

### Deseret moves onto mortars

*New filtration system clears the way for new campaign*

With the new carbon filtration system up and running smoothly, TOCDF workers are back to destroying mustard agent-filled 4.2-inch mortars. The 4.2-inch mortar campaign was stopped almost as quickly as it started back in April when workers identified low, but unexpected levels of mercury in the exhaust gases of the Metal Parts Furnace (MPF).

While the mercury emissions were within permitted limits, the TOCDF's commitment to environmental protection drove the decision to stop processing mortars until the plant's new mercury filtration system was operational. TOCDF officials believe the mercury came from the silver solder used to assemble the mortars. The new Pollution Abatement System (PAS) Filtration System (PFS) uses sulfur-impregnated carbon to capture mercury from furnace exhaust gases.

Before the 4.2 inch mortar campaign restarted, workers temporarily halted chemical agent processing to perform routine  
(See Mortars on next page)



In preparation to restart mortar processing, TOCDF Unpack Area operators Johnny Chacon and David Nix safely place some of the first mustard-filled 4.2 inch mortars onto the feed conveyer. URS Photo

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### Tooele Chemical Stockpile Outreach Office

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The DA VINCH uses controlled detonation of a donor charge to implode the munition in a vacuum chamber. It is the only detonation system that has destroyed more than 500 mustard munitions.

### Controlled detonation system selected to deal with difficult munitions

More than 300 mustard-agent filled munitions will be destroyed using an Explosive Detonation Technology (EDT) called the DA VINCH. The DA VINCH, or Detonation of Ammunition in Vacuum Integrated Chamber, is a controlled detonation system developed for chemical weapons destruction.

The mustard agent-filled munitions that are slated for destruction in the explosive chamber include those that have previously leaked and now are safely stored in overpack containers and "reject" munitions—those munitions that are badly deteriorated and/or have stuck explosive components. The reject munitions could be processed at the TOCDF, but it would be time consuming and it would pose a greater safety risk for employees.

"Without this system, workers would be required to manually remove the overpacked munitions or cut away the stuck bursters. The DA VINCH provides a safer destruction option for these munitions," said Jim Grgich, EDT project manager.

Approximately 200 155mm reject projectiles and 130 4.2-inch leaking mortars will be destroyed using the DA VINCH; the majority of DCD's 155mm projectile stockpile—more than 54,000—was transported from the storage area to TOCDF and destroyed.

"Based on our experience, we also expect to find a handful of reject 4.2-inch mortars that will also need to be processed in the DA VINCH," said Grgich.

As TOCDF officials evaluated the various EDTs available, they concluded that the DA VINCH would be the best match for this project. The system has an established track record of safely destroying thousands of recovered chemical warfare munitions and has the most experience in destroying mustard agent-filled munitions.

(See DA VINCH on next page)

## EG&G is URS

URS Corporation acquired EG&G, which included EG&G Defense Materials, Inc, in 2002. Later, the EG&G name was used to identify one of URS' divisions. But as of Jan. 1, URS has retired the EG&G name, in order to promote a single identity for existing and prospective customers.

At the TOCDF, the intent of the system contractor is to utilize the URS name where possible, but there remains certain legal instances where usage of the name, EG&G Defense Materials, Inc, still will be required, including in formal documentation concerning the TOCDF operating permit.



## DA VINCH

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The DA VINCH is currently in operation in Lake Kanda, Japan, where it is being used to destroy recovered yellow and red bombs, and in Poelkapelle, Belgium, where it is destroying approximately 3500 recovered World War II chemical agent-filled munitions.

Prior to destruction in the explosive detonation chamber, each munition at DCD will be x-rayed. An x-ray machine will be set up in two separate igloos where the reject and overpacked munitions are currently stored. Versar/Kobe Steel, owners and operators of the DA VINCH system, have requested the x-rays to help them gain a better understanding of each tricky munition.

"They're looking for heel content...they'll be looking at the packaging material...anything that can help them do their job better," said Grgich. The x-raying of each reject and overpacked munition is expected to start late next month and should take approximately 11 weeks to complete.

The DA VINCH detonation chamber will also be located in DCD's Area 10. Site preparation will begin this summer and, following state approval, operations are expected to start in February 2011.

### Tooele Chemical Agent Disposal Facility Processing

(as of Jan. 18, 2009)

Total number of mustard agent-filled bulk containers destroyed	4,682
Total number of mustard agent-filled 155mm projectiles destroyed	54,453
Total number of mustard agent-filled 4.2-inch mortars destroyed	2136
Percentage of total mustard agent stockpile destroyed	72.51%

## CAMDS closure plan approved

*Chemical Agent Munitions Disposal System*

After nine long months of planning, the CAMDS closure team and the Utah Division of Solid and Hazardous Waste (DSHW) have completed negotiations for the final CAMDS closure plan, which was approved Dec. 24. The closure plan provides the "rule book" needed to close the CAMDS facility and satisfy Resource Conservation and Recovery Act closure requirements.

Decommissioning Work Packages (DWPs) will be required for each individual building. The DWPs provide the details necessary to proceed with closure activities that must be completed before each building is demolished. The first DWP for the CAMDS Chemical Treatment Facility has been submitted to the DSHW.

## Mortars

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maintenance on the MPF. Built up ash had to be cleaned out of the MPF's primary chamber and workers changed out the first two beds of carbon in the MPF PFS. The change out of the MPF PFS carbon was not originally scheduled at this time, but TOCDF officials decided to take advantage of the downtime to determine the mercury contamination levels. TOCDF officials are awaiting sample analysis before determining disposal options for the contaminated carbon.

The Deseret Chemical Depot's 4.2 inch mustard agent-filled stockpile consists of approximately 63,000 mortars. Destruction of the 4.2 inch mortars is expected to be completed by fall.

## Upcoming Events

- **Feb. 2, 5:00 p.m.** – TOCDF RCRA Class 3 Permit Modification public hearing. The hearing will be held at the Tooele County Administrative Building, 47 S. Main Street in Tooele.
- **Feb. 3, 6:00 p.m.** – TOCDF RCRA Class 3 Permit Modification public meeting. The meeting will be held at the Tooele Chemical Stockpile Outreach Office, 54 S. Main Street in Tooele.
- **Feb. 10, 6:00 p.m.** – TOCDF RCRA Class 2 Permit Modification public meeting. The meeting will be held at the Tooele Chemical Stockpile Outreach Office, 54 S. Main Street in Tooele.
- **Feb. 11, 1:30 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, 168 N. 1950 W. in Salt Lake City.

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