

Environmental Monitor

January 2010

Depot Opts for New Treatment Approach

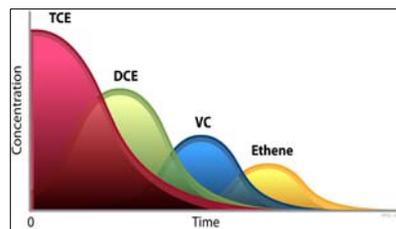
Pueblo Chemical Depot (PCD) is using a new treatment approach called enhanced in-situ bioremediation, or EISB, to clean up solvents like trichloroethene (TCE) contamination in groundwater at South Central Terrace (SCT).

Over several months, field workers installed EISB treatment systems at two sites. They expect the EISB to successfully remove TCE and other solvents from groundwater.

The EISB approach being used to treat TCE contamination at SCT is called enhanced reductive dechlorination, or ERD. The approach involves injecting a food source, such as sodium lactate or soybean oil, and additional amounts of naturally occurring bacteria cultured in a laboratory into the contaminated groundwater. The food source stimulates growth of large amounts of bacteria, which in turn break down the solvents into harmless compounds via a series of chemical processes.

This conversion process results in TCE first being converted to the solvent dichloroethene (DCE), then to the solvent vinyl chloride (VC), and finally to ethene, a harmless chemical by-product.

During ERD (as shown in the figure), sites with little or no DCE or VC will initially experience an increase in



these contaminants, followed by a decrease in contaminant levels. As TCE concentrations begin to decrease, concentrations of DCE increase. Then, as treatment continues, TCE further decreases, DCE starts to decrease, and VC increases. Ultimately, concentrations of TCE, DCE, and VC all will decrease as concentrations of ethene increase before finally decreasing over the long-term. ♦

Environmental Cleanup Progress and Work Planned in FY 2010

As PCD continues to clean up 60 solid waste management units (SWMUs) on the installation, state regulators approved the final Resource Conservation and Recovery Act (RCRA) corrective measures study (CMS) for the Disposal Area North of Disassembly Plant (**SWMU 45**). In addition, PCD submitted the following reports/plans for state review:

- Remedy Completion Report for the B545 Sand Blast Building (**SWMU 49**);
- Draft No Further Action (NFA) Justification for the B546 Sand Blast Building (**SWMU 50**);
- Draft Geophysical Investigation Plan for the Pershing Missile Burial Site (**SWMU 60**).

A great deal of work is planned for Fiscal Year (FY) 2010, including completion of RCRA CMS work plans for the following four sites:

- Sanitary Sewage Treatment Plant (**SWMU 25**);
- Septic Tank Systems (**SWMU 39**);
- Oil Separators (**SWMU 40**);
- Historic Vehicle Staging and Storage Area (**SWMU 43**).

PCD will implement CMSs at the Red Fuming Nitric Acid Washout Disposal Area (**SWMU 19**); Buildings 701, 706, and 731 (**SWMU 57**); and SWMUs 25, 39, and 40. At SWMUs 39 and 40, workers will collapse and backfill 21 septic tanks and nine oil/water separators. PCD will complete a supplemental RCRA facility investigation (RFI) at the Former Test Range Near East Lagoon (**SWMU 34**). At B406 (**SWMU 38**), workers will implement the supplemental RFI work plan. PCD also will perform pilot studies at SWMU 43 and submit No Further Action Justifications for several SWMUs, including the East Lagoons (**SWMU 21**), B595 – Vehicle Maintenance Building (**SWMU 35**), and B529 – Missile Facility (**SWMU 41**). ♦

The *Environmental Monitor* is published quarterly by Pueblo Chemical Depot for the citizens of Pueblo County and surrounding communities. Editorial views and opinions expressed in this publication are not necessarily those of the Department of the Army.

The *Environmental Monitor* encourages comments, questions, and suggestions. Please direct all correspondence to the Public Affairs Office, Pueblo Chemical Depot, 45825 Hwy. 96E, Bldg. 1, Pueblo, CO 81006-9330, or call 719-549-4135.

Environmental Monitor

Depot Protects Migratory Birds

by Max Canestorp, U.S. Fish and Wildlife Service



Worker readies a rehabilitated burrowing owl for release.

Pueblo Chemical Depot (PCD) hosts many migratory species of birds. In general, migratory birds travel seasonally to and from areas where they breed. Most birds you see at PCD are migratory species and are protected from harm by a federal law called the Migratory Bird Treaty Act (MBTA).

The MBTA prohibits the “taking”, harming, or possession of birds or bird parts, their eggs, and/or active nests without a permit. This means that if PCD workers find an active migratory bird nest during an operation that may impact the nest or cause the adults to abandon it, PCD will take steps to protect it from harm. Bald and golden eagles are further protected by the Bald and Golden Eagle Protection Act. Penalties for violating these federal laws can be severe.

Not all bird species are covered by the MBTA. Quail are non-migratory species; they live on the Depot year-round. Non-native, invasive species, such as the common pigeon, European starling, and house sparrow, are also not covered. Some migratory species, such as many kinds of waterfowl, are considered game birds and can be hunted with the proper license.

Under the PCD migratory bird protection program, PCD is taking several important actions to protect migratory birds.



A rehabilitated golden eagle is released at PCD.

First, because electrocution by power lines is a main cause of raptor deaths in the U.S., PCD retrofitted many Depot power poles with perch-guard triangles to discourage raptors from perching between hot electrical lines and being electro-



Plastic perch-guard triangles, atop the cross-beam of a PCD telephone pole, and insulated wires help prevent raptor deaths from electrocution.

cuted. Workers also insulated wires to help prevent electrocution. Each year, workers retrofit more poles to provide even greater protection.

Second, PCD schedules building demolitions for non-breeding periods, where possible. When it is necessary to schedule demolition during the nesting season, a biologist first inspects the structures before demolition for evidence of bird occupation. This action helps ensure that no harm comes to active nests, eggs, or fledgling migratory species. If nests are found, demolition be postponed, if possible. If an operation may impact an active nest, workers cordon off the nest site to protect it until the young can successfully leave the nest.

PCD also has worked closely with the Pueblo Raptor Rehabilitation Center and other rehabbers for many years to help injured or sick birds recover. When workers find a raptor that is unable to fly, they catch the bird and immediately transport it to the rehab center for evaluation and, if possible, rehabilitation. Sometimes birds that have recovered are brought back to the Depot for release. In fact, PCD is the release site for many birds taken in from other areas once they were ready to fly free again.

Anyone who is interested in learning more about PCD’s migratory bird protection program should contact Max Canestorp, PCD Natural Resource Manager, at (719) 549-4228.◇



Released burrowing owl makes its home on the Depot.



Environmental Monitor

Depot Celebrates “Make a Difference Day 2009”

Make a Difference Day is an event held on the fourth Saturday in October to bring the community together to help others. This year, PCD invited Avondale Elementary School to participate in the event, and together they celebrated “Make a Difference Day 2009” by providing get-well wishes to pediatric patients at St. Mary-Corwin Hospital in Pueblo.

Elementary school classes, from kindergarten through 5th grade, made get-well cards for children in the pediatric unit. PCD made a large “Get Well” banner, and PCD staff signed and wrote get-well messages on the banner.

On October 24, Paula Polk-Jones, who works in PCD’s Environmental Management Office, and Vicki Roskey, Avondale’s Special Projects teacher, delivered the banner and hand-made cards to children in the pediatric unit at St. Mary-Corwin Hospital.

Corwin’s pediatric staff expressed their gratitude to the students, their teachers, and PCD employees for taking time to bring cheer to their patients. ♦

New Faces Join PCD’s Environmental Office

On November 15, 2009, Chris Pulskamp, PCD Environmental Management Office (EMO) project manager, left for a six-month assignment in Iraq. While in Iraq, he will assist the Army in facility engineering. Chris is the EMO Project Manager for environmental compliance and restoration activities being conducted at sites in the Southwest Terrace. All the PCD staff wish him well and look forward to his safe return.

During Pulskamp’s absence, Tim Kilgannon, a project manager with PCD subcontractor Stern Tech International, assumes responsibility for project management in



Tim Kilgannon

the Southwest Terrace and other PCD projects, including stormwater management. This work includes activities associated with the Groundwater Extraction, Treatment, and Injection System (GETI) boundary treatment wells.

Recently, EMO also welcomed two new staff members:

Shawn Weary and Rod Zimmerman. Shawn and Rod provide waste management and compliance support for the depot. They coordinate and track waste shipments being sent offsite to hazardous and nonhazardous waste disposal facilities.



Shawn Weary and Rod Zimmerman

Weary also manages PCD’s air program, and Zimmerman supports depot construction projects.

Prior to joining EMO, Weary was a drinking water operator for Fort Carson and PCD, and he worked at Umatilla Chemical Depot in Oregon. For the past nine years, Zimmerman worked in the Utility Department of PCD’s Public Works Office and was previously at Fort Carson.

EMO welcomes all the new personnel and is grateful for their support! ♦

Calendar of Events

The next PCD Restoration Advisory Board (RAB) meeting will be held on Monday, January 11, 2010, at 6:00 pm in the Pueblo Chemical Depot theater—Building 6.
See you there!

The next Citizen’s Advisory Commission meeting will be held on January 27, 2010, at 6:00 pm at the Olde Towne Carriage House, 102 S. Victoria Avenue, Pueblo.



CONTACT US If you have questions about the environmental restoration projects or base reuse, please call: Chuck Sprague, Pueblo Chemical Depot (PCD) Public Affairs Officer, 719-549-4135 • Kathryn Cain, Chief, PCD Environmental Management Office, 719-549-4201

Or return this form to: U.S. Army Pueblo Chemical Depot, 45825 Hwy. 96E, Building 54, Pueblo, CO 81006-9330

Would you like to be added to our mailing list? Yes No

Please complete the following: Name _____ Address _____
City/State/Zip _____ Phone (optional) _____ Email (optional) _____

The PCD Environmental Program schedules presentations that can be given to community groups, clubs, and schools. If you know of a group that might be interested, please complete the following:

Name _____ Address _____
City/State/Zip _____ Phone _____ Email _____



U.S. ARMY PUEBLO CHEMICAL DEPOT

Environmental Monitor

ENVIRONMENTAL MANAGEMENT OFFICE

45825 Highway 96 East, Building 54
Pueblo, Colorado 81006-9330

Information Repositories

Boone Fire Station: 421 E. 1st St, Boone, CO, (719) 947-4126
Hours: 8 a.m. to 2 p.m. M-Th

Robert Hoag Rawlings Public Library: 100 East Abriendo, Pueblo, CO, (719) 562-5600
Hours: 9 a.m. to 9 p.m. M-Th; 9 a.m. to 6 p.m. F-Sat;
1 p.m. to 5 p.m. Sun

Avondale Water & Sanitation District: 321 3rd St,
Avondale, CO, (719) 947-3186
Hours: 8 a.m. to 5 p.m. M-F (closed 12:00 to 1:00 p.m. for lunch)

Pueblo Chemical Depot Document Tracking Center
Environmental Management Office, (719) 549-4268
Hours: 6:30 a.m. to 5 p.m. M-Th

Additional Contacts

Deb Anderson, (303) 692-3379
Jeannine Natterman, Public Information Officer, (303) 692-3303 or (888) 569-1831, ext. 3303,
Hazardous Materials and Waste Management Division,
Colorado Department of Public Health and Environment

Vera Moritz, Program Manager, U.S. Environmental Protection Agency, (303) 312-6981

Heather Maio, Environmental Health Director, Pueblo City-County Health Department, (719) 583-4321