U.S. ARMY CHEMICAL MATERIALS AGENCY www.cma.army.mil

CMA NEWS | November 2009

CMA PROGRESS AT A GLANCE

as of October 21 2009:

Anniston Chemical Activity, Ala.: Anniston Chemical Agent Disposal Facility (ANCDF) experienced a small fire on Oct. 20 in one of the two Explosion Containment Rooms. The fire lasted less than 15 seconds. It started while robotic equipment was being used to remove the fuse and burster from a mustard-filled 4.2-inch mortar. Disposal operations were suspended for two hours while ANCDF employees followed standard operations procedures to ensure there was no threat to the work force, the community, and the environment. Curtailed operations resumed later in the day as site maintenance teams planned for the safe over packing of the mortar and the decontamination of the room. In the meantime, Anniston Chemical Activity employees have safely delivered more than 408,300 munitions to the ANCDF for demilitarization, emptying 103 storage igloos in the process.

Deseret Chemical Depot, Utah: Tooele Chemical Agent Disposal Facility (TOCDF) workers achieved a major accomplishment by reaching and surpassing eight million consecutive man hours—nearly four years—without a lost work day injury on Oct.1. A little more than two years ago, they surpassed their previous record of 3,579,072 hours. Their ultimate goal is to finish the project without any additional lost time injuries. TOCDF has safely destroyed 4,223 mustard agent-filled ton containers, 54,453 mustard agent-filled 155 mm projectiles and 336 4.2-inch mortars.

Newport Chemical Depot, Ind.: Newport Chemical Agent Disposal Facility workers continue closure operations. All 1X waste material has been safely transported to Veolia Environmental Services in Port Arthur, Texas, for final disposal. Administrative closeout tasks such as property disposition and records archiving are ongoing. Building deconstruction is ongoing.

Pine Bluff Chemical Activity, Ark.: Pine Bluff Chemical Agent Disposal Facility resumed processing on Sept. 26, after performing preventative maintenance on the Metal Parts Furnace (MPF), the MPF Afterburner and the Liquid Incinerator (LIC) during a planned two-week outage. The current processing rate allowed by the Arkansas Department of Environmental Quality is 75 percent of the permitted maximum value for both the LIC and MPF. The site is preparing for demolition of the former BZ disposal building.

Umatilla Chemical Depot, Ore.: Umatilla Chemical Agent Disposal Facility (UMCDF) started HD mustard agent disposal in June 2009 and continues to prepare for agent trial burns. The UMCDF performed planned Metal Parts Furnace annual maintenance in October and also installed a quench cooling system to help control emissions as mustard ton containers (TCs) exit the furnace. UMCDF is on pace to finish processing mustard agent TCs, its final campaign, in 2011.

As we approach the holiday season, remember to be extra cautious in the kitchen. According to the U.S. Fire Administration, 1,450 fires in the United States occur in residential houses on Thanksgiving Day, claiming 15 lives, injuring 41 and causing approximately $21 million in damage.

CMA Celebrates Two Million Munitions Destroyed

The U.S. Army Chemical Materials Agency (CMA) held an open house on Oct. 29, 2009, to commemorate its two millionth munition destruction. The open house was held at the Chemical Demilitarization Training Facility (CDTF) at Aberdeen Proving Ground - Edgewood Area, Md., and featured programmatic displays and a photo slideshow.

The two millionth munition since Entry-Into-Force of the Chemical Weapons Convention (CWC) was destroyed on Oct. 5, 2009. This destruction was not a treaty milestone, but is, never-the-less, a significant milestone in the history of U.S. chemical weapons destruction. The United States ratified the CWC in 1997, joining more than 180 countries pledging to rid the world of chemical weapons.

CMA Director Conrad F. Whyne said of the accomplishment, "The professional, dedicated government and contract workers at all of our locations are making great strides in safely eliminating our chemical weapons stockpile—making our nation and world safer."

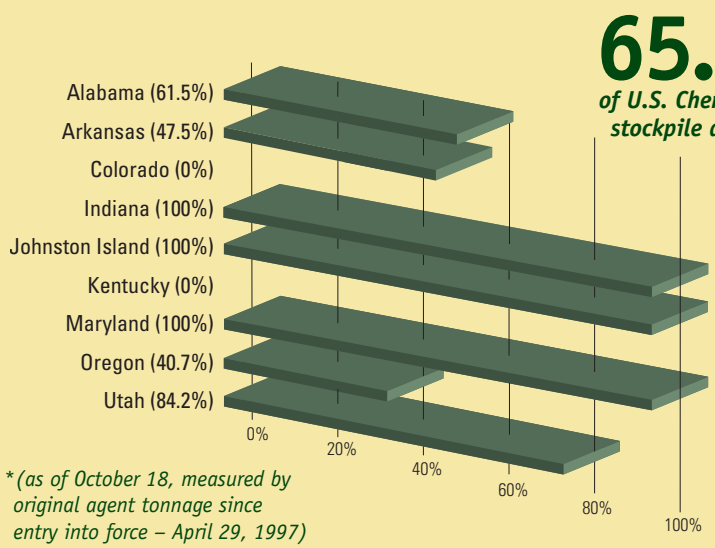
The open house bustled with CMA employees, past and present, taking time to mingle and discuss the future of CMA and share lessons learned.

Mrs. Morita Bruce, CMA Retired, CMA Director Conrad F. Whyne and Cheryl Maggio, Deputy Project Manager Chemical Stockpile Elimination, at the two millionth open house.

"This event was an opportunity to recognize the site and leadership contribution to the destruction of the two million munitions," said CMA Public Affairs Chief Greg Mahall. "It also provided a chance to share ideas and perspectives about what lies ahead for the program."

CMA's four remaining destruction sites continue to operate safely and efficiently to destroy munitions under the CWC. The sites are on pace to complete operations by the 2012 treaty deadline.

CMA - U.S. CHEMICAL AGENT STOCKPILE DESTROYED



** (as of October 18, measured by original agent tonnage since entry into force – April 29, 1997)*

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Sampling Data Supports GA/Lewisite Disposal Process

The Battelle Hazardous Materials Research Center has completed analysis of samples from Deseret Chemical Depot's (DCD's) stockpile of GA nerve and Lewisite blister agent ton containers (TCs). The results will be used for design and permitting activities in support of the thermal destruction of GA and Lewisite in a small-scale liquid incinerator (LIC) located within DCD's storage area.

Because mercuric chloride was used as a catalyst in Lewisite production, lab technicians were not surprised to identify some mercury in the Lewisite. But they didn't expect to find so much in the layers of solid, sludge-like material that has settled inside the TCs. The solids had never been sampled and analysis shows 13 to 42 percent of it is mercury. "We never thought we would have anything to that level," explains GA/Lewisite Project Manager Jim Clark. Additionally, as a principle component of Lewisite, high levels of arsenic were confirmed.

Sampling results show that the Lewisite TCs contain different concentrations of mercury, so operators will need to control the rate at which agent is fed into the furnace. The small-scale LIC will be equipped with a specially designed pollution abatement and filtration system to cool and clean the exhaust gases, and to remove remaining particulates and metals like arsenic and mercury.

Workers will first drain the agent from the TC and send it to a storage collection tank. The solids will then be dissolved by filling the TC with 100 gallons of nitric acid and rotating the container to liquefy the contents. The remaining liquid will be pumped through a diffusion dialysis unit, which uses water to separate the metals from the nitric acid. The recovered acid will be used to dissolve sludge in another TC and the remaining watery effluent will be shipped safely off site for disposal.

Each empty Lewisite TC will be rinsed three times; each time, rotating the TC for an hour with 100 gallons of water. The water will be drained and incinerated in the secondary chamber of the LIC.

An assessment of the GA nerve agent samples provided data consistent with previous analytical results. The GA TCs will be drained directly into the LIC primary chamber. Sodium hydroxide will be used to clean the containers, followed by a triple water rinse.

Following the destruction of the GA nerve and Lewisite blister agent, the empty containers will be disposed of in accordance with hazardous waste regulatory requirements.

The sampling project also included the depot's so-called "transparency" TCs—these containers were thought to be empty or contain Lewisite residue. Results confirmed no agent or agent residue in the small stockpile of transparency TCs, with the exception of one that was not sampled due to a defective sample tube. Thus, the contents of this container could not be confirmed and it will be processed with the other Lewisite containers. The remaining transparency TCs will be processed as secondary waste—cut in half, cleaned and shipped to a hazardous waste landfill.

Final design and planning activities continue as TOCDF officials prepare the class 3 permit modification request for construction and operations of the small-scale LIC. Construction is scheduled to begin this fall and will continue through summer 2010. Destruction operations are expected to be completed in time to meet the April 2012 Chemical Weapons Convention deadline.

Closure Activities Under Way at the Newport Chemical Agent Disposal Facility

The Newport Chemical Agent Disposal Facility (NECDF) at the Newport Chemical Depot (NECD) in Newport, Ind., successfully and safely neutralized the 1,269 tons of chemical nerve agent VX that had been stored at NECD since 1968. Currently, closure activities are under way in accordance with a closure plan approved by the Indiana Department of Environmental Management and governed by environmental permits and Army regulations.

In working toward closure, NECDF obtained approval of the Unventilated Monitoring Test on Sept. 16 from the U.S. Army Chemical Materials Agency. This eight hour test was conducted to verify that the Toxic Cubicle and the Toxic Maintenance Area at NECDF had been successfully decontaminated to less than 1 Vapor Screening Level.

Demolition of the Utility Building began on Oct. 19 and the Filter Farm Building on Oct. 26.

More recently, on Oct. 2, the Newport Chemical Stockpile Outreach Office in Clinton, Ind., closed to the public. The outreach staff provided a comprehensive outreach program to local stakeholders that focused on the NECD and NECDF.

"The outreach office has provided a wealth of helpful information on the Newport project since it first opened. I appreciate the staff's support and their presence as part of the Newport team amongst the community," said Lt. Col. William Hibner, depot commander.

New Challenges Arise with Ongoing Remediation at Deseret Chemical Depot

Deseret Chemical Depot (DCD) is one of six Army installations in the U.S. that currently stores chemical weapons. DCD consists of nearly 20,000 acres containing a number of Solid Waste Management Units (SWMUs), areas that have been used for the treatment, storage or disposal of solid waste. The Resource Conservation Recovery Act requires DCD to assess and remediate its SWMUs.

The depot has 23 SWMUs in the Installation Remediation Program with 14 that require no further action, 3 that will complete remediation this year and 6 that require future action. Future action is also required for 6 additional SWMUs that fall under the Military Munitions Response Program.

A major challenge will be cleanup of SWMUs 1 and 25, which were used for demilitarization operations between 1945 and 1980. Located along DCD's southern boundaries, SWMUs 1 and 25 are the most heavily contaminated, said Troy Johnson, DCD's Environmental Program Manager.

SWMU 1 encompasses approximately 373 acres and has 130 areas where demilitarization activities—burning and detonating of conventional munitions as well as burying chemical munitions—took place. Johnson said there are approximately 59,000 empty 4.2 inch mustard mortars sitting on SWMU 1's surface and one GA bomb was also disposed there.

"We have quite a challenge ahead in the cleanup of this area," Johnson acknowledged. He also confirmed that soil samples from SWMU 1 indicate trace amounts of GA nerve agent and mustard agent, but he stressed the levels are very low.

"We're talking nanograms," Johnson said, "Well below levels that are immediately dangerous to anyone. The area is safe and people can travel to the area without worry of exposure to chemical agents."

Before SWMU 1 surface cleanup can start, a work plan, explosive and chemical safety plans and health and ecological risk assessments must be completed.

SWMU 25, located next to SWMU 1, comprises 1,120 acres and includes M50 Thermite bombs (some with live charges), 50 clusters of high-explosive detonation craters (3.5 acres each) and ash piles from the cluster bomb activities. Carbon tetrachloride has been detected in the groundwater and soil sampling will be conducted in the spring. Cleanup of SWMU 25 and SWMU 1 is expected to start in 2012.

"The Army's commitment to be good stewards of the land and clean up past practices will no doubt be costly and take a substantial amount of time and resources," Johnson said. "Yet it will leave this unique desert ecosystem a legacy for the flora and fauna that share the land with us."

CMA News is produced by the U.S. Army Chemical Materials Agency Public Affairs Office.
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