



THE MEMPHIS DEPOT TENNESSEE

ADMINISTRATIVE RECORD COVER SHEET

AR File Number 908

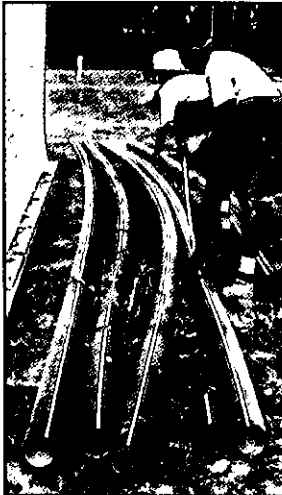
EnviroNews

Summer 2007



Dunn Field:

Dunn Field Source Areas Remedial Action Begins



Environmental contractors cut pipe to connect soil vapor extraction wells to the treatment system.

In June 2007, the environmental team began construction of the first phase of the Source Areas Remedial Action (RA) – Soil Vapor Extraction – to clean up soil and prevent further movement of solvents into the groundwater at Dunn Field.

This remedy is described in the Source Areas Remedial Design (RD) approved by the U.S. Environmental Protection Agency (EPA) and Tennessee Department of Environment and Conservation (TDEC) in April 2007. The environmental team presented the Source Areas RD during a public briefing on May 10, 2007 at the Ruth Tate Senior Citizens Center.

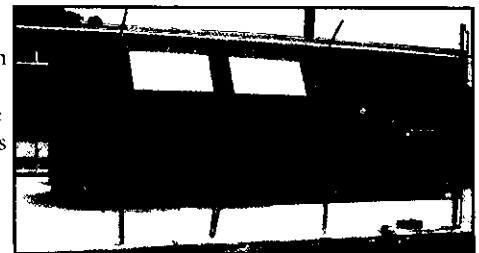
SVE works by pulling air and Chlorinated Volatile Organic Compounds (CVOCs) through the soil to a treatment compound that will filter out the CVOCs. The SVE system will remove CVOCs from the soil that is about 35 feet to about 75 feet below the ground surface. All the work will occur on Dunn Field.

Construction of the SVE system includes installation of seven SVE wells and 10 vapor monitoring points, placement

of the vapor treatment facility, construction of a fence around the treatment facility, and installation of the piping from the individual SVE wells to the treatment facility.

To monitor the performance of the SVE system, the environmental team will collect baseline groundwater samples, monitor the vacuum influence on the SVE wells, sample the air pulled through the soil, and monitor the air around the treatment facility. The environmental team will also sample the soil to make sure the system achieves the remedial action objectives set forth in the Dunn Field Record of Decision (ROD). The SVE system will run for about five years.

Construction of the next phase of the Source Areas RA – Thermal-enhanced SVE – will begin in the Fall of 2007.



Air from the soil vapor extraction wells will pass through filters contained in the treatment system located on Dunn Field.

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

The final Dunn Field Source Areas RD and the Fluvial SVE Remedial Action Work Plan are available in the Memphis Depot Information Repositories for public viewing.



Turpin Ballard of the Environmental Protection Agency addresses questions from the community at the Source Areas Remedial Design public briefing.

Upcoming Meetings

The Memphis Depot Restoration Advisory Board (RAB) will meet on: Thursday, September 20, 2007 • 6 pm

The RAB meeting will be held at the Ruth Tate Senior Citizens Center, 1620 Marjorie Street. The public is encouraged to attend the meeting to learn more about the progress of the Memphis Depot environmental restoration program.

For more information, please call (901) 774-3683.

Five-Year Review Community Notification

The Defense Logistics Agency is conducting a Five-Year Review for the Memphis Depot to determine whether the selected remedies for the Main Installation and Dunn Field are protective of human health and the environment. Please call the Community Information Line at (901) 774-3683 for additional information or to comment on the protectiveness of the selected remedies or the remedial actions at the Memphis Depot.

Main Installation:

Remedial Action Continues on Main Installation

2 In September 2006, the environmental team began injecting an organic nutrient, called sodium lactate, into groundwater wells to treat affected groundwater in the shallow aquifer (approximately 90 feet below the surface) beneath portions of the Main Installation. This is referred to as Enhanced Bioremediation Treatment (EBT).

Thirty-seven injection wells were installed in the southwest corner of the Main Installation (Target Treatment Area [TTA] 1) to introduce sodium lactate into the groundwater. Twelve injection wells were installed in the southeast corner (TTA-2) just west of the Memphis Police Department's Southeast Precinct.

The sodium lactate injections are expected to continue for two years. They will occur every two weeks during the first year and once a month during the second year. The cleanup goals in these areas are expected to be reached by Fall 2008.

In December 2006, the environmental team completed the first quarterly sampling event scheduled for the EBT areas.

The quarterly sample results as well as additional field data gathered by the team provided enough data to determine where

we are in meeting the "operating properly and successfully" status for EBT (See Inset Box).

Monitored Natural Attenuation (MNA) is also being used to treat groundwater containing low levels of solvents or Chlorinated Volatile Organic Compounds (CVOCS) in the shallow aquifer beneath the MI. The cleanup goals in the MNA areas are expected to be achieved by Fall 2015.

The environmental contractors will prepare an Interim Remedial Action Completion Report (IRACR) after the first year of sodium lactate injections have been completed and EBT and MNA have been determined to be operating properly and successfully. The report must be reviewed and approved by the U.S. Environmental Protection Agency (EPA) and Tennessee Department of Environment and

Conservation (TDEC). The approved IRACR will be placed in the Depot's Information Repositories.

EPA and the 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) have been achieved, to ensure the site continues to be safe for future use.

The Main Installation Record of Decision, Remedial Design and Remedial Action Work Plan are available for public review online in the Administrative Record and in the Depot's Information Repositories located at the Cherokee Branch Library and the Memphis Depot Business Park.

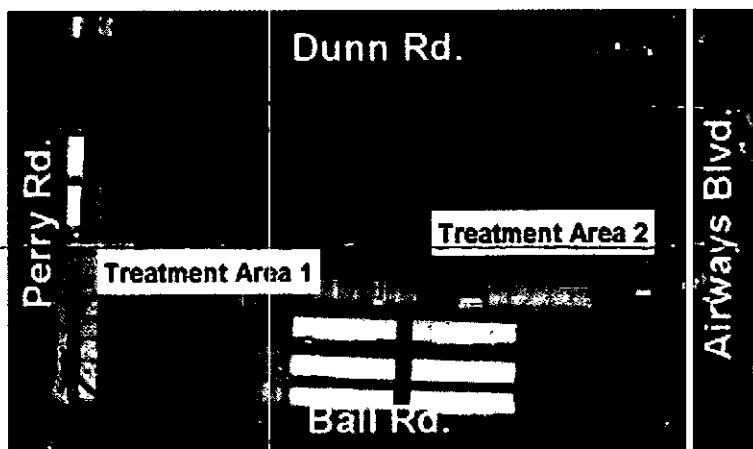
Enhanced Bioremediation Treatment Status of Operating Properly and Successfully

Criteria for Operating Properly have generally been met

- **Well Installation:** Completed installation of the injection wells and performance monitoring wells.
- **Lactate Distribution:** Sodium lactate is present in monitoring wells in the MW-101 area of TTA-1 and in all the TTA-2 monitoring wells.
- **Injection Volume:** The environmental team has met the planned injection volumes.

Criteria for Operating Successfully will continue to be monitored

- **Anaerobic Conditions Created:** Anaerobic conditions have been created at the injection locations and at some down gradient monitoring wells. They will continue groundwater monitoring.
- **Anaerobic Conditions Maintained:** The status of the criteria will be determined through future groundwater monitoring events.
- **Tetrachloroethene and Trichloroethene Concentrations Decrease:** CVOCS concentrations are decreasing. The team will continue groundwater monitoring.



What Are CVOCS?

Chlorinated Volatile Organic Compounds (CVOCS) are substances that evaporate (or 'volatilize') quickly in the air.

CVOCS are found in many cleaning products, fuels and degreasing agents for industrial and household use.

CVOCS are also present in a wide range of common products including gasoline, paint thinner, dry-cleaning agents, and other solvents.

The cleanup program at the former Memphis Depot has made important strides toward our goals in 2007. With remedial actions underway at several locations on the site, the program is now in the final stages of the eight-stage process outlined in the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

So far this year, Remedial Action continued for the groundwater cleanup system at the Main Installation and started for the Soil Vapor Extraction system at the Source Areas on Dunn Field. The draft Off-Depot

Groundwater Remedial Design and Loess/Groundwater Remedial Action Work Plan for the Source Areas at Dunn Field are currently being reviewed by the U.S. Environmental Protection Agency (EPA) and Tennessee Department of Environment and Conservation (TDEC).

There's more work ahead, this year and beyond. The environmental cleanup team has set the following schedule to achieve more of these important program milestones:

Summer/Fall 2007	2008	2009	2010
<ul style="list-style-type: none">• Continue injections to treat affected groundwater in the shallow aquifer beneath the Main Installation• Operate and maintain Soil Vapor Extraction (SVE) at the Dunn Field Source Areas• Continue Dunn Field Off-Depot Groundwater Remedial Design (RD)• Begin Loess/Groundwater Remedial Action (RA) on Dunn Field	<ul style="list-style-type: none">• Complete Off-Depot Groundwater RD• Conduct Off-Depot Groundwater RD Public Briefing• Begin Off-Depot Groundwater RA• Complete Five-Year Review for Main Installation and Dunn Field• Receive Operating Properly and Successfully (OPS) determination from the Environmental Protection Agency (EPA) for the Main Installation RA• Conduct a Public Comment Period for the Finding of Suitability to Transfer (FOST) #5 (remainder of Main Installation)	<ul style="list-style-type: none">• Begin Zero-Valent Iron (ZVI) portion of the Source Areas RA• Continue long-term monitoring for Main Installation and Off-Depot Groundwater RA• Operate and maintain Dunn Field Source Areas SVE	<ul style="list-style-type: none">• Receive OP determination for the Dunn Field Source Areas and Off-Depot Groundwater RAs• Conduct a Public Comment Period for FOST #6 (remainder of Dunn Field)

This technical schedule is based on current projections and may be subject to change as new information is made available through the field work.

As we continue to achieve these milestones on the cleanup program, the Depot's environmental team is committed to keeping the community informed. Study documents and resources are available at our two Information Repositories. The public is also invited to attend meetings of the Restoration Advisory Board (RAB), which are advertised in the local media.

Progress updates will also be shared through community information sessions, media releases, fact sheets and future issues of EnviroNews.

For more information, please contact the Community Relations Line at (901) 774-3683.

Cleanup Moves Forward at Dunn Field

In 2007, the environmental team will complete another Remedial Action Work Plan and the Off-Depot Groundwater Remedial Design for the cleanup of soil and groundwater at Dunn Field.

The team is working in consultation with the U.S. Environmental Protection Agency (EPA) and Tennessee Department of Environment and Conservation (TDEC) to ensure the safest and most effective methods of environmental cleanup at the Depot site.

Loess/Groundwater Remedial Action Work Plan

In addition to the Soil Vapor Extraction (SVE) system recently installed 35 to 75 feet below ground surface in the Fluvial Aquifer (see Front Page), another cleanup technology to be implemented at the Dunn Field Source Areas is thermally-enhanced SVE in the top layer of the soil (Loess).

This remedy is described in the Source Areas Remedial Design (RD) approved by EPA and TDEC in April 2007. The environmental team presented the Source Areas RD during a public briefing on May 10, 2007 at the Ruth Tate Senior Citizens Center.

The Loess/Groundwater Remedial Action (RA) Work Plan provides the procedures necessary to construct and operate the thermal-enhanced SVE system. 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 an underground vacuum system to pull air through the soil, turning the solvents to vapor. The air containing the vapors is fully contained within the system until it passes through a series of filters that remove the solvents. The Loess/Groundwater por-

tion of the Dunn Field Source Areas RA is expected to operate for about one year.

Upon final approval from the EPA and TDEC, the Loess/Groundwater Remedial Action Work Plan will be placed in the Information Repositories for public viewing.

Next Steps:

- Final Work Plan expected to be completed in Fall 2008
- Cleanup activities expected to begin in Fall 2008

Off-Depot Groundwater Remedial Design

The BCT continues to look for the best remedy to clean up the groundwater that has moved off to the west of Dunn Field. The environmental team is currently looking at using Enhanced Bioremediation Treatment (EBT), since it has worked so well on the Main Installation.

The environmental team is now working to complete the Off-Depot Groundwater Remedial Design (RD). The Off-Depot Groundwater RD will include an analysis of the remedy and will provide a detailed set of plans for implementing the remedy.

The BCT began its review of the draft Off-Depot Groundwater RD in June 2007. Upon final approval from EPA and TDEC, the Off-Depot Groundwater RD will be placed in the Information Repositories for public viewing.

Next Steps:

- Final Off-Depot Groundwater RD to be completed in Winter 2008
- Public briefing to be scheduled in early 2008
- Remedial Action Work Plan to be completed in Summer 2008
- Cleanup activities expected to begin in Summer 2008

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DATED MATERIALS - PLEASE DELIVER THIS IMMEDIATELY

Need to check a document or find more information on the environmental cleanup program at the Memphis Depot? You'll find technical documents, meeting minutes, historical files and other information at our two public Information Repositories, located in the Depot community.

Memphis/Shelby County Public Library -

Cherokee Branch

3300 Sharpe Ave.

Mon. to Thurs. 10 a.m. to 6 p.m.

Sat. 10 a.m. to 6 p.m.

Closed Friday and Sunday.

The Memphis Depot Community Outreach Room

2163 Airways Blvd.

Please call ahead for
an appointment: 774-3683

New Documents

The following documents have
been added to the Information
Repositories:

- Dunn Field Source Areas Remedial Design, Rev. 4, April 2007
- Dunn Field Fluvial Soil Vapor Extraction Remedial Action Work Plan, Rev. 1, April 2007
- Administrative Record Update, February 2007

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
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 Relations
Line at (901) 774-3683

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

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