

# DLA concludes oversight of former Defense Depot Memphis, Tenn.; transitions award-winning environmental program to Dept. of Army

DLA Distribution, located in New Cumberland, Pa., surmounted many challenges in its journey toward the restoration and reuse of the former Defense Depot Memphis, Tennessee, and on Dec. 16, 2010, oversight of the award-winning environmental program changed back to the property owners, Department of the Army.

“This is a planned procedure for any cleanup operation involving Army property,” explained Michael Dobbs, chief for environment, safety and occupational health for DLA Distribution that managed the cleanup for DLA. “DLA’s defined role has ended and the Army is designated to oversee the remaining restoration activities.”

Constructed by the Army as a general supply depot in 1942, command of the Depot changed to DLA in 1963. As a principal distribution center for DLA, the Depot’s mission was to receive, warehouse and distribute supplies common to all U.S. military. As an important distribution point for the Department of Defense, the Depot shipped approximately 107,000 tons of goods a year. At its peak, the Depot employed about 3,000 people, many drawn from the neighboring communities.

The 642-acre Depot was divided into two areas – the 578-acre Main Installation where the main mission was accomplished and the 64-acre Dunn Field where Defense National Stock Pile materials were stored and hazardous substance disposal occurred.

Due to environmental impacts identified during a facility assessment, the U.S. Environmental Protection Agency, or USEPA, placed the Depot on the National Priorities List, or NPL, also known as Superfund, in

1992 marking the start of a long journey toward environmental restoration following requirements of the Comprehensive Environmental Response, Compensation and Liability Act, or CERCLA.

Community interest in the former Depot’s environmental restoration program prompted DLA Distribution to form a Restoration Advisory Board in 1994. Board members included community members, local elected officials, former Depot employees and representatives from the local health department, Tennessee Department of Environment and Conservation, or TDEC, and USEPA. The Agency for Toxic Substances and Disease Registry completed the initial Public Health Assessment of the Depot in 1995 and concluded it posed no apparent public health hazard.

DLA, USEPA and TDEC signed the Federal Facilities Agreement in March 1995 establishing the environmental project management team that consisted of representatives from the three agencies. Along with a cadre of environmental restoration contractors and contracting officers, the team continued its journey toward environmental restoration.

Four months later in July 1995, the Base Realignment and Closure Commission decided to close the Defense Depot Memphis, Tennessee. The project management team became the BRAC Cleanup Team, or BCT, and the journey took on a new objective – to implement Fast Track Cleanup while remaining firmly focused on the protection of human health and the environment. Over the course of the next year, the team completed eight additional studies required by the BRAC property transfer process, including an environmental baseline

survey, while maintaining a steady course of preliminary investigations required by the CERCLA-required environmental restoration process.

On Sep. 30, 1997, the Depot closed as a federal facility. But the journey toward restoration and reuse was still in the beginning stage. Soil and groundwater samples had been collected from areas of environmental concern and from areas of reuse interest, such as the family housing area. The BCT kept on track by accelerating their review of all these sample results in order to identify areas in need of restoration as well as areas ready for reuse.

In 1998, the Depot Redevelopment Corporation, or DRC, of Memphis and Shelby County opened the Memphis Depot Business Park at the Main Installation under a master interim lease with the Army. In that same year, early restoration projects removed approximately 5,000 cubic yards of soil from various areas throughout the Main Installation. A groundwater pump and discharge system was installed on Dunn Field to inhibit impacted groundwater from moving off-site.

The Depot participated in the ATSDR-sponsored “Greater Memphis Environmental Justice Work Group” in response to environmental justice concerns raised by the local community in 1998. At community request, ATSDR issued a follow-up Public Health Assessment in 2000 that confirmed the former Depot posed no apparent public health hazard.

During 2001 and 2002, the Depot’s journey toward reuse speeded forward as DLA Distribution completed the environmental condition documents necessary to allow the Army to sign several deeds transferring about 25



acres of the Main Installation. The property was reused by a homeless veterans' aid agency, by the City of Memphis Police Department, and by the DRC.

With the journey to reuse well underway, the BCT focused on the road to restoration. Following many rounds of soil and groundwater sampling, the BCT evaluated available restoration technologies and signed the Main Installation Record of Decision, or ROD, in 2001. The ROD identified the selected restoration treatment, the treatment objectives and the restoration goals that must be achieved in order to remove the Depot from the NPL.

Construction of the enhanced bioremediation treatment system was completed and began operating in 2006. Sodium lactate was injected into groundwater about 30 feet below ground surface at two areas of the Main Installation that increased the natural biological activity that breaks down contaminants. When operations ended in 2009, the treatment system had achieved the treatment objectives and reduced contamination in the groundwater by 90 percent where lactate was injected and 80 percent in the surrounding areas.

Long-term groundwater monitoring at the Main Installation will continue until about 2016 when it is expected natural processes will reduce the remaining contaminant levels to the restoration goals identified in the Main Installation ROD. Land Use Controls are in place to prevent residential reuse and to prevent groundwater use.

DLA Distribution overcame many challenges during the journey to restoration of Dunn Field. Site assessments identified the potential for chemical warfare materiel, or CWM, to be buried at Dunn Field delaying the restoration investigations. Clearing Dunn Field of CWM included investigations in 1998 through 1999.

From 2000 through 2001, DLA Distribution removed about 2,000 cubic yards of contaminated soil. The community's interest in these activities prompted DLA Distribution to conduct weekly public briefings.

The BCT completed their review of the Dunn Field sample results and began evaluating the available restoration technologies in 2002. In order to allow the unrestricted reuse of the eastern half of Dunn Field, DLA Distribution removed about 930 cubic yards of soil (containing lead) from the former pistol range in 2002.

Over the next couple of years, DLA Distribution conducted several additional studies at Dunn Field to clearly define the boundaries of disposal sites to be excavated and to test the effectiveness of the restoration technologies being evaluated. The BCT signed the Dunn Field ROD in 2004 and DLA Distribution began the first of several restoration activities required by the ROD.

With the Main Installation restoration underway and the Dunn Field ROD signed, DLA Distribution completed the environmental documents necessary for the Army to sign deeds transferring about 319 acres of both the Main Installation and Dunn Field. The property was reused by the City of Memphis for a road expansion project, by the DRC for the Memphis Depot Business Park, and some was sold to a private development firm. The remaining property would be available to transfer only after further environmental restoration.

By 2006, DLA Distribution's journey met with success by completing the excavation of the former Dunn Field sites and receiving USEPA's approval of the completion report. However, DLA Distribution's journey was interrupted as results of studies to test restoration technologies selected in the Dunn Field ROD before full-scale implementation proved the technologies would not be environmentally or fiscally effective. DLA Distribution amended the Dunn

Field ROD to change the selected groundwater treatment and to enhance the soil treatment technology to increase its effectiveness.

The BCT signed the Dunn Field ROD Amendment in 2008. In the meantime, DLA Distribution constructed and began operating a soil vapor extraction, or SVE system to pull contaminant vapors out of the soil that is about 70 feet below ground surface under Dunn Field. "We're very pleased with the performance of the SVE system," said Dobbs. "The rate at which we are pulling CVOCs out of the soil will keep us on track to reach our cleanup goals by our planned end date."

As of 2011, the Dunn Field SVE system has removed 4,029 pounds of contaminants preventing further movement of contamination into the groundwater and significantly reducing contaminant levels in the groundwater. The Dunn Field SVE treatment system is scheduled to meet the treatment objectives in 2012.

The SVE system was enhanced with a thermal SVE system that was constructed and operated from May 2008 until December 2008 when soil sampling results confirmed it had achieved the treatment objectives. The thermal SVE system removed about 12,500 pounds of contamination from the soil that is 5 to 35 feet below ground surface under Dunn Field. Previous studies had estimated that 9,000 to 14,000 pounds of contamination may be present.

Because the fluvial SVE and thermal enhancement were so successful in reducing groundwater contamination levels, another restoration technology selected in the Dunn Field ROD, zero-valent iron injections into groundwater, were not required, saving \$2.2 million for the injections and \$600,000 for associated groundwater monitoring. Also during this time and because of these successes, the BCT agreed to stop operating the groundwater pump and discharge system at an annual savings of \$140,000.

The Secretary of Defense acknowledged that the restoration program at the former Depot was among the best in the Department of Defense. In a June 3, 2009, ceremony in Washington, D.C., Joseph R. Biden, Jr. Vice President of the United States of America and William J. Lynn III, Deputy Secretary of Defense presented the 2009 Environmental Restoration Award to the Defense Logistics Agency for outstanding work by an installation in the Department of Defense environmental programs.

“Clean up efforts at the former Memphis Depot have always been aimed at protecting human health and the environment in a timely, cost-efficient and responsive manner, said Dobbs. “As we worked to complete the final stages of cleanup, I can think of no better recognition as the site is transferred for community reuse.”

The final stage of the DLA Distribution’s restoration journey was marked in December 2009 by completing construction and beginning operations of the air sparging/SVE system to treat groundwater that had moved off Dunn Field. By December 2010, this treatment system removed about 69 pounds of contaminants from groundwater that is about 70 feet below ground surface west of Dunn Field. The system should achieve the treatment objectives in 2014, and long-term groundwater monitoring will continue until about 2019 as natural processes continue to reduce remaining contaminant levels to the restoration goals identified in the Dunn Field ROD. Land Use Controls are also in place to prevent residential reuse of Dunn Field and to prevent groundwater use.

The Restoration Advisory Board continued to meet regularly from its inception in 1994 until the members voted to adjourn in October 2009. “The fact of the matter is, remedial actions are complete,” said Ulysses Truitt, a board member since it was formed. “So, consequently, there is no need for a RAB.” With no more actions



**Today, the former Memphis Depot is site of the Memphis Business Park employing over 1,300 people.**

to consider, Truitt entered a motion to adjourn the RAB according to its charter. The motion passed.

In 2010, USEPA approved DLA Distribution’s reports that demonstrated the Main Installation and the Dunn Field environmental treatment systems are operating properly and successfully. USEPA submitted the Preliminary Close Out Report documenting that construction of the treatment systems necessary to restore the environment are complete and the process has entered the operations, maintenance and long-term monitoring phase. The BCT also met regularly until electing to adjourn effective in December 2010.

DLA Distribution ended its journey at the former Defense Depot Memphis, Tennessee after completing the final environmental condition documents necessary for the Army to transfer the remaining property for productive community reuse. “Completing these documents marks the end of an era for the former Depot, the environmental team and the community,” commented Dobbs. “We have worked long and hard with great success to restore the

environment clearing the way for productive reuse and revitalizing the area.”

According to Jim Covington, president of the DRC, some of the property is already being considered by companies. “We are working on closing sales with two companies for about 95 acres as soon as the deed is signed,” explained Covington. “And, we expect another two acres to sell late in 2011.” Covington expects opportunities to sell the remainder of the entire property to increase as the economy recovers.

In a letter to USEPA and TDEC, DLA Distribution announced that effective December 16, 2010, the Army assumed command of the operation, maintenance and long-term monitoring phase that will continue until groundwater samples confirm contamination levels have achieved the restoration treatment goals. The journey is complete and DLA Distribution can be proud of its many successes in the environmental restoration and productive community reuse of the former Defense Depot Memphis, Tenn.