



## Defense Depot Memphis Third Five-Year Review Fact Sheet

### What is a Five-year Review?

The purpose of a five-year review is to determine if remedies at a site are/remain protective of human health and the environment. If any issues that affect current and future protectiveness are found during the five-year review, recommendations are made to address them. The report addresses three major questions:

- Is the remedy functioning as intended?
- Are the exposure assumptions, toxicity data, cleanup levels, and remedial action objectives used at the time of remedy selection still valid?
- Has any other information surfaced that could affect the protectiveness of the remedy?

### Site Chronology

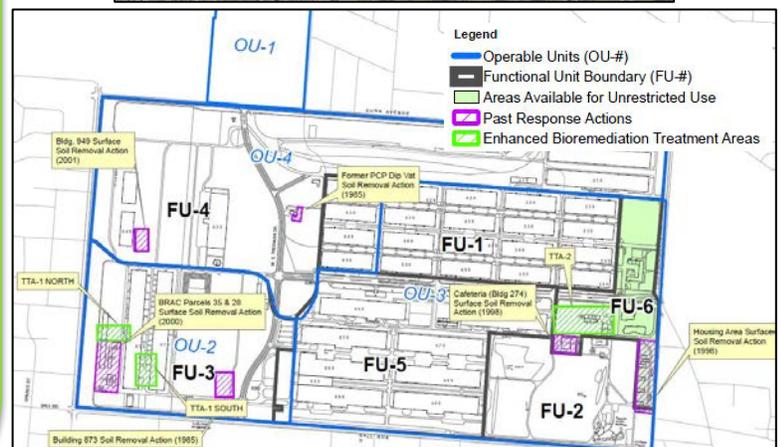
- **1981 – Initial Assessment Study:** Identified site hazards at exposure routes.
- **1992 – National Priorities List (NPL) Listing:** Site placed on NPL and identified as needing a long-term cleanup plan.
- **1997 – Facility Closed:** Depot received closure permits for its air, underground storage tank, stormwater discharge, and Nuclear Regulator facilities.
- **1998 – Initiation of Interim Remedial Action:** Groundwater recovery system installed at Dunn Field, this action was the trigger for the first five-year review.
- **2003 – First Five-Year Review**
- **2008 – Second Five-Year Review**
- **2012 – Sitewide Construction Complete:** Construction of remedies completed and NPL status updated to Construction Complete.

### Site History

The Depot is located in Memphis, Tennessee approximately 5 miles east of the Mississippi River and just northeast of Interstate 240. The property is approximately 632 acres and includes two components: Dunn Field and the Main Installation (MI). The site is located in an area of mixed residential, commercial and industrial land use.

The Depot served as a hub for the distribution of a variety of materials to the U.S. military from 1942 until the facility was closed in 1997. Hazardous substances were also stored and disposed of on site, resulting in soil and groundwater contamination by potentially hazardous wastes, including metals, hydrocarbons, and chlorinated volatile organic compounds.

### Site Map



## Major Developments since Last Five-Year Review

- **Operable Unit (OU) 1/Dunn Field:** Thermal soil vapor extraction was completed in December 2008 and removed 12,500 pounds of volatile organic compounds (VOCs). From July 2007-April 2012 fluvial soil vapor extraction removed 4,045 pounds of VOCs and was shutdown in July 2012. Soil samples met the remedy goals for both systems. From November 2009-June 2012 air sparge/soil vapor extraction removed 77 pounds of VOCs. Long term monitoring of 87 wells is being conducted on a semiannual basis.
- **OUs 2-4/Main Installation:** Long-term monitoring of 112 wells is being conducted on a semiannual basis and additional wells have been installed in the fluvial, intermediate and Memphis aquifers.
- **Sitewide:** Physical construction of all soil and groundwater extraction systems was completed in May 2010 and NPL site status was revised to Construction Complete.

## Issues, Follow-up Actions, and Schedule Dates

These issues do not affect current protectiveness because there is no current exposure to chemicals of concern in groundwater. They don't affect future protectiveness because the remedies have been effective in controlling groundwater contaminants.

- **Groundwater contaminants at OU 1/Dunn Field:** There is potential for rebound in groundwater concentrations of chlorinated volatile organics (CVOCs) at OU 1/Dunn Field following shut down of the fluvial soil vapor extraction system in July 2012. The air sparge/soil vapor extraction system will operate through December 2014 and long-term monitoring will continue through 2020.
- **Groundwater contaminants at OUs 2-4:** There was a rebound in groundwater CVOC concentrations above the level considered safe for consumption at the intermediate aquifer. Water from this aquifer is not used as a source of drinking water, but migration could impact the primary drinking water source for the City of Memphis. Department of the Army will restart enhanced bioremediation treatment in November 2012 and long-term monitoring will continue through 2016.

## Protectiveness Summary

OUs 1-4

• **Protective**

Sitewide

• **Protective**

Next Five -  
Year Review

• **January 2018**

### Contact Information

All publicly available documentation including the complete five year review is located at:

<http://www.epa.gov/region4/superfund/site/fedfacs/memdpttn.html>

