950 W. in Salt Lake City.
- **Sept. 18, 6:30 p.m.** – Utah Citizens' Advisory Commission meeting. The meeting will be held at the Department of Environmental Quality building, 162 N. 1950 W. in Salt Lake City.



Reduce, Reuse, Recycle

A new initiative at the Tooele Chemical Agent Disposal Facility (TOCDF) is providing a new cycle of life for the water that is used in the facility's water softener system. This water was previously shipped off site as non-regulated waste water.

The Utah Department of Transportation (UDOT) requires "salt water" of a similar make for dust suppression and road maintenance during the summer months. Tooele County Roads Department Director Rod Thompson explains, "The cost of this water may not be expensive per mile, but there are many miles of dirt roads in Tooele County, creating a challenge with the limited road maintenance budget available."

The facility's Environmental Management System (EMS) team has been working with the Tooele County Roads Department to supply this water at no cost, allowing the county to perform more dust control on county roads. To date, there have been 10 tankers provided to Tooele County holding an average of 4,500 gallons each. The water has been used on approximately 10 miles of road, including seven miles of the Pony Express Route.

There are also plans in place to concentrate the water for deicing the roads and sidewalks at the TOCDF in the winter months. In addition, UDOT will test the concentrated product in the Salt Lake City metro area.

This reuse project will result in a significant cost savings for the TOCDF; saving fuel costs to ship the water off site and water treatment costs.

The TOCDF also recycles items such as computers, electronics, white paper, industrial scrap metal and wood pallets. The EMS team continues to search for opportunities to reduce, reuse and recycle.



A Tooele County water truck uses effluent water from the TOCDF for dust control and road maintenance.

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