

Leading by example

DCD fulfilling its promise to be a good environmental steward

Deseret Chemical Depot has several new projects underway that affirm the depot's commitment to being a good environmental steward.

DCD's latest project is providing new and much safer homes for the depot's declining burrowing owl population. The owls are considered to be a "sensitive" species in Utah—not endangered but certainly threatened. The owls use abandoned badger dens to nest, which can be fatal if the badgers return.



Twenty-two manmade nests have been placed around DCD in hopes of helping the depot's declining burrowing owl population. The fabricated nests are much safer for the owls because the entrance, which is made of plastic tubing, is too small for predators. The owls are expected to migrate to the area by the end of March.

"If the badgers come back through their old dens looking for food, they'll trap the owls inside and eat them," explained Boyd White, an environmental scientist for Sci-Tech, who is working with DCD's environmental department.

While earning his master's degree, White developed a computer program that pinpoints the most favorable nesting areas in a particular region. At DCD, 22 areas were identified as optimum locations for nests. The "nests" are made from 55-gallon plastic drums that are cut in half and are connected to a long piece of corrugated plastic tubing, which serves as the nest's entrance. Measuring four inches in diameter, the tubing is big enough for the owls, but too small for badgers.

"Even if a badger found the entrance, it would be difficult for it to locate the nest," said White.



The owls should start migrating by the end of the month. "The males come first and find a nesting spot," explained White. "Then the males will stand outside the nesting area and start singing to attract the females."

DCD decided to help its burrowing owl population after learning about Umatilla Chemical Depot's successful efforts, which started a few years ago. White said DCD has plans to erect nests for other bird species including swallows (in an effort to keep them and their messes away from existing doors and awnings), black-capped chickadees, red tail hawks and great horned owls.

(See ENVIRONMENTAL PROJECTS on next page)

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Carbon test results are favorable

Recent testing of the mercury-contaminated carbon filters from the change out of the Metal Parts Furnace (MPF) carbon in the mercury filtration system revealed that the TOCDF can dispose of the used carbon at a local hazardous waste landfill.

The MPF Pollution Abatement System (PAS) Filtration System (PFS) uses sulfur-impregnated carbon to capture mercury from the furnace exhaust gases. The filter banks, which house the sulfur-impregnated carbon, are monitored for mercury throughout the PFS; a rise in mercury levels will alert TOCDF officials when the carbon will need to be replaced. TOCDF officials utilized downtime during a scheduled MPF maintenance outage to replace the first two beds of carbon. This allowed them to determine the mercury contamination levels in the carbon and find the most appropriate disposal options for the used carbon.

The mercury-contaminated carbon was sent to a laboratory in Salt Lake City, where they performed a required U.S. Environmental Protection Agency (EPA) test called the Toxicity Characteristic Leaching Procedure (TCLP), which simulates landfill conditions to see if the mercury will leach from the carbon into the soil and possibly into groundwater, or if it will remain attached to the carbon.

The results of the TCLP test came back with good news. URS Hazardous Waste Manager Sean McClatchey further explained the results, saying, "The mercury doesn't just stick to the carbon, it actually locks itself into the sulfur, so as long as there is sulfur available, it will continue to capture the mercury." These results allow TOCDF officials to begin shipping the mercury-contaminated carbon to the Clean Harbors' Grassy Mountain hazardous waste landfill for disposal.

"We are very pleased with the final results because we know that we can dispose of the used carbon now instead of setting it aside in storage until we were able to determine a sufficient disposal option," McClatchey said.



Pictured above is a sample of the sulfur-impregnated carbon from the TOCDF's Metal Parts Furnace mercury filters. The carbon was analyzed to determine the levels of mercury contamination to determine the most appropriate disposal option. URS Photo



Freedom, an injured bald eagle that was rescued at DCD last year, continues treatment at the Great Basin Wildlife Rescue. Freedom will soon be ready to hit the road as part of the Wildlife Rescue's educational program.

Environmental projects

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In addition to helping the depot's birds, DCD is evaluating possible plans to allow grazing on its fenced property and grow crops on its irrigated land to feed local wildlife.

"By the time DCD is transferred back to Tooele Army Depot, we want this place to be in better shape than what we found it," said DCD Environmental Manager Troy Johnson. "Projects like these are proof of the Army's commitment to the environment and its inhabitants."

GAL processing plans moving forward

The last agent campaign for DCD/TOCDF is getting closer to getting started. A public meeting was held related to the proposed Area 10 Liquid Incinerator (ATLIC), which, if approved by state regulators, would be used to destroy DCD's small stockpile of GA nerve and Lewisite blister agents. DCD is required to prepare a Notification of Intent to Comply (NIC) under the Hazardous Waste Combustion Maximum Achievable Control Technology (HWC MACT) regulations for the new incinerator. The planned ATLIC is similar to TOCDF's liquid incinerators but smaller in scale.

The public meeting, held on March 4 at the Tooele Chemical Stockpile Outreach Office, provided an opportunity for the general public to learn about the ATLIC. Cindy King of the Utah Chapter of the Sierra Club attended the meeting along with several DCD and TOCDF personnel, including DCD Commander Col. Gerald L. Gladney, TOCDF SPM Ted Ryba and URS TOCDF General Manager Gary McCloskey.

The first public comment period for the RCRA class 3 permit modification to install and operate the ATLIC ended March 8. A second 45-day public comment period will soon start and a public hearing will be held during that time. Construction activities that are allowed prior to permit approval have begun. GA and Lewisite disposal operations are estimated to be completed by January 2012.

Tooele Chemical Agent Disposal Facility Processing

(as of March 14)

Total number of mustard agent-filled bulk containers destroyed	4,682
Total number of mustard agent-filled 155mm projectiles destroyed	54,453
Total number of mustard agent-filled 4.2-inch mortars destroyed	28,033
Percentage of total mustard agent stockpile destroyed	73.72%

Performance tests results won't slow mortar processing

The recent Deactivation Furnace System (DFS) Comprehensive Performance Test (CPT) displayed excellent mortar processing feed rates. During the CPT, mortar through-put steadily increased each day, with a total average of 43 mortars per hour.

The DFS CPT is necessary to establish DFS operating parameters, that is, the furnace feed rates during processing are limited to those which were demonstrated during testing. The DFS CPT is required every five years under federal air quality regulations known as MACT (Maximum Achievable Control Technology).

Tooele Chemical Agent Disposal Facility (TOCDF) workers have destroyed more than 24,000 4.2-inch mustard agent-filled mortars since restarting operations in January.

The 4.2-inch mortar campaign was suspended last April after workers identified low levels of mercury in the Metal Parts Furnace exhaust gas. TOCDF officials suspect the mercury came from the silver solder used to assemble the mortars. As a result, operations were delayed pending completion of the plant's new mercury filtration system, which uses sulfur-impregnated carbon to capture mercury from furnace exhaust gases.

"After operations were halted, workers had a chance step back and look at things," said Rod Chaney, project manager for the 4.2-inch mortar campaign. "Plant management's commitment to safety allowed us the time we needed to fully prepare for a successful restart of 4.2-inch mortar operations."

Destruction of the 4.2-inch mortars is expected to be completed by fall.

Upcoming Events

April 8, 1:30 p.m. – Utah Division of Solid and Hazardous Waste Control Board monthly meeting. The meeting will be held in Room 101 at the Department of Environmental Quality building, 168 N. 1950 W. in Salt Lake City.

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