TEAM DESERET

TOCDF | DCD | CAMDS

DESERET CHEMICAL DEPOT

End of Operations

CREATING A SAFER TOMORROW, **TODAY.**

Together we made a difference.

DIRECTOR'S MESSAGE

"Well done. Thank you to each and every one of you who, in any manner, contributed to the destruction of the Utah stockpile."

On behalf of all of the U.S. Army Chemical Materials Agency (CMA), I thank each and every member of the Deseret Team for your contributions to the safe, successful destruction of the largest and most varied stockpile of chemical agent weapons and containers in the history of the United States' Chemical Demilitarization Program.

You have destroyed the chemical nerve agents GB, GA and VX, and the blister agents H, HD, HT as well as lewisite contained in ton containers; rockets and rocket warheads; 155mm, 105mm and 8-inch projectiles; 4.2-inch mortars; Weteye and 750-pound bombs; land mines and spray tanks. Through multiple challenges, you safely destroyed a chemical weapons stockpile larger than the next three largest U.S. chemical weapons stockpile sites combined.

Though unheralded, yours has been a remarkable journey, marked by self-sacrifice and overcoming adversity as you moved safely ahead—destroying 27.2 million pounds of nerve and blister agents in more than 1.1 million munitions and ton containers.

Your years of dedication, hard work and sacrifice have resulted in not only the destruction of the stockpile, but the creation of a safety culture recongnized by the Occupational Safety and Health Administration with its highest award—Star status—in its Voluntary Protection Program. You've worked nearly 14 million hours without a lost workday due to injury on the job, and that record continues on into closure. In working safely, you have made Utah and our Nation safer.

Chemical weapons have been safely and securely stored at Deseret Chemical Depot in Tooele County, Utah, for more than six decades. Because of your combined efforts—the men and women of Deseret Chemical Depot, the Tooele Chemical Agent Disposal Facility (TOCDF) and the Chemical Agent Munitions Disposal System; and the efforts and support of the local communities, local and state officials and regulators and elected officials—the bunkers lay empty of chemical weapons and the demilitarization facility is being taken down, its job faithfully and fully finished.

TOCDF, which started up in August 1996, was CMA's first full-scale CONUS site to begin demil operations. You implemented the lessons learned at Johnston Island, and you have contributed your own lessons learned to CMA's follow-on sites across the country as you moved steadily, efficiently and safely toward operations complete on Jan. 21, 2012.

Well done. Thank you to each and every one of you who, in any manner, contributed to the destruction of the Utah stockpile.

Completion of destruction operations at Deseret is a giant step forward in the United States' fulfillment of its obligation to the Chemical Weapons Convention treaty. It is undeniable proof of our Nation's commitment. And it is a result of your dedication, expertise and selfless sacrifice and service.

Congratulations. I am proud of your achievements and to have had a part in the success of Team Deseret.

DON E. BARCLAY
Acting Director, U.S. Army Chemical Materials Agency


TEAM DESERET
TOCDF | DCD | CAMDS

MESSAGES

CONRAD WHYNE

Congratulations to the men and women of Team Deseret! Thanks to your efforts and dedication, the largest, most diverse chemical weapons stockpile in the Nation has been safely eliminated. Your task was a difficult one, but you rose to meet each challenge with ingenuity and a steadfast sense of purpose, and set the standard for the world to follow.

CONRAD WHYNE
Program Executive Officer, Assembled Chemical Weapons Alternatives
Former Director, U.S. Army Chemical Materials Agency

COL. JOHN LEMONDES

Through 70 years of safe storage; 30 years of development, testing, and disposal at the Chemical Agent Munitions Disposal System; and more than 20 years of construction, systemization, and disposal operations at the Tooele Chemical Agent Disposal Facility; the men and women of Deseret Chemical Depot have lead the way toward elimination of the Nation's largest chemical weapons stockpile. As the vanguard for demil operations, your efforts paved the way for all who followed. Congratulations on your incredibly successful journey!

COL. JOHN LEMONDES
Project Manager – Chemical Stockpile Elimination,
U.S. Army Chemical Materials Agency

COL. DARRYL BRIGGS

From the raising of the flag over Deseret Chemical Warfare Depot in 1943 until the delivery of the last pallet of overpacked mustard munitions on Jan. 11, 2012, the men and women of Deseret watched over some of the deadliest weapons the world has ever known. You did it professionally, safely, quietly, proudly, and most importantly, you did it extremely well. Thank you for all that you've done.

COL. DARRYL BRIGGS
Director of Stockpile Operations,
U.S. Army Chemical Materials Agency

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COL. MARK POMEROY

As someone who has dedicated my life in service to this country, I am honored to be Deseret Chemical Depot's final commander and witness the conclusion of a historic mission.

Nearly 70 years ago, this Nation established this depot to safely store and protect a deterrent to war. Over the past two decades, our workforce has made a significant impact toward eliminating what was once the largest-single stockpile of chemical warfare agent in the United States. It took more than 24,000 deliveries by On-Site Containers to safely transport more than 1,130,000 munitions containing 13,617 tons of chemical agent for destruction, and a diverse team of soldiers, civilians and contractors to complete this complex task. These men and women, along with the families and communities who supported them, have demonstrated unique adaptability, versatility and patriotism in meeting our international obligations. They are, quite simply, one of our Nation's greatest assets.

Our community, our state and our Nation are safer because of the accomplishments and partnerships of our workforce and local stakeholders. That character and American spirit will continue to enhance our Nation's strength well into the 21st century.

We are proud, honored and humbled by the legacy we leave behind. We have created a safer tomorrow, today.

Thank you.

Mark Pomeroy

COL. MARK POMEROY
DCD Commander

From left: TOCDF General Manager Gary McCloskey, TOCDF Site Project Manager Ted Ryba, and DCD Commander Col. Mark Pomeroy celebrate the delivery of the last mustard ton containers from storage to the disposal facility on May 10, 2011.

TED RYBA

We're done! I'd like to offer my congratulations and thanks for all the hard work that all of you have put into destroying the Nation's largest-single stockpile of chemical munitions. Over 1.13 million individual items, and over 13,600 tons of chemical agent destroyed! This is an amazing feat. You have clearly made our local community a safer place.

Randy Long, the former site project manager at the Pine Bluff Chemical Agent Disposal Facility coined the phrase "noble mission" when referring to the chemical weapons disposal program. I'd like to spend a little time reflecting on what that means. Most certainly, the destruction of the Deseret Chemical Depot's stockpile has made the local community a safer place. In these troubled times when any number of terrorist organizations are attempting to wreak havoc around the world in any manner possible, knowing that the stockpile formerly stored in Utah is gone is a reassuring thought. Looking at the broader picture, not only have you made the local community safer, your work here has made the world a safer place. You have certainly completed a "noble mission."

Once again, congratulations and thank you for your dedication to a mission that allowed completion of this task. You have truly completed a historical task.

THADDEUS A. RYBA, JR.
U.S. Army Site Project Manager,
Tooele Chemical Agent Disposal Facility

GARY McCLOSKEY

As the projects at Deseret Chemical Depot (DCD) come to completion, I want to thank each employee for their work in the safe elimination of the weapons stockpile at DCD. This team safely and successfully destroyed a stockpile that represented approximately 44 percent of the U.S. chemical weapons stockpile, or more than 1.1 million items, which equaled more than 13,600 tons of chemical agents. The stockpile we destroyed was more than three times larger than any of the other eight U.S. chemical weapons sites and twice as large as any other chemical weapons stock in the world. The Tooele Chemical Agent Disposal Facility (TOCDF) was the only U.S. site to process five different chemical agents and, as such, provided a proving ground for full-scale U.S. destruction technology—a truly impressive accomplishment.

This team will be remembered for other amazing accomplishments, some of which made history in the Chemical Demilitarization Program. This program set a world championship standard in safety by becoming the first and only demil site to achieve nearly 14 million hours worked without a lost workday injury and also by going more than 216 consecutive days without an OSHA-recordable injury (Dec. 13, 2010 to July 18, 2011). From the receipt of the first GB ton container in January 1997 to the processing of the last lewisite ton container, Team Deseret demonstrated what can be accomplished when a group of individuals works together and takes full ownership of the task at hand. Through the work of this outstanding team, Utah, the Nation and the world are a safer place.

Team Deseret stands today as an example of what amazing teamwork and people can accomplish when they commit fully and completely to not just getting the job done, but getting it done in a way that is conducive to the safety of workers, the public and the environment.

It has been an honor to work beside you all in completing this amazing mission. Your noble mission is now safely completed. For the project team and all those who supported it, I congratulate each of you on your role in successfully fulfilling our goal of safe, environmentally protective chemical agent munitions destruction at the TOCDF. Also, thank you to the families of all the men and women who worked in support of this goal.

GARY McCLOSKEY
URS Vice President and TOCDF General Manager

DOWN TO THE FINISH LINE: TOCDF & ATLIC

Separate projects wrap up destruction efforts

> "Although this new process [TOCDF cutter operations] was labor intensive...it proved to be a success."

As the chemical weapons destruction mission approached the home stretch, two separate projects brought operations to a close.

With the success of these combined projects, cutter operations at the Tooele Chemical Agent Disposal Facility (TOCDF) and the Area 10 Liquid Incinerator (ATLIC), workers safely completed operations ahead of the April 29, 2012, international treaty deadline.

TOCDF overpacked munitions campaign

The final stage of the mustard agent munitions campaign involved 333 overpacked 4.2-inch mortars and 155 millimeter projectiles. While most of the mortars were overpacked during agent sampling operations, the majority of the projectiles were overpacked because they had either leaked in the past or were so badly deteriorated that they could not be destroyed using TOCDF's normal disposal process.

Original plans called for a detonation chamber known as the DAVINCH (Detonation of Ammunition in a Vacuum Integrated Chamber) to destroy these rounds. However, the DAVINCH project experienced unexpected delays, falling behind schedule such that plans for its use were cancelled.

In an effort to stay on pace to meet the international treaty deadline, the TOCDF disposal process was fine-tuned and modified with reconfigured equipment such as specially-designed cutters to assist with the removal of explosive components.

The TOCDF focused on the safest and easiest munitions first—the overpacked 4.2-inch mustard mortars. Mortar cutter operations began on Sept. 29, 2011, and in less than three weeks the remaining stockpile of mortars was destroyed. Workers then prepared the plant for the 155mm projectiles.

"Because the mustard fill inside the projectiles had thickened and solidified, we expected to face additional processing challenges as we prepared for this campaign," explained Gary McCloskey, TOCDF general manager.

Projectile cutter operations began on Nov. 14, 2011, and workers quickly learned that the agent fill in some of the projectiles had become so hardened that the burster and burster well were stuck in place. It took creative problem-solving and careful planning to develop viable solutions to overcome this added obstacle.

A new torque adapter tool was added to the cutters to help loosen the burster well. However, if the agent was hardened too much, the burster well would break. In this case, the munition was inverted and another new tool—a washout system—was used to soften the agent so that the burster well and burster could both be safely removed.

"Although this new process was labor-intensive and took more time than was first expected, it proved to be a success," said TOCDF Site Project Manager Ted Ryba. "The last overpacked 155 millimeter projectile was destroyed on January 18, 2012, bringing the mustard agent destruction campaign to a close and marking the end of nearly 16 years of TOCDF operations."

ATLIC operations

The ATLIC facility was specifically designed to destroy Deseret Chemical Depot's (DCD) small stockpile of GA nerve and lewisite blister agents—the only such stockpile in the United States.

Located in DCD's storage area, also referred to as Area 10, the facility was similar in design to the liquid incinerators at the TOCDF, but smaller in scale.

Construction of the ATLIC began in March 2010, bringing major construction to DCD's storage area for the first time in 30 years. It took more than a year to construct and several more months of equipment testing and fine-tuning before the facility was ready for operations.

Chemical agent operations began at the ATLIC on Oct. 31, 2011, when workers drained the first GA nerve agent-filled ton container. The ATLIC was running parallel with the TOCDF as both facilities worked to destroyed DCD's remaining stockpile of chemical weapons. »

Top Left: In June 2010, crews poured the concrete foundation for the ATLIC Environmental Control System (ECS), which was attached to the backside of a storage igloo. The foundation required 33 trucks (or 330 cubic yards) of concrete in a single, continuous pour. The ECS housed the ATLIC and its pollution abatement system.

Middle Left: On Jan. 11, 2012, the last pallet of overpacked mustard rounds was delivered to the TOCDF for destruction.

Bottom Left: DCD's 333 overpacked mustard munitions had to be manually placed onto specially designed cutter machines. The entrants would leave the room while the cuts were performed. The entrants would then re-enter the room and attempt to remove the explosive components from the rounds. The explosives would be destroyed in the TOCDF's deactivation furnace while the rounds were sent through the metal parts furnace to destroy the mustard agent and decontaminate the metal casings.

Above: By April 2011, only a few finishing touches remained necessary as construction of the ATLIC was nearly complete and systemization activities were under way to prepare the facility for operations.

1942

FEBRUARY:
Maj. Gen. William N. Porter, Chemical Warfare Service chief, selects Rush Valley as the depot's location

JUNE:
Installation is officially named Deseret Chemical Warfare Depot

1943

JULY 11:
Dedication and flag raising ceremonies are conducted

1960s

U.S. Army determines that a new technological process is required to dispose of chemical munitions

1969

DCD realigns under the Tooele Army Depot and is renamed Tooele Army Depot South Area

1970

Concept developed for a transportable disposal facility

1974

Concept of transportable facility evolves into a permanent facility

DOWN TO THE FINISH LINE (CONT.)

(continued from previous)

The drained GA agent was sent directly to the ATLIC for destruction and in less than two weeks, workers safely completed destruction of the four GA nerve agent-filled ton containers—the last of the nerve agent stored at DCD.

Workers then prepared for the final ATLIC campaign—the destruction of 10 lewisite ton containers, which began on Dec. 19, 2011. Because lewisite is known to contain heavy metals, the drained agent was initially fed to a holding tank where it was sampled prior to being thermally destroyed in the ATLIC.

"Because of its chemical makeup, lewisite was the most challenging agent to destroy. Some thought it would be impossible," said McCloskey. "But, through the dedication and determination of our workforce, we made it possible."

Lewisite operations successfully concluded Jan. 21, 2012—signifying the end of chemical agent operations at DCD.

"Through the unified efforts of the DCD and TOCDF workforces, we can now celebrate a new chapter in the history of our community," declared Ryba. "DCD's chemical weapons stockpile has now been safely destroyed." •


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1. The last two lewisite ton containers were delivered to the Area 10 Liquid Incinerator (ATLIC) for destruction on Jan. 17, 2012.

2. Each ton container was loaded onto a rolling cart and placed into a glove box.

3. Once the glove boxes were sealed tight, workers used the attached gloves to safely drain the lewisite from the ton containers. The agent was held in a collection tank while it was sampled for metals content before it was destroyed in the ATLIC on Jan. 21, 2012.

DESERET CHEMICAL DEPOT

A rich history of safely storing America's largest cache of chemical weapons

For nearly 70 years, the Deseret Chemical Depot safely stored the Nation's largest-single chemical weapons stockpile, made up of more than one million munitions ranging in size from massive Weteye bombs to smaller landmines containing 27 million pounds of nerve agents VX, GB and GA and blister agents mustard and lewisite.

In its early days, the depot was known as the Deseret Chemical Warfare Depot (DCWD), and the U.S. Army said its Rush Valley, Utah, location—relatively dry, remote and easily accessible by rail—was ideal for storing chemical weapons.

There were only a handful of old homesteads on site when construction started in the summer of 1942. Construction was scheduled to take six months, but unforeseen obstacles caused frustrating, time-consuming delays. One problem was the poor quality of the site's gravel for concrete making it necessary to haul in thousands of cubic yards of better quality gravel over poor roads to the installation.

In addition, the war limited the availability of critical supplies and made it extremely difficult to get needed equipment such as trucks, cranes and steel products. The war also contributed to the lack of available manpower. Many of the area's able-bodied men were already serving in the military or working at nearby Tooele Ordnance Depot or Dugway Proving Ground. When men did come on board, most didn't stay long because of adverse living and working conditions. At one point the turnover rate was almost 400 percent; after a severe dust storm more than 200 men walked off the job in one day.

In a *Salt Lake Tribune* article dated Dec. 1, 1942, Lt. Col. F.M. Keller, the officer in charge of DCWD's construction, praised the men who remained on the project, stating, "Living and working in this isolated desert area, without entertainment or recreation, without proper housing facilities, and when the job first began, even without proper food and water, many of the men have seen the job through. Those men are heroes in the present war and as such are just as deserving of decoration as soldiers in the field."

Slightly more than four months after the start of construction, the first weapons, 306 ton containers filled with mustard agent, arrived at DCWD. The containers were transported by rail from the Utah General Depot in Ogden, approximately 100 miles away. When word came that the first shipment was on its way, an additional 200 yards of track had to be laid almost overnight so the rail cars could get to the designated storage yard. »

1974 — **1974–1978:** CAMDS is constructed at Tooele Army Depot South Area to research and develop disposal methods

1978 — **AUGUST 19:** HD mustard agent-filled projectiles are transferred to Tooele Army Depot South Area from Tooele Army Depot North Area

An additional 68 steel-arch storage igloos are constructed

1979 — **SEPTEMBER 10:** CAMDS begins operations to demonstrate various chemical weapons disposal technologies and techniques to dispose of the chemical weapons stockpile elements in a safe, environmentally protective and cost-effective manner

1981 — **AUGUST:** Tooele Army Depot South Area receives Weteye bombs from Rocky Mountain Arsenal

1984 — The Army unveils plan to incinerate chemical weapons at the Tooele Army Depot South Area and other depot locations

1989 — **JUNE 30:** State of Utah grants Army permission to build the Tooele Chemical Agent Disposal Facility (TOCDF)

SEPTEMBER 6: TOCDF contract awarded to EG&G Defense Materials Inc.

1993

SEPTEMBER 1989–JULY 31, 1993:
Construction of the TOCDF

JANUARY 13:
United States signs the Chemical Weapons Convention—an international treaty that prohibits the development, production, stockpiling, transfer and use of chemical weapons, calling for the elimination of the stockpiles by 2007

AUGUST 1:
TOCDF systemization commences

1996

JUNE 30, 1995–JUNE 6, 1996:
TOCDF surrogate trial burns conducted

JUNE 26:
State of Utah grants approval to start agent operations at the TOCDF

AUGUST 22:
TOCDF disposal operations begin with the destruction of the first GB nerve agent-filled M55 rocket

OCTOBER 2:
Depot name changes back to Deseret Chemical Depot

DESERET CHEMICAL DEPOT (CONT.)

(continued from previous)

Many more shipments followed, and by the end of January 1943, nearly 14 million pounds of chemical warfare material had been received at DCWD.

As the depot's stockpile grew, so did the town of Deseret. Located on depot, Deseret became a thriving community that DCWD workers and their families called home, complete with most everyday essentials such as a post office, nursery, chapel, school, health clinic and commissary.

"It was a great community to live in," shared Richard Trujillo, who lived on base as a child and later worked at the depot for much of his government career. Trujillo has a passion for preserving Deseret through old photos and by sharing stories. Back then, he said, Stark Road (the depot's main road) was known as First Avenue, the flag pole was made by employees from scrap metal, and the prisoner-of-war camp located on base was known as "Tin Town" because of the tin structures that housed World War II prisoners.

By the 1970s, the town of Deseret had been abandoned and the Nation's chemical weapons were beginning to show their age, making DCD's job to safely store its stockpile even more challenging. The weapons were stored in open storage yards, warehouses or in earth-covered, steel-reinforced cement structures known as "igloos." Maintenance largely involved routinely checking for leaks. In the early days, caged rabbits were strategically placed inside the warehouses and igloos, as well as around the perimeter of the storage yards to help determine if nerve agent-filled munitions were leaking. Detection of a mustard or lewisite leak consisted of visual inspections and smell. Both agents have strong odors that can be detected at very low concentrations; mustard has an odor similar to garlic, while lewisite's odor resembles geraniums.

Fortunately, as the weapons aged and further deteriorated (making them more prone to leak), detection technology greatly improved. Rabbits gave way to much more reliable monitoring equipment such as bubblers, glass tubes partially filled with chilled liquid which air was drawn through and analyzed for chemical agent contamination. Bubblers were replaced by DAAMS (Depot Area Air Monitoring System), glass tubes that were filled with a dry absorbent material and didn't require chilling. Next came flame photometric detectors that were placed in RTAPs (Real Time Analytical Platforms), making monitoring mobile, which was needed to go from igloo to igloo.

When a leak was detected, workers dressed in protective clothing, would identify and isolate the leaking rounds, place them into larger containers, known as overpacks, tightly seal the overpacks and decontaminate the area.

In addition to regularly dealing with leaking munitions, depot employees were sometimes required to replace deteriorated parts such as corroding plugs and valves in ton containers. Munitions also required moving, whether on site from one storage space to another, or to the Tooele Chemical Agent Disposal Facility (TOCDF) or the Area 10 Liquid Incinerator (ATLIC) for destruction. Prior to movement, a series of precautionary steps were always taken to protect the workers and the environment.

In the early 1970s, plans for the depot's stockpile shifted gears when our Nation's leaders feared that continued storage perhaps posed the greatest risk of all. The Army was directed to develop safe, environmentally responsible methods to dispose of the country's chemical agent-filled munitions. To accomplish such a hefty goal, the Army once again looked to Tooele County, building the Chemical Agent Munitions Disposal System (CAMDS) within the depot's boundaries. From 1979 until the early 1990s, CAMDS served as the primary test and development facility for the Nation's Chemical Weapons Elimination Program. First conceptualized as a transportable disposal facility, the design was extensively modified and expanded to a permanent plant.

The technologies successfully developed and tested at CAMDS provided a solid foundation to move forward with the plan to destroy America's chemical weapons at their different stockpile locations. While moving munitions was strongly supported during wartime, such movements became increasingly under fire as public sentiment changed. »

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1. The first chemical weapons—306 ton containers filled with mustard blister agent—arrived at the Deseret Chemical Warfare Depot in October 1942.

2. In 1955, the depot became the Deseret Depot Activity under Tooele Ordnance Depot. This is a photo of the depot's main gate.

3. As the depot's stockpile grew, so did the town of Deseret. The on-site community was self-sustaining, with necessities such as housing (pictured), a post office, chapel, school, health clinic and commissary. But as roads and automobiles improved, the town's population steadily declined until it was completely abandoned and ultimately torn down by the 1970s.

4. Depot workers routinely inspected and maintained ton containers filled with chemical agent in an outside storage area.

5. Deseret Chemical Warfare Depot's official inauguration ceremony was held July 11, 1943. Exactly 70 years later, on July 11, 2013, the now-called Deseret Chemical Depot will hold a deactivation ceremony and will be transferred back to Tooele Army Depot.

1997

APRIL 25:
The U.S. Senate ratifies the Chemical Weapons Convention and it enters into force on April 29, 1997

SEPTEMBER 16:
First 1,000,000 pounds of GB nerve agent safely destroyed

1998

JULY 26:
Complete destruction of GB MC-1 bombs

1999

JANUARY 5:
More than 5,000,000 pounds of GB nerve agent destroyed

2000

MAY 8:
Agent detected in TOCDF stack—operations suspended

SEPTEMBER 11:
10,000th On-Site Container delivers munitions to the facility

SEPTEMBER 19:
U.S. Army authorizes full restart of facility operations

OCTOBER 1:
Complete destruction of GB M56 warheads

DESERET CHEMICAL DEPOT (CONT.)

Because nerve agents are essentially odorless and deadly at very low levels, rabbits were used for monitoring. Caged rabbits were placed around stockpile perimeters and inside storage igloos to help detect leaks until the early 1980s.

Before workers would enter an igloo, the storage structure was monitored using a Real Time Analytical Platform (RTAP), a self-contained mobile monitoring and detection system. The RTAPs contain near real-time monitors that are capable of 24-hour operations and can detect extremely low levels of chemical agent vapors.

(continued from previous)

The most controversial move happened in August 1981 and involved the translocation of 888 Weteye bombs filled with GB nerve agent from Rocky Mountain Arsenal in Colorado to the depot (then called Tooele Army Depot South Area). Over the course of three weeks and dozens of flights, the bombs were airlifted to Dugway Proving Ground before being transported by a heavily guarded convoy over Look Out Pass.

"I had over 200 law enforcement officers from all around the state. I also had the Utah Highway Patrol at my disposal," remembered Walt Shubert, who was sheriff of Tooele County at the time of the move. "We planned for anything and everything that could possibly happen, from flat tires to armed conflict."

The move went smoothly; the Weteye bombs were safely delivered and eventually destroyed in 2001 at the TOCDF built to destroy the depot's aging stockpile of chemical weapons.

The TOCDF started destroying the depot's stockpile in August 1996. On Jan. 17, 2012, after storing chemical weapons since 1942, employees delivered DCD's last munition, a ton container of lewisite, to the ATLIC for destruction.

From its first delivery for storage to its last delivery for destruction, DCD's history has almost come full circle. On July 11, 2013, exactly 70 years after its inauguration ceremony, Deseret Chemical Depot's colors will be cased, symbolizing its deactivation. At that time, the 19,400-acre property will be turned over to Tooele Army Depot.

DCD's history is one that can be looked back on with great pride; enriched by dedicated employees who achieved what was once thought to be an impossible task.

"The employees of Deseret Chemical Depot—past and present—have done what they were asked to do," said DCD Commander Col. Mark Pomeroy. "They have done it safely; they have done it proudly; and they have stuck with it until the end." •

Vincent Baird, DCD employee, gave his fellow coworkers a thumb's up as they delivered the last munition, a ton container filled with lewisite, to the Area 10 Liquid Incinerator for destruction. "I've been waiting 25 years for this," said Baird. "I was working here when we delivered the first munition for destruction, and I wanted to be here when we delivered the last. I'm so glad I got to see this."

2001

AUGUST 14:
Complete destruction of GB M55 rockets

DECEMBER 25:
Complete destruction of GB Weteye bombs

2002

FEBRUARY 5:
Complete destruction of GB 105mm and 155mm projectiles

MARCH 15:
GB nerve agent campaign safely completed as the last GB ton container is processed

JULY 15:
Worker exposure (GB) incident at the TOCDF—operations halted

OCTOBER 9:
Safety Improvement Program completed following worker exposure incident

PAST DCD COMMANDERS

Congratulations to the past and present staff of Deseret Chemical Depot and the Tooele Chemical Agent Disposal Facility.

You are an incredibly talented and dedicated group of men and women. I was blessed with the opportunity to command the depot the year before and the year after TOCDF began agent operations. Simultaneously DCD became a separate installation with all the headaches that entailed. We all pulled together to meet the challenges and begin the safe destruction of the largest U.S. stockpile of chemical weapons. Now you have finished that work. I greatly admire your skill, perseverance and commitment to the safety of your fellow workers and the surrounding community. It was my honor to serve with you.

COL.(R) ROBERT COUGHLIN
Commander, Deseret Chemical Depot, 1995–1997

Sincere congratulations to the Deseret Chemical Depot team!

You stand proudly at the pinnacle of mission completion as the superb professionals that you are. You accomplished an extraordinarily difficult job in the safe manner that we came to routinely expect. During tough times, and there were some, you were always unbelievably cool, proficient and brave; you were always aware that your coworkers, community and Nation depended upon you to be consummate professionals.

In my short time with you, we safely destroyed up to 25 percent of the GB agent stored in the igloos. We refined processes and procedures that paid tremendous dividends in the long run. We achieved ISO 9000 status, a first for the chemical storage sites. In retrospect, these achievements may sound routine, but they reflect great effort and teamwork, and a collective passion for excellence.

The Chemical Weapons Convention inspections, the Chemical Surety Inspections, the Chemical Accident Incident Response Activities and the Chemical Stockpile Emergency Preparedness Program exercises are all history now. We share great "war" stories of those events that will always bring a smile and even a laugh or two. But in every respect, we resoundingly demonstrated to the world that we were the best at what we do.

I will always be extremely proud of the men and women of Area 10, the Security Force, disposal facility, CAMDS and those at headquarters. Susie and I were so proud to live among you and serve with you. She always speaks fondly of her students in the Tooele Alternative School. I tell people my nails left white scratch marks in the pavement when I was pulled away from DCD!

Be forever proud of what you accomplished. I offer my humblest thanks to have served as your commander.

COL.(R) JOSEPH E. HUBER
Commander, Deseret Chemical Depot, 1997–1999

We were unable to contact COL(R) Bruce Pate for a message.

COL.(R) BRUCE PATE
Commander, Deseret Chemical Depot, 1999–2001

PAST DCD COMMANDERS

To the Deseret Chemical Depot Team:

It is amazing to me to hear that you have completed your mission of destroying the chemical weapons that have been entrusted to you by our Nation. President Ronald Reagan in his farewell speech to the General Counsel of the United Nations made the statement that, "It is incumbent upon all civilized Nations to ban, once and for all, and on a verifiable and global basis, the use of chemical and gas warfare." A critical aspect of this vision was the safeguarding and destruction of the world's stockpile of these weapons. Deseret, having the largest stockpile, accomplished this mission with diligence, integrity and dedication. You have been a part of history—changing the world for the better!

My family and I heartily congratulate you and want to express our utmost pride in your accomplishments.

On a personal note, I want to thank all of you who supported my family and me during my three years as your commander. It was a challenging period for all of us as our time together was marked by the September 11th attacks. All of you responded to our Nation's call to make the depot more secure and safe with professionalism and a patriotic fervor. We are filled with nothing but very fond memories. Memories such as the wedding of our oldest daughter, Heather, to a Utah National Guard soldier deployed to guard the depot. It was during this wedding and your response to it that we realized that you had accepted us like family. For that, we are grateful.

Again congratulations, best regards and with all my respect,

COL.(R) PETER C. COOPER
Commander, Deseret Chemical Depot, 2001–2004

To all past and current employees of Deseret Chemical Depot and the Tooele Chemical Agent Disposal Facility, I extend a sincere and genuine "Thank You" and "Job Well Done!" What you have collectively accomplished is truly remarkable and historic. Your achievement reflects greatly upon your professionalism and dedication to the common good for our Nation, our Army, and the people of the great state of Utah. My wife Dianne, our daughters and I have the fondest memories of our time spent at DCD, Tooele and Utah. We were greatly blessed in meeting many wonderful people and we wish everyone in the DCD and TOCDF family the very best as you move forward to new challenges and opportunities in your lives.

COL.(R) RAY VAN PELT
Commander, Deseret Chemical Depot, 2004–2006

Your incredible drive to complete the storage and destruction mission safely and ahead of schedule is truly remarkable. The mission could not have been accomplished without a professional and dedicated workforce and a supportive community. This support was not immediately recognized but fostered by continuously safe and environmentally compliant operations. Although I was a part of this great endeavor for a short period, I will always have fond memories of the depot workforce and your "can do" attitude, Utah, and the lasting friendships I have made. Be proud knowing that you made history and a positive impact on our Nation for a safer tomorrow.

COL. FREDERICK PELLISSIER
Commander, Deseret Chemical Depot, 2006–2008

It is with extreme pride and utmost appreciation that I offer this note of congratulations on a job well done! You have made a name for yourselves, not only locally and nationally, but internationally based on the consummate professionalism and dedicated commitment to excellence with which you approached your mission 24 hours a day, seven days a week, 365 days a year for many, many years.

Many of the Deseret teammates, past and present, have rendered tireless service towards ridding our great Nation of the chemical stockpile for much of their adult lives. It is because of this level of commitment that you have finally reached mission completion. And now a grateful Nation thanks you and your families for your many sacrifices and willingness, without reservation, to place yourselves in harm's way to destroy the chemical stockpile in the safest manner possible, while protecting the surrounding communities and the environment.

I am extremely proud and extraordinarily humbled to have served as a member of the Deseret Team, a cherished memory I will hold dearly for the rest of my life. Deidre and I reflect often about time spent with the entire Deseret family and the local Tooele community and remember you with great fondness, tremendous respect and admiration. This is your time to bask in the international spotlight and enjoy this moment that was a long time coming but has finally arrived. You are truly deserving of the many accolades that come with a monumental job well done! We wish each and every teammate great success in all future endeavors and pray for your continued health and strength. May God bless you and may God bless America!

"ONE TEAM, ONE FIGHT!"

COL. GERALD L. GLADNEY
Commander, Deseret Chemical Depot, 2008–2010

TOOELE CHEMICAL AGENT DISPOSAL FACILITY

The first chemical demilitarization facility in the continental U.S., the TOCDF destroyed the largest percentage of the country's chemical stockpile.

Once it was decided that the Nation's chemical weapons would be destroyed at their current stockpile locations, plans were made to construct and operate the necessary destruction facilities at each site.

The Tooele Chemical Agent Disposal Facility (TOCDF) was the first U.S. Army chemical demilitarization site within the continental United States. Its predecessor, the Johnston Atoll Chemical Agent Disposal System (JACADS), located in the South Pacific, had not quite started disposal operations when the Army awarded a contract to EG&G for the construction, operation and closure of the TOCDF in September 1989.

Construction of the TOCDF started immediately and took nearly four years to complete. Richard Jolley, who was transferred from JACADS to the TOCDF to lead the design and construction of the facility for EG&G still marvels at the plant's design. "The concept for the plant was a leap forward in technology at the time," said Jolley.

The TOCDF was a massive, well-equipped facility with remote-controlled machines to disassemble the chemical rounds and four furnaces to destroy the agent, decontaminate the metal munition casings, and safely dispose of explosives. In addition, the TOCDF was equipped with state-of-the-art monitoring, ventilation and pollution abatement systems to ensure the safety of its workers and the environment.

The hub of the TOCDF was the control room, where operators could monitor and control the automated equipment used during the demil process. Additional features included a Container Handling Building (CHB) where the munitions were delivered and temporarily stored in On-Site Containers (ONCs) before destruction. The CHB (pronounced "chub") included a conveyor system capable of rearranging up to 48 ONCs and industrial-size elevators. The TOCDF site also included several supporting structures such as a fully equipped medical clinic and a treaty compliance building, which housed international inspectors that were on site around the clock to verify the destruction of Deseret Chemical Depot's (DCD) stockpile.

Construction of the TOCDF was completed July 1993, and was followed by another three years of testing and systemizing the facility's equipment and disposal processes.

Operations at the TOCDF began Aug. 22, 1996, with the destruction of the first nerve agent-filled M55 rocket. By Sept. 16, 1997, one million pounds of GB nerve agent had been destroyed. The GB nerve agent campaign was safely completed March 15, 2002, and on March 28, 2003, VX nerve agent disposal operations started.

By Sept. 12, 2004, TOCDF workers had destroyed half of DCD's entire stockpile and less than one year later, on June 3, 2005, the VX nerve agent campaign was completed, tremendously reducing the risk to nearby communities.

TOCDF's last agent campaign—mustard agent—totaled more than 11 million pounds of agent and was the largest chemical agent destruction campaign in the United States. It also proved to be TOCDF's most challenging disposal campaign. »

Construction of the TOCDF started in September 1989 and continued for nearly four years. The facility then went through an extensive systemization over the next three years before disposal operations started in August 1996. The TOCDF is the largest facility of its kind in the world and required more than 800 miles of electrical wire, over 16,000 instruments and valves, and nearly 6,000 tons of steel to construct.

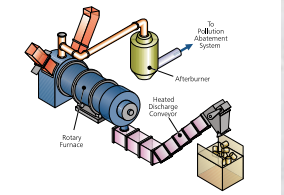
Tooele Chemical Agent Disposal Facility
Disposal process

Chemical munitions are transported from the storage igloos to the TOCDF in specially designed On-Site Containers (ONCs). These containers have been designed to protect the munitions against external forces.

Trucks are unloaded and the ONCs enter the TOCDF munition demilitarization building on a conveyor system.

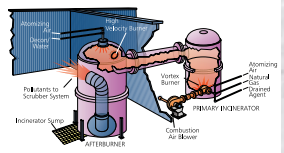
The plant is equipped with a cascading ventilation system that ensures chemical vapors will remain within engineering controls.

In the explosive containment room (equipped with 28-inch reinforced concrete walls), explosive components are removed from the munition bodies. Explosive components are cut into pieces and fed into the deactivation furnace system.

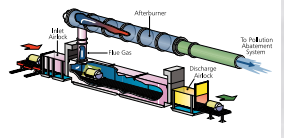


The deactivation furnace system destroys the explosive components using natural gas at a temperature of 1100°F. Residue is collected and disposed of at a hazardous waste facility.

In the munitions processing bay, liquid agent is drained from the munition bodies.



Drained chemical agent is destroyed in a liquid incinerator using natural gas at a temperature of 2700°F. Chemical agent destruction occurs at 700°F.



Empty munition casings are thermally decontaminated in the metal parts furnace at a temperature between 1400°F and 1600°F. The decontaminated metal is recycled by smelting or disposed of at a hazardous waste landfill.

"There have been a variety of challenges to overcome associated with the aging stockpile. In all cases, our workers have been up to the challenge."

(continued from previous)

Before TOCDF's mustard disposal operations got under way, workers started sampling the contents of every mustard-filled ton container—6,399 total—and segregated each one based on its mercury content and amount of solid and semi-solid sediment, known as heel. Two storage igloos were modified and equipped with glove boxes to protect the workers as they released any built up hydrogen pressure, sampled the mustard agent, and measured the heel depth. The sampling efforts were completed July 29, 2008, more than 14 months ahead of schedule. Sampling results confirmed that approximately 15 percent of the stockpile was contaminated with elevated levels of mercury and more than half had excessive heel.

"The information from the sampling project helped us complete our mission of safely eliminating the entire DCD chemical weapons stockpile," said Ted Ryba, TOCDF site project manager.

As a result of the sampling, two new systems had to be added to the TOCDF. To effectively deal with the heel in the ton containers, TOCDF workers designed and built a Heel Transfer System (HTS). The HTS used a high pressure, warm water spray to break down the heel, allowing a portion of the resulting liquid to be pumped from the original ton container into an empty one before both were processed through the plant's metal parts furnace.

For those munitions contaminated with elevated amounts of mercury, a new sulfur-impregnated filtration system was added to the plant's original

pollution abatement system. The installation of three new massive filters was more than enough to safely and effectively remove mercury from exhaust gases.

Another challenge during the mustard campaign was the overpacked munitions. The overpacked munitions were the last to be processed through the TOCDF and consisted of 135 4.2-inch mortars and 198 155 millimeter projectiles. These rounds could not be destroyed using TOCDF's normal disposal process and, because they were so badly deteriorated in many cases, required the use of specially-designed equipment such as a rotary cutter and a projectile washout system.

"During TOCDF operations, there have been a variety of challenges to overcome associated with the aging stockpile. In all cases, our workers have been up to the challenge. Equipment modifications and process changes ensured continued safe processing at the TOCDF," said Ryba.

On Jan. 18, 2012, the last remaining overpacked munitions were destroyed, marking the end of disposal operations at the TOCDF after nearly 16 years.

"We should be collectively proud of having destroyed the largest chemical stockpile on earth in a safe and environmentally responsible manner," said TOCDF General Manager Gary McCloskey. "We leave this program with a legacy of excellence."

The TOCDF accomplished an amazing feat—destroying a stockpile that was almost four times larger than any of the other eight U.S. chemical weapons demilitarization sites and twice as large as any other chemical weapons stockpiles in the world. The TOCDF was the only U.S. site to process five different chemical agents and had the most diverse stockpile with 11 different types of munitions. As such, the TOCDF provided a proving ground for full-scale U.S. destruction technology. Even more impressive is that these accomplishments were completed with an Occupational Safety and Health Administration (OSHA) recordable incident rate of 0.32 and a string of nearly 14 million man-hours worked without a lost workday injury.

"Since our historical accomplishment, I have received many congratulatory comments on the efforts of our workers and team. I want to commend each of you for your efforts in completing the sometimes seemingly impossible mission of stockpile destruction with honor and pride," said McCloskey.

What's next for the TOCDF? The facility will continue to help with the proper disposal of secondary waste while undergoing closure activities. Closure-related work includes the decontamination, dismantling and disposal of the demilitarization facility and its equipment. The goal is to return the site to its natural state by fall 2014. •

An important feature of the TOCDF was the container handling building *(top photo)* where the munitions were delivered and temporarily stored in On-Site Containers before destruction. The hub of the TOCDF was the control room *(bottom photo)*, where operators monitored and controlled the equipment used during the demilitarization process.

2003

MARCH 28:
VX nerve agent campaign begins with destruction of first VX M55 Rocket

NOVEMBER 9:
Complete destruction of VX M56 warheads

NOVEMBER 17:
Complete destruction of VX M55 rockets

2004

APRIL 24:
Complete destruction of VX ton containers

AUGUST 16:
Complete destruction of VX 155mm projectiles

SEPTEMBER 12:
Workers reach 50 percent destruction of the total DCD chemical agent stockpile

DECEMBER 31:
Complete destruction of VX spray tanks

2005

JUNE 3:
VX nerve agent campaign safely completed as the last VX landmine is processed

OCTOBER 2:
TOCDF workers complete processing of hydrolysate created during CAMDS VX neutralization research and development projects

2006

JUNE 6:
Sampling project begins in DCD's storage area (Area 10) to analyze and characterize the contents in the mustard agent-filled ton containers

AUGUST 18:
Mustard blister agent disposal operations begin with destruction of the first ton container

NOVEMBER 14:
CAMDS closure activities begin under control of the Tennessee Valley Authority

2007

MARCH:
Autoclave system chosen to augment secondary waste disposal operations

CAMDS MILESTONES
& Contributions

- CAMDS construction 1974–1978
- Disposal operations began September 1979
- Neutralization testing of agent in rockets and projectiles
- Testing and development of reverse assembly, demilitarization, rocket shear, projectile/mortar disassembly and multi-purpose demil machines
- Testing and development of bulk drain station and explosive containment chamber
- Testing and development of liquid incinerator and metal parts furnace
- Testing and development of agent quantification system
- Deep bed carbon filter and mustard thaw container testing
- Rocket separation
- Cryofracture and VX water neutralization testing and development
- Demil protective ensemble technology developed
- Removed explosive components in 40,000 4.2-inch mustard mortars
- Supported the development of Simulation Equipment Test Hardware (SETH)
- Development of carbon tray filling and certification
- Development and support for chemical agent monitoring
- Alternative technologies tested for the ACWA program, including: energetic rotary hydrolyser, projectile and mortar washout systems, continuous steam treater, VX and mustard hydrolysate
- Non-stockpile empty ton container processing
- Sampling of 155mm projectiles' explosive components
- Study of neutralization processes for full-scale destruction of lewisite
- Secondary waste segregation and treatment

CHEMICAL AGENT MUNITIONS DISPOSAL SYSTEM

A modern-day pioneer in chemical weapons destruction

pi·o·neer adj; (1. to be the first to open or prepare (2. To take part in the beginnings of; initiate (3. to lead the way for (a group); to guide.

The Chemical Agent Munitions Disposal System (CAMDS) is undoubtedly a pioneer, having led the way to where we are today: 90 percent of the Nation's chemical weapons stockpile safely destroyed.

It is a journey that started in the early 1970s, when the U.S. Army initiated plans for a transportable facility to destroy M55 GB-filled rockets. The project soon expanded to a permanent facility capable of destroying all munition types and chemical agents GB, GA, VX, mustard and lewisite stored at the then-called Tooele Army Depot South Area.

CAMDS was a "pilot plant"—a plant that was designed to develop and test chemical weapons destruction methods. However, its mission encompassed all aspects of chemical demilitarization, from the handling of chemical weapons, to disassembly and disposal, to properly managing the remaining waste. Techniques and equipment were tested over and over again. Adjustments would be made and more testing would follow. The CAMDS workforce was never satisfied with "good enough."

One of CAMDS' many successes was the rocket saw machine, a temperamental device equipped with six blades that often broke, requiring time-consuming maintenance by workers that had to be dressed in full protective equipment.

"That machine was a nightmare," recalled Doug Peirce, who worked at CAMDS from its start.

CAMDS workers went back to the drawing board; switching the machine's six blades for one guillotine-like blade, transforming the rocket *saw* machine into the rocket *shear* machine. The switch was a huge success—requiring little maintenance and saving both time and money.

"The rocket shear machine is an excellent example of how CAMDS did its job," said Peirce. "Its job was to efficiently develop processes that would work well in a large-scale chemical demilitarization facility."

> The CAMDS workforce was never satisfied with "good enough."

Incineration became the preferred method of destruction for chemical agents at CAMDS, and three separate incinerators were utilized. The Deactivation Furnace System was designed and built to handle the munitions' explosives, the Liquid Incinerator destroyed the chemical agent, and the Metal Parts Furnace (MPF) thermally treated the metal munition casings. Over the years, CAMDS workers made significant modifications to the furnaces and their pollution abatement systems, which were later incorporated at the Army's large-scale incinerators.

In addition to incineration, CAMDS tested several alternative methods to destroy chemical agent, including neutralization, cryofracture and biotreatment. CAMDS' final chemical agent project was a mustard trial burn in the MPF which concluded Jan. 10, 2005.

During disposal operations, from September 1979 to January 2005, CAMDS workers destroyed more than 363,000 pounds of chemical agents and more than 40,000 munitions.

Acting Director, U.S. Army Chemical Materials Agency, Don Barclay, started his career within the Army's chemical demilitarization program as the risk manager for CAMDS and later served as the director. During CAMDS' 30-year milestone event, Barclay attributed CAMDS' success to its workforce.

"It didn't matter what the barrier was or the challenge, you took it on. You believed you could do anything and you believed in yourselves. You knew there would be challenges, but you were willing to stand up and take those challenges on for the Army," he said.

With demolition underway and expected to be completed by summer 2012, CAMDS will soon be gone but never forgotten. Its contributions as a chem demil pioneer will forever remain the foundation of the United States' Chemical Stockpile Elimination Program. •

Workers deliver a ton container to the Unpack Area at the Chemical Agent Munitions Disposal System.

2008

APRIL:
Construction commences on the new mercury filter system, officially known as the Pollution Abatement System Filtration System

JULY 29:
Mustard ton container sampling project successfully completed—14 months earlier than scheduled

AUGUST:
Baseline processing of mustard 155mm projectiles complete

OCTOBER 3:
TOCDF begins using the Heel Transfer System, designed and built by TOCDF workers, to help remove solidified mustard agent in ton containers

2009

MARCH:
GA and lewisite disposal technology selected: a small-scale liquid incinerator to be constructed in DCD's storage area—Area 10

APRIL 1:
Processing of 4.2-inch mustard mortars begins, but is quickly halted due to higher than anticipated levels of mercury in the furnace exhaust

APRIL 1:
Control of CAMDS closure activities transitions from Tennessee Valley Authority to URS (formally EG&G Defense Materials, Inc.)

UNIQUELY TEAM DESERET

A look at some of the accomplishments, people and components that were distinctly ours

Deseret Chemical Depot

When construction of Deseret Chemical Depot (DCD) started in 1942, it was solely designed for storing, shipping and receiving chemical warefare material. At the time, it was the only facility of its kind in the Nation.

Chemical Agent Munitions Disposal System

The transformation of DCD from a weapons stockpile to a weapons destruction facility started with the Chemical Agent Munitions Disposal System (CAMDS). Located within the depot's boundaries, CAMDS was a pilot plant designed to test chemical demilitarization methods—and successfully did so for more than 20 years.

Tooele Chemical Agent Disposal Facility

The Tooele Chemical Agent Disposal Facility (TOCDF) is the largest facility of its kind in the world and took nearly four years to build. After three years of systemization, the TOCDF destroyed its first munition on August 22, 1996.

On-Site Containers

DCD was the only site to use On-Site Containers (ONCs) to transport its chemical weapons. Used in more than 24,000 safe deliveries, the ONC featured 17 bolts around its door that had to be tightened and untightened by hand.

Simulation Equipment Test Hardware Program

For years, the Simulation Equipment Test Hardware (SETH) Program was located at DCD and was used to train personnel in the design, setup and testing of demil equipment and facilities. Much of the SETH equipment is now in Pueblo, Colo., and Blue Grass, Ky., to be used by the Assembled Chemical Weapons Alternatives chem demil sites.

Innovative Solutions

Portable Isotopic Neutron Spectrometry

This technology countered the need to open ton containers for sampling, and instead used neutrons to detect levels of mercury in a set of GB ton containers at DCD. The ton containers identified to have elevated amounts of mercury were set aside for special processing that included breaking down the mercury-laden sediment with hydrochloric acid, precipitating the solution to draw out the mercury, and properly disposing of it. The GB agent was destroyed in the TOCDF's liquid incinerators, while the ton containers were processed through the metal parts furnace.

Mini Mustard Ton Container Sampling Project

After being discovered in some of the GB-filled ton containers, workers feared mercury was present in other munitions as well. The unknown prompted the sampling of 100 mustard-filled ton containers. The results enabled workers to segregate the ton containers into two groups: 1) those with little or no mercury and could be processed right away using baseline disposal methods and 2) those with elevated amounts of mercury that would have to wait for additional filtration measures to be put into place before their destruction.

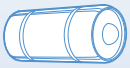
Major Mustard Ton Container Sampling Project

After sampling 100 mustard-filled ton containers, workers decided it would be best to sample all 6,399. The work was completed more than a year ahead of schedule inside two specially equipped storage igloos with controlled ventilation and filtration. Specially-designed glove boxes allowed workers to safely release any built-up hydrogen gas pressure inside the ton container, draw an agent sample, and measure the heel (solid or semi-solid sludgy residue). The sampling project provided much needed information and led to the addition of two new projects: the heel transfer system and a carbon filtration system. »

TEAM DESERET destroyed the single-largest, most diverse stockpile with **1,138,772** items, totaling **13,617** agent tons*

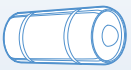
30,001
GB M55 Rockets and M-56 Rocket Warheads

6,399
Mustard Ton Containers



89,141
GB 155mm projectiles

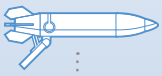
10
Lewisite Ton Containers (only U.S. stockpile)



4,463
GB MC-1 Bombs

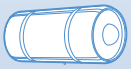
888
GB Weteye Bombs

862
VX spray Tanks

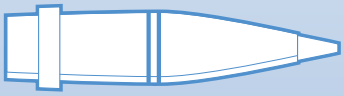


1
VX 8 inch projectile

638
VX Ton Containers



798,703
GB 105mm projectiles

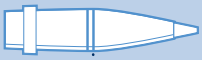


63,409
Mustard 4.2 inch mortars

151
Mustard 4.2 inch mortars

7,822
VX M55 Rockets and M-56 Rocket Warheads

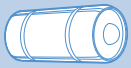
53,216
VX 155mm projectiles



5,709
GB Ton Containers

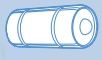
22,690
VX landmines

2
VX Ton Containers



12
Mustard 155mm projectiles

4
GA Ton Containers



54,651
H 155mm projectiles

Destroyed at the Tooele Chemical Agent Disposal Facility (TOCDF)

Destroyed at the Chemical Agent Munitions Disposal System (CAMDS)

Destroyed at the Area 10 Liquid Incinerator (ATLIC)

*since declassification of U.S. chemical weapons stockpile

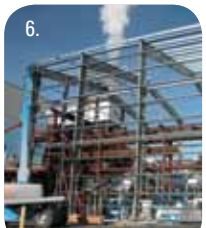

1.

2.


3.


4.


5.


6.


7.

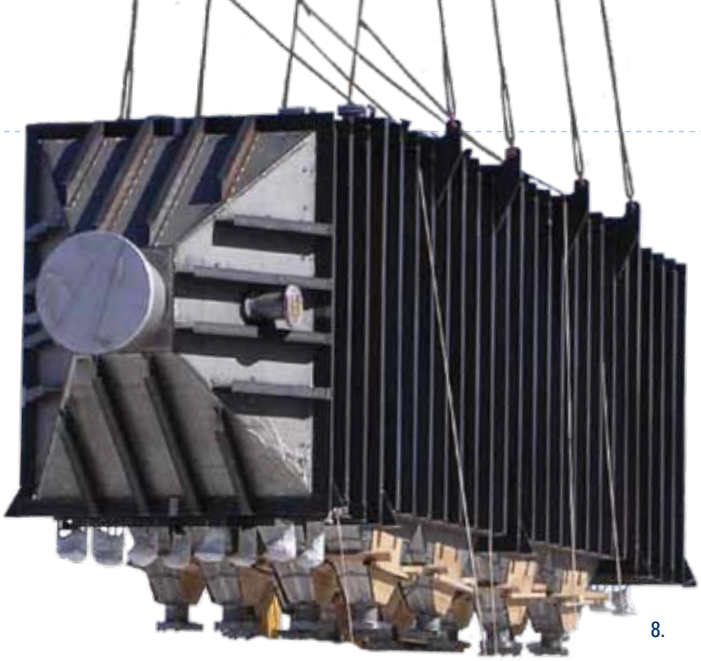
1. DCD was the only site to use the On-Site Containers that required the 17 bolts that encircled the door to be tightened and untightened by hand.

2. These 105mm projectile models are part of the Simulation Equipment Test Hardware (SETH) Program. The SETH program had been located at DCD for years, but now much of the equipment has been sent to chem demil sites in Colorado and Kentucky.

3. TOCDF workers sampled all 6,399 mustard ton containers in record time. The project, finished 14 months ahead of schedule, revealed the amount of heel (sludge-like material) and mercury inside each ton container. The findings were key to TOCDF's destruction operations forging safely forward and helped other chem demil sites facing similar issues.

4. An autoclave, capable of holding up to 16 50-gallon drums, helps with secondary waste disposal efforts. The autoclave uses heat and high pressure steam to decrease agent contamination so that the waste can be shipped off site for disposal.

5–8 (opposite page). Massive sulfur-impregnated carbon filters were added to the facility's original pollution abatement system for the TOCDF's metal parts furnace and both of its liquid incinerators. The filters were needed to capture the mercury in contaminated mustard munitions.



8.

(continued from previous)

Heel Transfer System

This TOCDF-designed and built system was used on approximately 3,000 mustard TCs with large, heavy heels. Ton containers were punched to access the agent and the agent was drained to a collection tank prior to disposal in the liquid incinerator. Once the agent was removed from the ton container, the HTS used a warm-water, high-pressure spray to break down the heel. The resulting rinsate was transferred to an empty ton container and both were processed through the metal parts furnace, destroying any remaining chemical agent and thermally decontaminating the metal containers.

Pollution Abatement System (PAS) Filtration System (PFS)

When massive sulfur-impregnated carbon filter units were added to the TOCDF's PAS, naysayers said it wouldn't be enough to capture elevated amounts of mercury found in some of the mustard agent-filled munitions. Those naysayers were quickly proven wrong, when the new filters, each measuring nearly 60 feet long and holding more than 56,000 pounds of sulfur-impregnated carbon, did the job safely and effectively.

Mercury Exhaust Gas Monitoring

When the Appendix K monitoring method developed by the Environmental Protection Agency was utilized at the TOCDF, it was the first time ever the method had been used somewhere other than a coal-fired power plant. At the TOCDF, the Appendix K monitored stack emissions for mercury, allowing continuous monitoring and confirming compliance with regulations.

Area 10 Liquid Incinerator

This incinerator and its pollution abatement system (PAS) were designed specifically to control metal emissions. DCD's stockpile of 10 lewisite ton containers was approximately 36 percent arsenic by weight and its mercury concentration ranged from approximately 70 to more than 500 parts per million. The PAS components and the order in which the exhaust gases passed through them were unique to this incinerator, controlling the emission of metals well below regulated standards.

Area 10 Secondary Waste Operations

A large autoclave and various support systems were installed in two Area 10 igloos to help properly treat and dispose of more than 2 million pounds of secondary waste in more than 15,000 containers. The operations started in 2009 and include a Drum Ventilation System, where the drums of waste are opened, sorted and monitored. Depending on the level of agent contamination, the drums are either shipped off site for disposal or treated in the autoclave, which uses heat and high-pressure steam to reduce agent contamination. In addition to the autoclave, secondary waste is processed through the TOCDF's metal parts furnace. Secondary waste disposal operations are expected to be completed by 2013, months ahead of the original schedule. »

2009

MAY 4:
TOCDF system contractor, URS and its subcontractor Battelle, are both formally awarded Star status, the highest award possible under OSHA's Voluntary Protection Program

JULY – AUGUST:
GA nerve and lewisite blister agent sampling begins to analyze and characterize contents of ton containers

OCTOBER 14:
TOCDF begins operating new Pollution Abatement System Filtration System, designed with sulfur-impregnated carbon filters to capture mercury contained in some of the mustard agent munitions

2010

JANUARY 12:
TOCDF resumes processing 4.2-inch mustard mortars

FEBRUARY–MARCH:
X-ray project begins on more than 300 mustard overpacked projectiles and mortars

MARCH:
Construction of the Area 10 Liquid Incinerator (ATLIC) begins in DCD's storage area

MAY 28:
Baseline processing of mustard 4.2-inch mortars complete

2011

MAY:
ATLIC construction complete

MAY 11:
More than 24,000 safe ONC deliveries of munitions to the facility complete

MAY 16:
Complete destruction of mustard ton containers

AUGUST:
ATLIC systemization complete

AUGUST 19:
CAMDS Unventilated Monitoring Tests completed—clearing its contaminated buildings for demolition

SEPTEMBER 29:
TOCDF begins cutting operations to destroy DCD's remaining overpacked mustard 4.2-inch mortars and 155mm projectiles

OCTOBER 15:
Complete destruction of overpacked 4.2-inch mustard mortars

UNIQUELY OURS (CONT.)

"IronMan Dan" Aldrich is congratulated by TOCDF General Manager Gary McCloskey on his 800th toxic area entry, in September 2004. Aldrich ended up completing more than 1,400 DPE (Demilitarization Protective Ensemble) entries during destruction operations at the TOCDF.

Two additional flags, each celebrating remarkable achievements, fly alongside Old Glory at the Tooele Chemical Agent Disposal Facility (TOCDF). The green flag commemorates TOCDF's independent certification of its Environmental Management System. TOCDF was the first chemical demilitarization site to achieve ISO 14001 certification. The other flag celebrates TOCDF's Star status, the highest possible achievement given by the Occupational Safety and Health Administration's Voluntary Protection Program, for TOCDF's strong safety culture.

(continued from previous)

Safety in Record Numbers

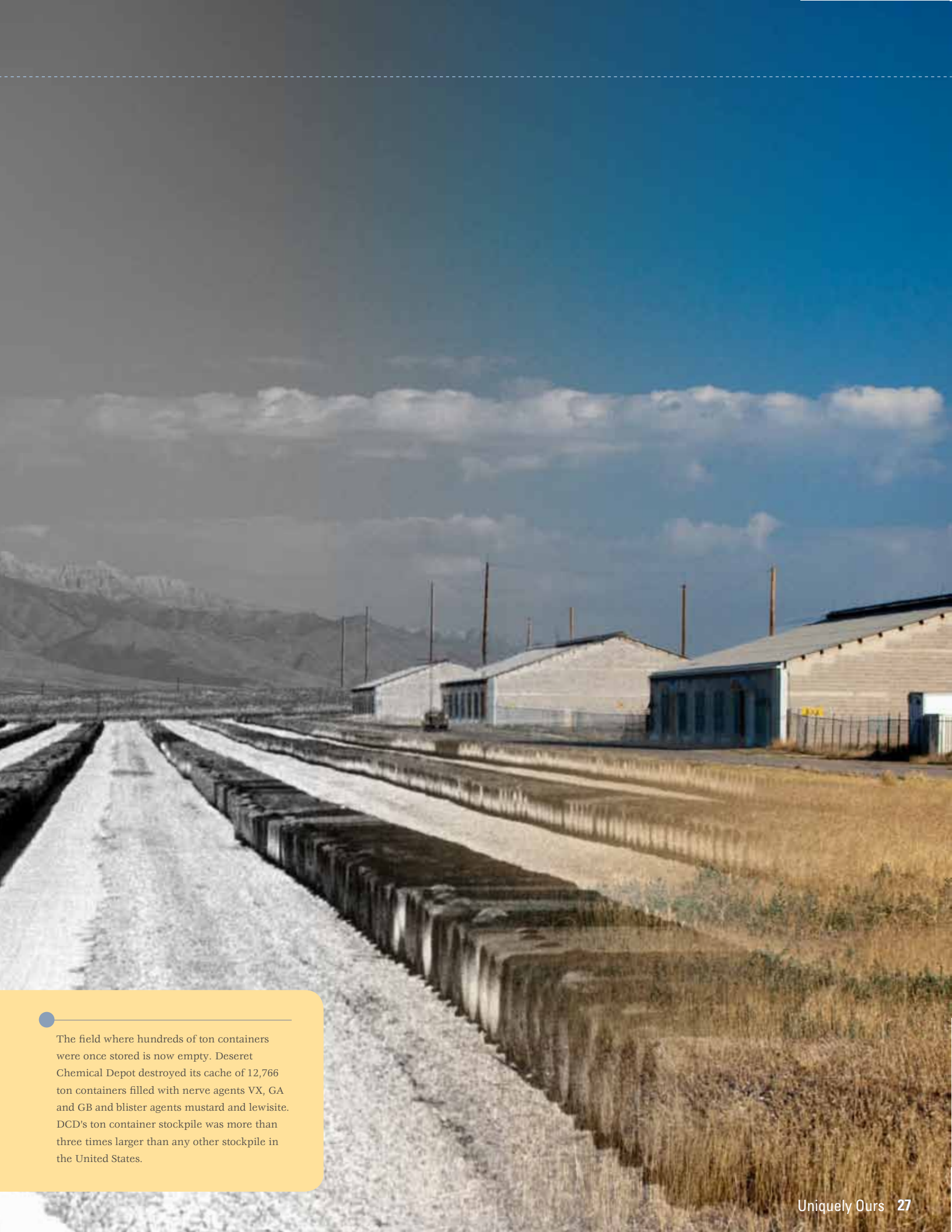
Team Deseret set new records when it came to working safely. At the time of stockpile elimination, TOCDF workers had reached nearly 14 million man-hours worked without a lost workday injury, while DCD employees had reached 1.1 million consecutive hours. Both totals set new records for Team Deseret and the U.S. Army Chemical Materials Agency.

IronMan Dan

TOCDF maintenance technician "IronMan Dan" Aldrich completed more than 1,400 DPE (Demilitarization Protective Ensemble) entries during destruction operations at the TOCDF. His CMA-wide record outnumbered anyone else by at least 500 entries. Aldrich said he never expected to complete that many, making his first entry on Sept. 7, 1996, but he admitted his goal was to lead the TOCDF. "I pushed it to get that many; I volunteered all the time," Aldrich said.

Gary McCloskey

TOCDF General Manager Gary McCloskey has directed the destruction of more chemical weapons than any other American. He served as the site project manager of the Johnston Atoll Chemical Agent Disposal System, the United States' first full-scale chemical weapons incineration facility, for 13 years. He was then appointed as TOCDF's general manager in May 2004. •



The field where hundreds of ton containers were once stored is now empty. Deseret Chemical Depot destroyed its cache of 12,766 ton containers filled with nerve agents VX, GA and GB and blister agents mustard and lewisite. DCD's ton container stockpile was more than three times larger than any other stockpile in the United States.

2011

OCTOBER 31:
ATLIC operations begin with destruction of the first GA ton container

NOVEMBER 11:
Complete destruction of GA nerve agent ton containers

DECEMBER 19:
ATLIC begins lewisite blister agent operations

2012

JANUARY 18:
TOCDF completes destruction of overpacked 155mm mustard projectiles, marking the end of nearly 16 years of operations

JANUARY 21:
ATLIC completes destruction of lewisite blister agent ton containers—representing complete elimination of the DCD stockpile

FEBRUARY 14:
CAMDS demolition begins

APRIL 26:
DCD Stockpile Elimination Ceremony

APRIL 29:
Chemical Weapons Convention date for completion of agent destruction

COMMUNITY PARTNERSHIPS

The successful elimination of the chemical stockpile has only been possible due to the strong federal, state and local partnerships developed and sustained throughout the life of the project.

And with the support of the Chemical Stockpile Emergency Preparedness Program (CSEPP) a legacy of enhanced emergency management capabilities and all-hazards preparedness will endure in the local community.

Better Prepared Because of CSEPP

Thanks to the CSEPP, communities surrounding the Deseret Chemical Depot (DCD) have been well informed and prepared to respond to emergencies.

Since the CSEPP began in 1989, state and local emergency management officials have teamed with the Army and FEMA to protect the public from the unlikely event of a chemical agent accident.

The Deseret CSEPP team consisted of the Department of the Army, Federal Emergency Management Agency (FEMA), Utah Division of Emergency Management, Tooele County Emergency Management (TCEM), Utah County Emergency Management, Utah Department of Health, Utah National Guard, Salt Lake Unified Fire Authority and the American Red Cross. Because safety has always been the top priority, DCD worked with FEMA and our local communities to upgrade emergency response capabilities.

CSEPP has funded millions of dollars to the state of Utah and the counties around the depot to boost emergency response and emergency alert systems. The Deseret CSEPP team has fulfilled its obligation to ensure public safety with the completion of the depot's stockpile and has better prepared the surrounding communities to respond in all-hazards emergencies.

Hospitals, fire departments, law enforcement, emergency management agencies, American Red Cross and other non-governmental agencies have been trained in a variety of emergency management functions. They have also been provided with equipment, including decontamination trailers, radio systems and communication vehicles, personal protective equipment, and self-contained breathing apparatuses, all of which can continue to be used post-CSEPP.

The 800 megahertz (MHz) radio communication system installed in Tooele County provides reliable communications between dispatchers and first responders and the Emergency Operations Center (EOC). These systems will continue to provide vital communication after CSEPP has ended.

Web-based applications developed emergency response and information tools will continue after the CSEPP program ends. WebEOC, which allows operators to share current information during an emergency, is the state of Utah's standard for use in emergency operations centers statewide. CSEPP also helped pay for the creation of UtahEmergencyInfo.com, a website that allows the state to continue to release emergency public information, even if state web servers go down.

> "This partnership has helped each community strengthen its ability to respond to emergencies..."

CSEPP partnered with Tooele County to build a new, state-of-the-art, FEMA-approved, TCEM Building, which houses the TCEM Department, the 911 Dispatch Center, and the EOC. CSEPP and Tooele County also worked together to acquire and renovate the Tooele Community Joint Information Center, which will be the hub of information verification and dissemination during large emergencies and disasters.

Tooele County will continue to benefit from the various warning systems provided by CSEPP including the sirens, highway message boards, and tone alert radios.

The public is better informed and better prepared through the CSEPP-funded outreach efforts. The annual Tooele County Emergency Preparedness calendar, mailed to every residence within Tooele County, contained informative family disaster plan recommendations, protective action steps, and other emergency preparedness checklists and information.

A new Utah EOC is nearing completion and will be a state-of-the-art command center for coordinating resources in an emergency. The new facility doubles the square footage of the state's current EOC and puts command closer to the governor's office. More meeting space will allow for better coordination of precious resources.

Today, with the enduring partnerships of the Army, FEMA and other federal, state and local agencies, our communities are better prepared for a variety of emergencies. This partnership has helped each community strengthen its ability to respond to emergencies through improved facilities, equipment, planning, training and exercises.

The Citizens Advisory Commission

In 1993, as part of the National Defense Act, the Army created Citizens Advisory Commissions (CAC) where chemical weapons stockpiles existed. The Army recognized that public participation in the chemical demilitarization program was critical to its success and encouraged the public to participate in all phases of the program's decision-making process.

The Governor of Utah created the Utah CAC to provide citizens an independent voice on matters relating to chemical weapons storage, disposal and emergency preparedness. Representatives of the Army, along with the facility contractor, and representatives from the state of Utah regularly met with members of the CAC and interested citizens to publicly discuss the program at the depot and its impact on Utah and its communities. •

Emergency preparedness exercises *(top photo)* were held regularly to help local communities be prepared for a chemical agent or natural disaster. The DCD Restoration Advisory Board meets quarterly *(middle photo)* to discuss remediation efforts at DCD. The Citizens Advisory Commission *(bottom photo)* served as a public forum for the chemical demilitarization program for nearly 15 years.

OVERSIGHT

Numerous federal, state, local and even international agencies executed oversight responsibilities for the Chemical Stockpile Elimination Program which enabled Team Deseret to fulfill its national imperative to eliminate the country's chemical weapons while protecting workers, the community and the environment.

- Under the Chemical Weapons Convention, a team of international inspectors from the Organisation for the Prohibition of Chemical Weapons were continually present during disposal operations to verify the destruction of chemical weapons since July 1997.
- The National Research Council of the National Academy of Sciences assisted in guiding scientific and other technical aspects of the program.
- The U.S. Department of Health and Human Services provided oversight regarding public health concerns.
- The U.S. Environmental Protection Agency, the Council on Environmental Quality regulated and inspected disposal facilities to ensure compliance with federal environmental law.
- The Utah Division of Environmental Quality worked closely with the Army to ensure an exceptional level of protection for workers, the local communities and the environment.
- The DCD Restoration Advisory Board serves as a forum for representatives from DCD, federal and state environmental agencies, local government and residents to come together to address environmental remediation efforts at the depot.

Background Photo: Deseret Chemical Depot has donated numerous railroad trusses to Ophir to help preserve the aesthetics of the old mining town.

Left: Over the years, employees have worked hard to make a difference. Some examples include *(photos from top to bottom)* preserving historic gravesites and creating a cemetery for the deceased homesteaders, donating more than 1,700 units of blood, and annually holding a fishing day at the depot's Rainbow Reservoir for special needs children.

GOOD DEEDS

by Team Deseret

Not only did the entire workforce at Deseret Chemical Depot (DCD) — Team Deseret—give the invaluable gift of safely storing and destroying DCD's stockpile of chemical weapons, they also found it important to give back in so many other ways.

Team Deseret has made tremendous efforts to raise money, do good deeds and make generous donations—both time and money—that have helped fellow workers, citizens, charitable organizations as well as historical preservation, to name a few. With numerous accomplishments to note, here are a few examples that highlight the big hearts of this workforce.

Back in 1997, a group of employees donated their own time and money to restore Johnson Cemetery, an old pioneer cemetery located on DCD. Originally, only a few headstones and a flagpole were visible, signifying any presence of a cemetery. With the assistance and oversight of volunteer archeologists and geologists, these employees completed ground scrapping and used ground penetration radar equipment to locate 13 graves. After locating and mapping the graves, cleanup began. Workers planted a cactus garden; welded, installed and painted a fence, replaced the flag pole and placed gravel over the ground. Taking it even further, employees also completed some geological research on the deceased. Employees successfully completed the cemetery restoration and cleanup project in July 1999.

For the past 13 years, it has been a tradition for DCD to host an annual American Red Cross Blood Drive. An American Red Cross representative reported that Team Deseret has donated a grand total of 1,704 units of blood. Considering each unit can save up to three lives, Team Deseret's blood donations could potentially have saved up to 5,112 lives! The Red Cross is the sole blood provider for Tooele's community hospital, Mountain West Medical Center, so Team Deseret's donations directly support the local community.

This workforce never fails to take care of their own, having raised and collected cash for colleagues when necessary, whether they needed an organ transplant, help with funeral costs or with piling-up medical bills. In 2009, workers raised more than $12,000 for a coworker's granddaughter to help the family travel to China for stem cell treatments. Kenidee Benton, the granddaughter of Battelle employee, Steve Strickland, was born with Optic Nerve Hypoplasia, which is underdeveloped optic nerves, leaving her blind since birth. Strickland and his family were holding their own fundraising efforts, when his cohorts stepped in to help. Employees held a carnival, bringing in about $7,500 for Kenidee. And then, employees teamed up with the Tooele County Chapter of Sportsmen for Fish and Wildlife (SFW) at the 2009 annual SFW dinner banquet. They auctioned off a deer hunt and passed around a collection bucket, raising another $5,000. Thanks to the support of the workforce, Kenidee was given an opportunity to pursue the miracle of sight. Following the treatments, Kenidee did begin reacting to light.

It's difficult to come up with exact figures, but we can easily say that Team Deseret has donated around $400,000 to various groups and organizations, including educational venues, high school academic clubs, local sports teams and numerous charities. •

CONTRIBUTIONS

A highlight of some of the specific contributions made over the years

- $136,000 to the Leonardo on Wheels – Utah Science Center.
- $37,000 to the Children's Museum of Utah.
- $25,000 to the Tooele County Children's Justice Center.
- $7,000 to the Tooele County Boys and Girls Club.
- $4,000 to the Special Olympics – Tooele City Giants Team.
- $3,000 to Utah's Primary Children's Medical Center.
- $2,000 to the United Way of Salt Lake County.
- $1,000 to the Salt Lake City Astronomical Society.
- $500 to the Tooele City Library.
- $500 for the Tooele County American Cancer Society Relay for Life.
- $300 to a Tooele City tree-planting project.
- Thousands of dollars have been donated by Team Deseret, who elected to have money automatically deducted from their paychecks to go to various charity organizations.
- Since 1995, the workforce has donated more than 100 toys each year to the Marine Toys for Tots Foundation.
- For nearly a decade, DCD has hosted an annual Fishing Day at the depot's Rainbow Reservoir for special needs children.
- DCD has donated railroad trusses to Ophir to help preserve the aesthetics of the old mining town.
- Workers donated 41 back packs filled with school supplies, as well three large containers filled with more supplies to Eureka Elementary School.
- School supplies were donated to Grantsville Elementary School after the school was destroyed by fire.
- DCD has helped Tooele County combat flooding. In 2005, DCD gave Tooele City about 600 filled sandbags and 4,000 empty bags, along with a hopper machine to fill them. In 2011, DCD provided concrete barriers to the town of Ophir to help contain Ophir Creek.
- The depot's medical and fire departments provided emergency response assistance to vehicle accidents and fires within the surrounding areas.
- Stockings for Soldiers – workers filled Christmas stockings with donated supplies and sent them to soldiers stationed in Iraq and Afghanistan.
- Every year Team Deseret held multiple food and clothing drives.
- Employees volunteered to help with various community cleanups, including Tooele County highways and canyons.

GOOD ENVIRONMENTAL STEWARDS

Leaving DCD a better place; efforts to reduce and reuse

While destroying its large cache of chemical weapons, Team Deseret also made a commitment to be better caretakers of the earth.

"We made a commitment to be good environmental stewards because we wanted to leave this place in better shape than what we found it," said Deseret Chemical Depot (DCD) Environmental Manager Troy Johnson.

Their diligence went above and beyond what was required by law. Not only was the commitment wholeheartedly kept, it was also driven by a passion to always do better.

Whether it was recycling or reusing, building or restoring, Team Deseret's green efforts conserved limited resources, kept waste out of landfills and will continue to help the area's flora and fauna thrive long after the depot's legacy.

Here we celebrate a handful of their accomplishments.

1. Burrowing Owls

Since placing its first manmade nest in 2008, DCD's efforts to help the declining burrowing owl population has taken flight, as the number of occupied nests has steadily increased. The depot currently has more than 80 artificial nests, which offer a safe place for the owls to nest and nurture eggs, and will hopefully help the sensitive species prosper. Additionally, the artificial nests make it possible to band the baby owls and hopefully track their future progress.

2. Wildlife Water Guzzlers

Two water guzzlers were added to the depot to provide additional water sources for wildlife. The guzzlers naturally fill themselves by rain and snowfall, but were also strategically placed next to hydrants to collect the water released when the hydrants are regularly tested.

3. Nesting Platforms & Manmade Nests

Approximately 20 nesting platforms have been built and erected on DCD property. Built from recycled materials such as obsolete power poles, the manmade "trees" offer a safe, undisturbed environment for the depot's larger bird populations, which include hawks, eagles and owls. For smaller bird species such as kestrels and chickadees, employees made bird houses and placed them in riparian areas and away from high-traffic areas.

4. Recycle, Recycle, Recycle

Team Deseret's recycling efforts included a wide variety of items, including pounds of white paper, hundreds of thousands of gallons of reused water, wooden pallets, miles of railroad ties, industrial scrap metal, electronic waste and the massive On-Site Containers (pictured) that safely transported the depot's chemical weapons stockpile for destruction. Employees also found ways to reduce power usage and purchased environmentally friendly products when possible.

5. Pond Restorations

Two ponds that were part of the old Johnson homestead more than 100 years ago were restored. Once planted vegetation took root, 500 lease chub were translocated to the ponds in an effort to keep the small native minnow off the endangered species list. Additionally, the overflow from the ponds, which get their water from the depot's Rainbow Reservoir, irrigates adjacent land.

6. Reseeding

When a wildfire charred 300 acres on DCD property, the environmental staff turned the misfortune into an opportunity by replanting the burned area with a special mix of seed. The mix, which included six different kinds of seeds, was selected to establish more native grasses instead of the invasive cheat grass that was overrunning the area.

7. Independently Certified

The TOCDF's Environmental Management System has been ISO 14001 self-certified by U.S. Army agencies since 2005, but employees wanted to raise the bar, seeking and receiving an independent certification in 2011. The TOCDF is the first U.S. chemical demilitarization facility to achieve such an independent certification, which centers around goals such as reducing waste, recycling and conserving resources such as water, fuel and power.

8. Head Count

DCD conducted several animal surveys in an effort to better understand what wildlife lives on the depot's 19,400 acres. Workers counted bats, small mammals and birds to determine different species and to estimate their populations. The information helps the depot in planning future environmental projects and how they could possibly impact the wildlife.

9. Out to Pasture

With Team Deseret's stockpile storage and destruction mission complete, the land could soon be returning to its roots—literally. Plans are being made to bring cattle on property to graze on approximately 17,000 of the depot's 19,400 acres. The agricultural lease plan will generate money that could only be used for conservation projects.

10. Animal Rescue

Team Deseret tried to help hurt wildlife whenever possible. Perhaps the most memorable was Freedom, a bald eagle that was found with an injured wing. Named by depot employees, the bold and beautiful bird was sent to the Great Basin Wildlife Rescue to recuperate and is now at a zoo in Pueblo, Colo. •

“With Team Deseret’s stockpile storage and destruction mission complete, the land could soon be returning to its roots—literally.”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CHEMICAL WEAPONS CONVENTION TREATY

On April 29, 1997, the Chemical Weapons Convention (CWC) treaty entered into force. The United States and 86 other nations originally signed and ratified the CWC, agreeing to destroy all of their chemical weapons and former production facilities, as well as halt the development, use, production and acquisition of chemical weapons.

Today, approximately 188 nations have ratified the CWC; representing approximately 98 percent of the world's population and landmass. Albania, India and South Korea are the only nations that have completely destroyed their chemical weapons stockpiles.

The U.S. Army Chemical Materials Agency (CMA) was responsible for safely destroying the majority of the United States' chemical weapons, stockpiled at seven sites: Johnston Atoll (completed November 2000) in the Pacific Ocean, the Edgewood Area of Aberdeen Proving Ground (completed February 2006) in Maryland, the Newport Chemical Depot (completed September 2008) in Indiana, the Pine Bluff Arsenal (completed November 2010) in Arkansas, the Umatilla Depot (completed October 2011) in Oregon, the Anniston Depot (completed September 2011) in Alabama, and the Deseret Chemical Depot (completed January 2012) in Utah.

Since the CWC entry into force, inspectors from the Organisation for the Prohibition of Chemical Weapons (OPCW) were present at all U.S. chemical demilitarization facilities around the clock to verify the destruction of more than 2.3 million munitions and almost 27,000 tons of chemical agents.

The CWC originally required participating countries to destroy 100 percent of their chemical weapons stockpiles within 10 years, or by April 29, 2007. In April 2006, the United States requested a five-year extension because of unforeseen challenges and delays. The OPCW, which oversees CWC compliance, granted the request, giving the United States until April 29, 2012, to destroy its stockpile. Those disposal facilities under CMA's direction have met this deadline. The U.S. Department of Defense's Assembled Chemical Weapons Alternatives (ACWA) Program is responsible for destroying the remaining U.S. chemical weapons stored at Army installations in Kentucky and Colorado. ACWA's facilities will not be finished by the CWC deadline, but are committed to destroying their stockpiles safely, expeditiously and in full compliance with the treaty, which requires all chemical weapons are destroyed in an environmentally safe manner. •

Ted Ryba, site project manager of the Tooele Chemical Agent Disposal Facility, conducts a tour of the demilitarization plant to members of the Executive Council of the Organisation for the Prohibition of Chemical Weapons (OPCW). The OPCW oversees compliance of the Chemical Weapons Convention treaty, which mandates the destruction of chemical weapon stockpiles and ceasing the development, use, production or acquisition of chemical weapons.

"The U.S. Army Chemical Materials Agency (CMA) was responsible for safely destroying the majority of the United States' chemical weapons, stockpiled at seven sites..."

TOOELE CHEMICAL STOCKPILE OUTREACH OFFICE

Continuing to serve the community

Today, we can celebrate a new chapter in the history of our local community—the elimination of the single-largest stockpile of chemical weapons in the United States.

For nearly 70 years, Deseret Chemical Depot (DCD) had been dedicated to safely storing more than 13,600 tons of chemical agent. Since beginning operations in 1996, the Tooele Chemical Agent Disposal Facility has completely eliminated the DCD stockpile and along the way, the Tooele Chemical Stockpile Outreach Office has served as a valuable source of information to the community.

The Outreach Office has provided timely information to the public about various activities taking place at DCD—from storage and disposal operations to environmental stewardship endeavors. As we move forward through closure activities and DCD environmental remediation efforts, the Outreach Office will continue to provide project updates.

The office, located at 54 South Main Street in Tooele, will remain open and the staff can be reached at 435-882-3773 or 800-471-1617 until further notice. You can also view additional information online at www.cma.army.mil.

Top and Middle: The Outreach Office staff conducted regular tours of Deseret Chemical Depot and the Tooele Chemical Agent Destruction Facility during operations.

Bottom: The staff at the Tooele Chemical Stockpile Outreach Office *(from left)*: Angela Van Dam, Kylee Shields, Amy Blauser and Becki Bryant. The office is open Monday–Friday to provide information about Deseret Chemical Depot and its current activities.

CMA

U.S. ARMY CHEMICAL
MATERIALS AGENCY