

The former Memphis Depot  
2163 Airways Blvd., Building 144  
Memphis, TN 38114

DATED MATERIALS – PLEASE DELIVER THIS IMMEDIATELY

## FOR YOUR INFORMATION

### INFORMATION REPOSITORY

#### New Address:

**The Memphis Depot Business Park,  
2245 Truitt Street, Memphis, TN 38114 (901) 774-3683**

Please call ahead for an appointment to ensure that we  
are available to assist you.

#### New Documents:

- Dunn Field Source Areas Remedial Design
- Dunn Field Source Areas Remedial Action Work Plan
- Dunn Field Source Areas Remedial Action Health and Safety Plan
- BRAC Cleanup Plan Version 11

## How to reach us...

If you have any questions or comments about the Depot's environmental cleanup program,  
please feel free to contact any one of the following:

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EnviroNews is published by the  
former Memphis Depot to update  
the public on the environmental  
cleanup program. If you have  
comments, questions or  
suggestions for future articles,  
please call the Community  
Information Line at (901) 774-3683.

Visit the Former Depot's website at [www.ddc.dla.mil/memphis](http://www.ddc.dla.mil/memphis)

# EnviroNews

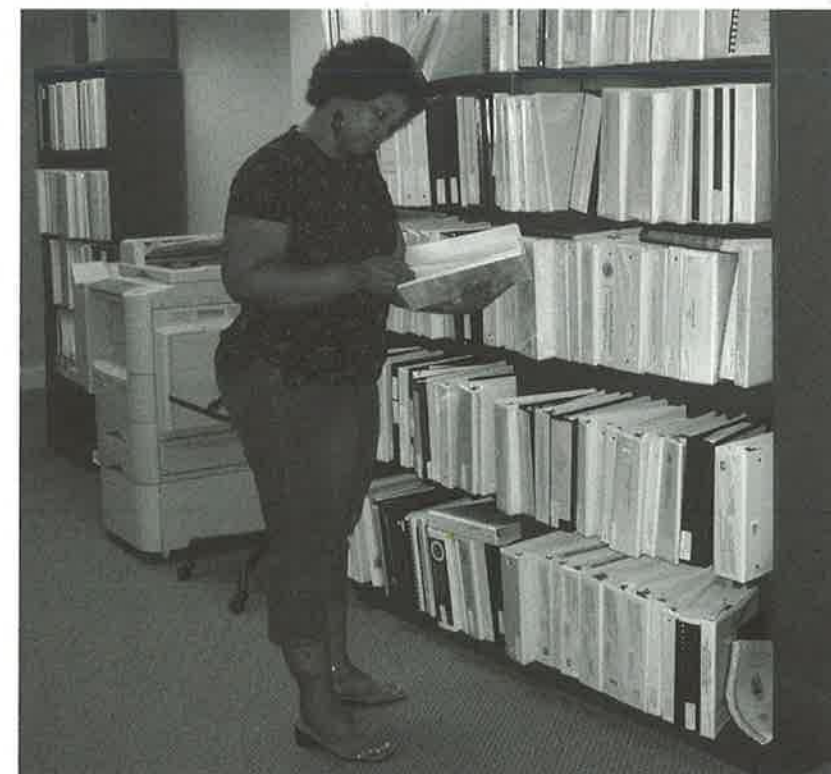
Summer 2008



## Information Repositories Consolidated at New Location

The former Memphis Depot environmental cleanup project Information Repository (IR) has moved to 2245 Truitt Street, a new location in the Memphis Depot Business Park. The new IR is located across the Memphis Depot Parkway from the previous office and is adjacent to the Memphis Police Department Southeast Precinct. IR documents from the Cherokee Branch Public Library location have been removed and consolidated into the Memphis Depot Business Park location, as is customary in the final stages of an environmental cleanup project. The new IR is within the Depot Redevelopment Corporation office and has a separate library room available to the public from 9:00 a.m. to 5:00 p.m. (regular business hours.) To ensure that someone is available to assist you, please call the Community Information Line (901-774-3683) for an appointment.

The former location at 2163 Airways Boulevard (previously designated as Building 144) has been leased as part of the ongoing community reuse at the former Memphis Depot. Mr. Jim Covington, Executive Director of the Depot Redevelopment Corporation, reports that as of this month the Memphis Depot Business Park is 97 percent occupied. "Barnhart Crane & Rigging Company now occupies about 100,000 sq. ft. in the



Ms. Karen Bell reviews information at the new Information Repository location.

old Building 144, as well as another 80 acres of former Depot property under a lease/purchase agreement," Covington said.

The IR contains documents related to the environmental cleanup project at the former Memphis Depot, Memphis Depot site history, Base Realignment and Closure (BRAC) property transfers, initial environmental project studies and investigations, soil and water sampling results, health and safety plans, removal action work plans and completion reports, remedial action designs and work plans, and guidance documents produced by

the Department of Defense and the Environmental Protection Agency. Also included are copies of past editions of the EnviroNews, press releases and fact sheets, meeting minutes from the former Memphis Depot Restoration Advisory Board and BRAC Cleanup Team, and a host of other documents of interest to the community. For more information about the former Memphis Depot environmental cleanup project, see the Defense Logistics Agency Memphis Web site, [www.ddc.dla.mil/memphis](http://www.ddc.dla.mil/memphis).



# Cleanup Continues at Dunn Field

Since January 2008, the environmental team has continued to operate the Fluvial Soil Vapor Extraction (SVE) system and completed construction of the thermally-enhanced SVE system, another phase of the Dunn Field Source Areas Remedial Action (RA).

In addition, the U.S. Environmental Protection Agency (EPA) and Tennessee Department of Environment and Conservation (TDEC) approved final changes to the Loess/Groundwater Remedial Action Work Plan. The team has also submitted the draft final Off-Depot Groundwater Remedial Design for the cleanup of groundwater that has moved off of Dunn Field to the northwest.

The team works in consultation with EPA and TDEC to ensure the safest and most effective methods of environmental cleanup at the former Memphis Depot site.

## Fluvial SVE System Operation

Since July 2007, the environmental team has operated the Fluvial SVE system to clean up soils that are 35 to 75 feet below ground surface and to prevent further movement of solvents into the groundwater at Dunn Field. SVE pulls air through the soils to remove the Chlorinated Volatile Organic Compounds (CVOCs).

In January 2008, the Memphis/Shelby County Health Department inspected the Fluvial SVE system and confirmed that

operations are within the air permit limits. From July 2007 through the end of May 2008, the Fluvial SVE system has removed approximately 2,350 pounds of CVOCs from the soil. The environmental team anticipates operating the Fluvial SVE system until Fall 2012.

## Loess/Groundwater Thermally-Enhanced SVE System Operation

Before constructing the thermally-enhanced SVE system, the environmental team excavated two areas on Dunn Field. The excavation, transportation and disposal cleanup activities occurred between October 2007 and January 2008. At one area, the team excavated 160 cubic yards of soil from a 20 by 25 foot area to a depth of 15 feet. At the other area, the team excavated 3,600 cubic yards of soil, crushed drums, metal and other debris from a 120 by 120 foot area to a depth of 7 feet. The excavated material was transported to an off-site, approved landfill as non-hazardous waste. In May 2008, the environmental team completed construction of the thermally-enhanced SVE system to clean up soils from 5 to 30 feet below ground surface, called the loess, and to prevent further movement of solvents into the groundwater at Dunn Field. SVE is one of the most frequently used treatment methods to remove solvents that evaporate when exposed to air. The application of thermal heat will enhance

the SVE by significantly speeding up the process. This proven technology uses heater rods to heat up the soil causing the solvents to turn to vapors then an underground vacuum system pulls air and vapors into extraction wells to a treatment system, just as with the Fluvial SVE

system. The air and vapors remain fully contained within the system until passing through a series of filters that remove the solvents. The environmental team anticipates operating the thermally-enhanced SVE system until Fall 2008. The Loess/Groundwater Remedial Action Work Plan approved by EPA and TDEC is available in the Information Repository.

## Off-Depot Groundwater Remedial Design

After evaluating several different cleanup technologies, the environmental team is proposing an air sparging/SVE system (See Inset Box) to clean up the groundwater that has moved off to the west of Dunn Field.

Because the selection of air sparging/SVE is a change to the final remedies in the Dunn Field Record of Decision (ROD) signed in April 2004, the Defense Logistics Agency (DLA) must amend the Dunn Field ROD. The process includes providing a Revised Proposed Plan to the public in the Information Repository for a 30-day review and comment period, and providing a public meeting to present the Revised Proposed Plan.

DLA plans to begin the public comment period and to conduct the public meeting in Fall 2008. Please watch area newspapers for more information regarding the public comment period and comment meeting. All comments received will be addressed in the ROD Amendment that must be signed by DLA, EPA and TDEC. Upon signature, the ROD Amendment will be placed in the Information Repository. The air sparging/SVE system includes a series of air injection wells and SVE wells to be installed just south of the Memphis Light, Gas and Water substation along Menager Road. The environmental team

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anticipates operating the air sparging/SVE system for five years.

The environmental team submitted the draft final Off-Depot Groundwater Remedial Design (RD) to EPA and TDEC in June 2008 for review and comment. The environmental team anticipates completing the Off-Depot Groundwater RD following the Revised Proposed Plan public comment period. Upon final approval from EPA and TDEC, the Off-Depot Groundwater RD will be placed in the Information Repository.

## Next Steps for Off-Depot Groundwater:

- Revised Proposed Plan public comment period in Fall 2008
- Revised Proposed Plan public comment meeting in Fall 2008
- Final Off-Depot Groundwater Remedial Design completed in Fall 2008
- Remedial Action Work Plan completed in Winter 2008/2009
- Cleanup activities expected to begin in Spring 2009

## What is Air Sparging?

Air sparging is a cleanup technology used to reduce levels of chlorinated volatile organic compounds (CVOCs) in soil and groundwater. Air sparging is often used with soil vapor extraction (SVE), which is a cleanup technique already being used at Dunn Field to clean up soils and prevent further movement of CVOCs to groundwater.

## How Does Air Sparging Work?

Air sparging uses air to remove CVOCs from soil and groundwater. Air injection wells pump air underground into soils or into a layer of water (aquifer). The injected air disturbs the water causing the CVOCs to turn to vapor and makes them easier to remove. A vacuum system, such as the SVE system, then pulls the air and CVOCs up through extraction wells to a treatment system that filters the air and removes the CVOCs.

# Remedial Action in Second Year at Main Installation

The Main Installation (MI) Remedial Action, Enhanced Bioremediation Treatment (EBT), continues its second year of treating affected groundwater in the shallow aquifer (approximately 90 feet below the surface) beneath portions of the MI.

In September 2006, the environmental team began injecting an organic nutrient, sodium lactate, into the shallow groundwater in two treatment areas of the MI – the southwest corner in the Barnhart Crane area and the southeast corner just west of the Memphis Police Department's Southeast Precinct. The injections occurred every two weeks for the first year and, starting in September 2007, now occur once a month.

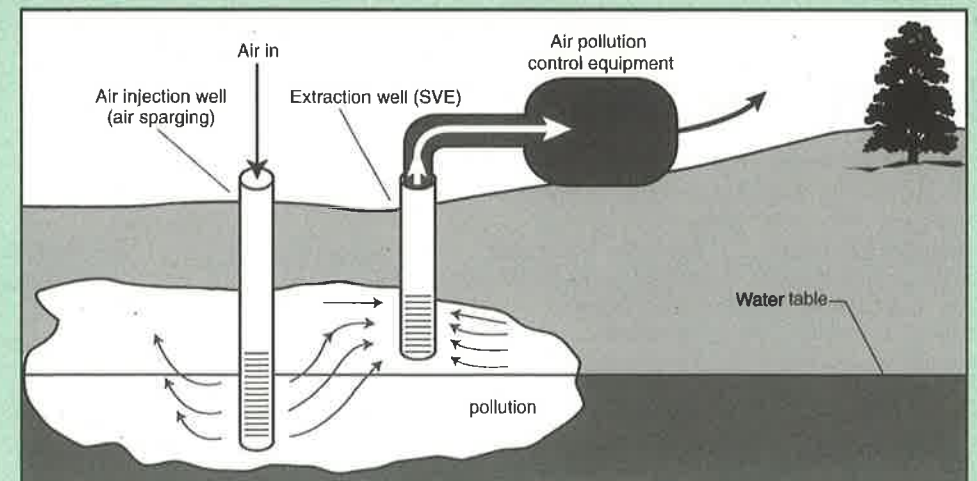
The EBT system is expected to continue in the two treatment areas until Fall 2008. The environmental team will continue to monitor the groundwater and will evaluate the need for additional treatment. The overall trends indicate the levels of chlorinated volatile organic compounds (CVOCs) are decreasing within the two treatment areas. Monitored Natural Attenuation (MNA) is also being used to treat groundwater containing low levels of solvents (CVOCs) in the shallow aquifer beneath the MI.

Cleanup progress is monitored by quarterly groundwater sampling events. The sampling results are compiled into an Annual Operations Report that is reviewed and approved by the Environmental Protection Agency (EPA) and the Tennessee Department of Environment and Conservation (TDEC).

The environmental team is also evaluating locations outside the two EBT treatment areas to determine if MNA will reduce levels in groundwater or if further cleanup is needed. The team submitted a Source Area Evaluation Report to the EPA and TDEC for review and comment. The environmental team plans to conduct a membrane interface probe (MIP) study at the MI in Fall 2008, similar to the MIP study performed at Dunn Field in 2005.

The environmental team will prepare a report following the MIP study and make recommendations to complete the shallow groundwater cleanup on the MI. The EPA and TDEC will review the effectiveness of this remedy at five-year intervals until the remedial goals identified in the Main Installation Record of Decision (ROD) are achieved to ensure the site continues to be safe for future use.

## How an air sparging/SVE system works.



Source: EPA Citizen's Guide to Soil Vapor Extraction/Air Sparging



Air treatment system used with the thermally-enhanced SVE system at Dunn Field.