



U.S. ARMY CHEMICAL MATERIALS AGENCY

MONTHLY UPDATE

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DESERET CHEMICAL DEPOT | Aug. 18, 2011

Disposal operations to re-start at TOCDF

Parallel processing needed to meet treaty date

Plant operations at the Tooele Chemical Agent Disposal Facility (TOCDF) are not yet finished. It was originally planned that the remainder of DCD's stockpile would be destroyed at two new facilities: the Area 10 Liquid Incinerator (ATLIC) would dispose of the small number of ton containers filled with GA nerve and Lewisite blister agents, and the Detonation of Ammunition in a Vacuum Integrated Chamber (DAVINCH) would take care of the remaining 300-plus mustard-filled 4.2 inch mortars and 155mm projectiles.

But as the international treaty deadline of April 29, 2012 draws nearer, the DAVINCH has suffered unexpected delays—from contractual issues to installation—and it has fallen significantly behind its initial schedule. Now the plan is to utilize both the plant and the DAVINCH to destroy the remaining 4.2 inch mortars and 155mm projectiles.

"Parallel processing has always been our backup plan," said TOCDF Site Project Manager Ted Ryba, "but as the DAVINCH schedule continues to lose ground, the need to re-use the plant is a necessity. It is also utilizing a familiar process in order to meet our international obligations."

The remaining 4.2 inch mortars and 155mm projectiles are safely stored in overpack containers within the Area 10 storage igloos. Most of the 4.2-inch mortars were overpacked during agent sampling operations conducted by DCD personnel. However, the majority of 155mm projectiles are overpacked because they have either leaked in the past or are so badly deteriorated that they could not be destroyed using TOCDF's normal disposal process.

In 2008, TOCDF workers attempted to process the problematic 155mm projectiles, but manually removing the explosive components, known as bursters, proved to be difficult—if not impossible—with the knowledge and resources available at the time. Inside many of the 155 mm projectiles, the mustard agent fill had solidified, binding the burster and burster well in place. If the burster is in the munition, the munition can't be sent through the plant's Metal Parts Furnace (MPF).

This dilemma put plans to use the DAVINCH into place, but as the detonation chamber is taking longer than anticipated, TOCDF is being readied for disposal operations once more.

Rod Chaney, TOCDF closure project manager, who is helping oversee the restart of plant operations, said modifications include a fine tuned disposal process and reconfigured or new equipment such as a high-powered water spray to break down solidified agent and a remotely operated "pull-shoe" packed with 500 pounds of force to remotely pull out the munition's explosive components. All of the work will be done inside the Explosive Containment Rooms (ECRs), which are fortified with 28-inch thick reinforced concrete walls.

"Even with a full day's worth of work in the ECR—an estimated 10 munitions—we will be operating well below the room's explosive storage limit," said Chaney. "And we will not have any



If the munition's explosive components cannot be easily removed with the "gripper" tool (inset photo), operators will use the new pull-shoe feature that has been added to each cutter. The pull-shoe is pneumatically powered and has up to 500 pounds of pulling force. The pull-shoe is manually positioned but activated remotely, thus personnel are not required to be present in the ECR when stuck bursters are being removed. Additionally, studies have indicated that explosives that are exposed to mustard agent are less sensitive.

personnel in the room while the hazardous operations are done—all of that will be done remotely."

The TOCDF has two ECRs; each will be outfitted with two cutters. Currently, only one ECR will be operational at a time, although that may change if both ECRs can be operated efficiently.

The projectile/mortar disposal campaign will be carried out by dedicated teams to optimize efficiency. The first team (all workers will be dressed in personal protective equipment) will transport the overpacked munitions into the ECR and unpack them. The second team will stage the munitions for cutting and leave the ECR while the cuts are completed. A rotary cutter—the same type utilized for past agent campaigns at the TOCDF—will be used and performed remotely by control room operators. Once the cut(s) are completed (4.2 inch mortars will be cut once; 155mm projectiles will be cut twice), workers will then re-enter the room and attempt to manually remove the burster well assembly. If the assembly cannot be easily removed, workers will position the pull-shoe and again leave the ECR while control room operators remotely attempt to remove the burster. If the burster assembly is still stuck, workers will reposition the munition so that the remotely operated high-pressure spray can wash out the solidified agent and free the burster. Once (See PARALLEL PROCESSING on page 2)

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DCD to be removed from BRAC list

Deseret Chemical Depot (DCD) was placed on the Base Realignment and Closure (BRAC) list in 2005, with a caveat that the destruction mission first be completed in accordance with treaty obligations. However, BRAC laws and regulations provide a six-year implementation period, which will expire on September 15—including the authority, funds and requirement to proceed with closure under BRAC law.

"We will still under go closure, but doing so under more conventional DoD [Department of Defense] protocol," explained DCD Deputy Commander Don Campbell at the July Citizens' Advisory Commission meeting.

The Office of Secretary Defense has determined that the installation will fall off the BRAC list due to ongoing chemical weapons destruction operations. For now, DCD is still under BRAC and will continue to receive BRAC funding until the September deadline. Thereafter, the depot will revert to common Army protocol relative to closure of an Army installation.

"For us, it should not make any difference. The only thing that is potentially up in the air is our turnover of igloos and warehouses to the Tooele Army Depot (TEAD)," said Campbell. "That was mandated under BRAC law. Now that BRAC law goes away, the Army Material Command and Joint Material Command, which is TEAD's higher headquarters, is re-evaluating that position—whether or not they need all of our igloos and warehouses. That study is ongoing and should be done by the end of August."

Additionally, DCD's environmental remediation efforts will not be affected by this change. The activities that are currently under BRAC will be transferred to the Defense Environmental Restoration Program and there will not be any delays to the cleanup efforts.

DCD will continue along the path forward to meet the Chemical Weapons Convention Treaty with projects scheduled to wrap up destruction operations by February 2012.

TOCDF final closure plan revisions

After a year-plus of negotiating and revising the closure plan for the Tooele Chemical Agent Disposal Facility (TOCDF), an agreement with state regulators looks hopeful. The Utah Division of Solid and Hazardous Waste (DSHW) Control Board has drafted its final modifications to TOCDF's closure plan, and the plan is now open to public comment.

TOCDF's closure plan is part of its overall Resource Conservation and Recovery Act (RCRA) permit, which governs the waste management activities TOCDF can conduct and the conditions in which they can be conducted.

Because the original TOCDF closure plan was developed in the mid-1990s, it has undergone extensive revisions to incorporate programmatic closure concepts. These concepts are the compilation of lessons learned while closing other chemical demilitarization facilities including Johnston Island and those in Maryland, Indiana and Arkansas. Programmatic closure concepts provide a sequence for closure-related activities, maximizing efficiency and reducing time and costs, while maintaining the safety of the workers.

DSHW will hold a public hearing on TOCDF's modified closure plan on Aug. 31 (see upcoming events section for more details), and the 45-day public comment period will conclude on Sept. 14.

Upcoming Events

- **Aug. 24, 6:00 p.m.** - TOCDF RCRA Class 3 Permit Modification public hearing, regarding revisions to the TOCDF closure plan. The meeting will be held at the Tooele County Administrative Building, 47 S. Main Street in Tooele.
- **Sept. 15, 6:30 p.m.** - Utah Citizens' Advisory Commission meeting. The meeting will be held at the Department of Environmental Quality Building, room #1015, 195 N.1950 W., Salt Lake City.

The Tooele Chemical Stockpile Outreach Office will be closed Sept. 5 for the observance of Labor Day.

TOCDF receives industry leader award

The National Safety Council (NSC) has awarded the Tooele Chemical Agent Disposal Facility (TOCDF) the 2011 Industry Leader Award, recognizing outstanding safety performance. As one of 52 organizations presented with this award, TOCDF is now part of the top five percent of NSC member companies to qualify for the NSC 2011 Occupational Excellence Achievement Award.

"It's up to each of us to keep on the same path and continue to strive for excellence as we work to successfully complete our mission and project," said URS General Manager and Vice President Gary McCloskey in an e-mail to employees at the TOCDF.

According to an NSC news release issued on July 26, the recipients of this award are selected based on North American Industry Classification Code, lowest total incidence rate and employee work hours.

The awards will be presented in November at the NSC's annual awards event in Philadelphia.

Parallel processing

(continued from front page)

separated, the agent-filled munition casing will be processed through the MPF; the explosive component will be destroyed in the TOCDF's Deactivation Furnace System.

The last team of workers will then enter the ECR to clean up the overpacks and waste in preparation for the next round of munitions.

"We plan to focus TOCDF plant operations on the safest and easiest items to handle—the 4.2 inch mortars—and focus the DAVINCH's path forward on the more difficult items such as leakers in double overpacks," said TOCDF General Manager Gary McCloskey. "It's a dual-processing plan that gives us balance and places all of us in our best position for success."

The cutting tables, which have been designed better ergonomically—higher to prevent workers from having to stoop—are being fabricated, the plant is being readied and a special training area is being set up.

Meanwhile, construction activities are complete at the DAVINCH and the project recently started systemization. This stringent process first tests individual components of the detonation chamber, including support equipment, before testing each system, and ultimately the entire facility and process.

TOCDF plant operations are estimated to start in late October; the DAVINCH is anticipated to start in late November.

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