

The Memphis Depot
Building 144,
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Memphis, TN 38114

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FOR YOUR INFORMATION.....

The Information Repositories are at the following locations:

The Depot, 2163 Airways Blvd., Bldg. 144,
Memphis, TN (901) 544-0613
The Community Outreach Room is located in Building
144. Please call ahead for an appointment to ensure
that we are available to help you.

Memphis/Shelby County Health
Department, Pollution Control Division
814 Jefferson Ave., Memphis, TN
(901) 576-7775
The Pollution Control Division is open Monday
to Friday from 7:30 a.m. to 4:30 p.m.

Memphis/Shelby County Public Library,
Cherokee Branch, 3300 Sharpe Ave.,
Memphis, TN (901) 743-3655
The Cherokee Branch is open Monday to Wednesday
from 10 a.m. to 6:30 p.m., Thursday from noon to
6:30 p.m., and Saturday from noon to 6 p.m.

Hillview Village Neighborhood
Network Systems, 2119 Alcy Rd.,
Memphis, TN 38114 (901) 743-0500
The office is open Monday to Friday from
8:00 a.m. to 5:00 p.m.

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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Memphis, TN 38114
(901) 544-0622

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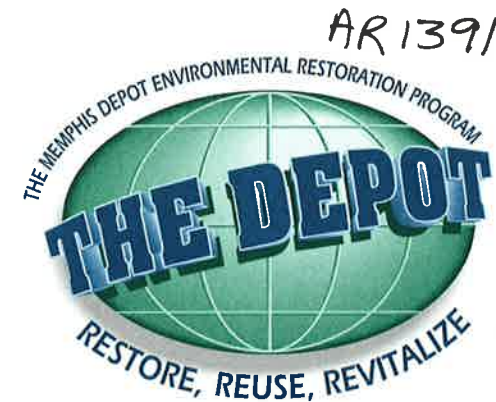
EnviroNews is published by the Memphis Depot to
update the public on the environmental cleanup
program. If you have comments, questions, or
suggestions for future articles, please call
Ms. Alma Black Moore at (901) 544-0613.

Visit the Depot's website at www.ddc.dla.mil/memphis



EnviroNews

Sept./Oct. 2001



Groundwater Investigation:

Memphis drinking water not affected by Depot operations

A comprehensive investigation of the water below the Memphis Depot's Main Installation (MI) and Dunn Field shows that the source of drinking water for the City of Memphis has not been affected by the environmental conditions at the former Depot.

There are now 96 monitoring wells located at the Depot and surrounding areas. Groundwater sampling has been conducted since 1996 as part of the ongoing environmental investigation and cleanup.

Steve Offner, Project Manager for the Depot's environmental contractor, CH2M Hill, told the Restoration Advisory Board (RAB) at the June 2001 meeting that the groundwater investigation has determined the flow direction of groundwater beneath the MI and Dunn Field, the underground geological conditions of these areas and the nature and extent of the environmental conditions.

In his presentation, Offner told the RAB that there are three areas with connections through the clay layers between the shallow aquifer and deeper groundwater aquifers. However, the clay layers also create areas of limited to no groundwater flow around these connections. This protects the deeper aquifers by limiting the amount of groundwater passing through the connections.

Samples for the MI taken from the shallow aquifer (about 80 to 100 feet beneath the ground surface) indicate that groundwater at 20 of the 28 monitoring wells on the MI do not meet health protective standards. This water is not used for drinking.

Samples for the MI taken from the intermediate aquifer (about 150 feet beneath the ground surface) indicate that the groundwater meets or surpasses safe drinking water standards.

Samples taken from the City's Allen Well Field drinking water wells closest to the Depot (about 500 feet beneath the ground surface) indicate no impact from environmental conditions at the Depot.

To assist with the design for the groundwater remedy at the MI, the Depot will install temporary monitoring wells near the connections and in areas where hazardous substances were used or handled. These wells will assist the Depot in determining locations to monitor as the remedy is being implemented and for long-term monitoring. The additional monitoring wells will also ensure that the deeper aquifers are protected from solvents in the shallow aquifer.

Samples for Dunn Field taken from the shallow aquifer indicate that groundwater in 27 of the 56 monitoring wells at Dunn Field meet health-protective standards, and that the drinking water aquifer under Dunn Field is not affected by the environmental conditions in the shallow aquifer.

These groundwater sample results have been reported in Groundwater Monitoring Reports, the MI Remedial Investigation (RI) and the MI Feasibility Study (FS), which are available in the Depot's Information Repositories. Cleanup remedies for the shallow aquifer beneath the MI

NEXT RAB MEETING

Due to the schedule for technical presentations, there will be no Restoration Advisory Board meetings in September or October of 2001.

The next
RAB meeting is
Thursday,
Nov. 15, 2001
at 6 p.m.

The meeting will be held at April House (formerly the "J" Street Cafe) at 2222 Lloyd St. Enter at the Memphis Depot Parkway.
For more information call
(901) 544-0613.

include enhanced bioremediation (see the article on Page 2), deed restrictions, and additional monitoring wells. Long-term monitoring will ensure these remedies are effective at protecting human health and the environment.

The RI for Dunn Field will be completed later this fall and the FS will be completed early in 2002. The Proposed Plan for Dunn Field, which will identify preferred cleanup alternatives, will be completed in spring 2002 and released for public comment.

For more information on the groundwater investigation, please call the Depot's Community Relations Office at (901) 544-0613. □

Soil Vapor Extraction: Test begins on Dunn Field

The Memphis Depot has designed a pilot project to test the effectiveness of a potential cleanup method to reduce solvent levels in soil at Dunn Field.

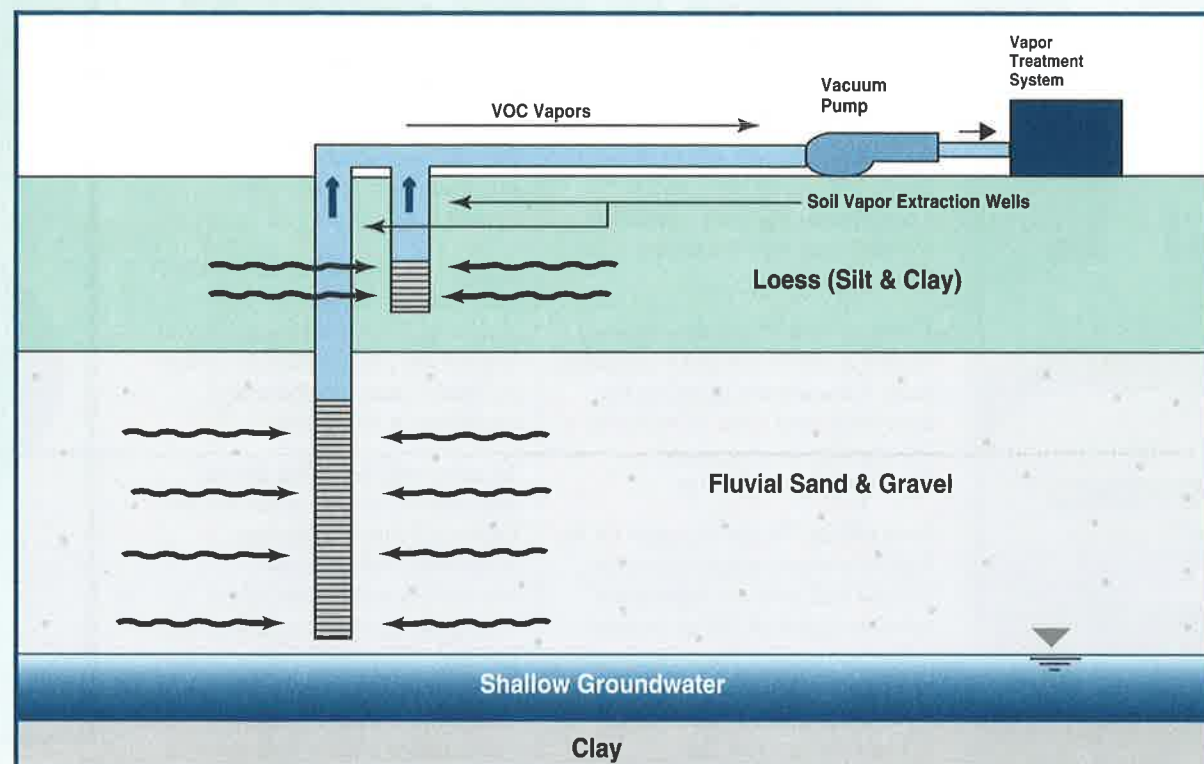
Soil vapor extraction, known as SVE, is one of the most frequently used treatment methods to remove contaminants that evaporate easily from soil. These contaminants include volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs), such as the solvents found at Dunn Field.

SVE pulls air through the soil turning the solvents to vapor. The extraction system then collects the vapor and passes it through a series of filters that remove the solvent. The pilot project at Dunn Field will test the effectiveness of SVE to reduce solvent levels in soil up to 75 feet below the ground surface:

“Vapor and air samples will be collected throughout the test to ensure the safety of the community and

evaluate the effectiveness of SVE as a potential treatment method,” said Clyde Hunt, the Depot’s Remedial Project Manager. “Once we have collected the data from the test, we will then determine if SVE is an effective cleanup remedy in the Feasibility Study for Dunn Field.”

A temporary vapor extraction system and three new monitoring wells will be constructed for the pilot project by the end of October. The project will also use four monitoring wells already in place at Dunn Field. The pilot project is expected to take 14 days in November. □



TAPP grant awarded to Hess Environmental Services

Hess Environmental Services, Inc. (HES) of Memphis has been awarded a Technical Assistance and Public Participation Grant (TAPP) from the Defense Logistics Agency.

The purpose of a TAPP Grant is to provide a mechanism for community members of Restoration Advisory Boards (RABs) to obtain professional technical assistance to help them understand and provide input to environmental restoration programs at Department of Defense sites.

Founded in 1982 by Connie Hess, HES is a privately owned environmental consulting firm located in Memphis.

A licensed engineering firm and a Certified Woman Business/Disadvantaged Business Enterprise, HES has assisted clients in Tennessee, Arkansas, Mississippi and many other states. HES has a team of engineers, geologists, chemists, and environmental specialists with expertise in virtually all areas of environmental compliance and remediation.

As the TAPP contractor for the Memphis Depot, HES will review technical documents and provide assistance to the RAB until July 2002. □

Natural cleanup methods tested at Main Installation

Tiny organisms with an appetite for chemical contaminants will soon be put to work in the groundwater beneath the Main Installation (MI) eating, digesting, and breaking down contaminants into safe, natural compounds.

The process is called enhanced bioremediation, and it is the selected cleanup remedy for groundwater at the Main Installation. The Depot is currently preparing a work plan for a pilot project that will determine how effective enhanced bioremediation will be at reducing contaminants in the groundwater at the MI.

There are two contaminants in the groundwater beneath the MI that the Depot has identified as chemicals of concern: industrial solvents called tetrachloroethene (PCE) and trichloroethylene (TCE). As part of the pilot project, data from other successful bioremediation programs for solvents at other cleanup sites will be studied.

After the Base Realignment and Closure (BRAC) Cleanup Team (BCT) approves the pilot project work plan, the Depot will construct two test sites in the southwest corner of the MI to test different methods of enhanced bioremediation. Construction of the test sites is scheduled to begin in November.

Different natural substances will be added to the groundwater through an injection well to help create the perfect conditions for the organisms and speed up, or enhance, the natural bioremediation process. Vegetable oil made from soybeans will be added to the groundwater at one test site, while other

organic nutrients such as molasses, whey and lactate will be combined with hydrogen at the other site.

“One of our cleanup objectives for groundwater is to reduce the level of PCE and TCE to within the health protective standards,” said Steve Offner, Project Manager for the Depot’s environmental contractor, CH2M Hill. “Enhanced bioremediation is a natural cleanup remedy that protects the safety of the community, environment and our workers. This test will help us evaluate the most appropriate enhanced bioremediation method for the specific conditions at the Depot.”

The test sites will be closely monitored for approximately six months to determine the distance the injected materials travel and the effectiveness of the different substances at breaking down certain amounts of PCE and TCE. Monitoring will also determine how enhanced bioremediation performs in the specific geological conditions at the Depot.

The results will be used to design a full-scale enhanced bioremediation program for the MI that may also be adapted for groundwater cleanup at Dunn Field. A technical memorandum on the results of the enhanced bioremediation pilot project is expected to be completed by the summer of 2002.

For more information on enhanced bioremediation and the Depot’s pilot project, call the Community Relations Office at (901) 544-0613. □

RAB Member Profile:

Diane Arnst

As the Technical Manager of the Pollution Control Section for the Memphis/ Shelby County Health Department, Diane Arnst’s professional expertise serves her well in her new role as a member of the Memphis Depot Restoration Advisory Board (RAB).

In her professional capacity, Arnst makes sure that facilities throughout Shelby County comply with the Clean Air Act and don’t pollute the drinking water aquifer. As a RAB member, she has found the chemical warfare materiel removal project, completed in May 2001, and ongoing groundwater monitoring particularly interesting.

“People are interested in the environmental cleanup projects at the Depot and have followed the cleanup process for several years. Depot community members show lots of pride in making sure the goal of a clean environment is achieved,” said Arnst.

A member of the RAB since February 2001, Arnst served for nine years as the Staff Attorney for the Hamilton County Air Pollution Control Program in Chattanooga, Tennessee, before she joined the Memphis/Shelby Health Department.

A native of suburban Chicago, Arnst enjoys her cat Pilsner, hiking and visiting historic sites around Memphis, especially downtown.

