



# THE MEMPHIS DEPOT TENNESSEE

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## ADMINISTRATIVE RECORD COVER SHEET

AR File Number 938

**FINAL**

**Memphis Depot  
BRAC Cleanup Team  
Meeting Minutes**

**5 June 2008**

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### ***Previous Meeting Minutes and Action Items***

The BRAC Cleanup Team (BCT) approved and signed the minutes from the 3 April 2008 meeting.

### ***Dunn Field***

#### **Source Areas Fluvial Soil Vapor Extraction (SVE) System**

e<sup>2</sup>M collected quarterly samples in April 2008 and is preparing the Quarterly Report. The Fluvial SVE system removed 500 pounds (lbs) of Volatile Organic Compounds (VOCs) between 1 February 2008 and 31 May 2008 for a total mass removed of 2,350 lbs since system start up in July 2007. e<sup>2</sup>M anticipates submitting the Quarterly Report on 18 June 2008.

A rebound test of the Fluvial SVE system was conducted from mid-March through mid-May. Preliminary results indicated rebound in the vapor monitoring points (VMPs) and the SVE wells, although no changes in Fluvial SVE system operations are planned at this time. The results of the test will be documented in a report. EPA suggested that e<sup>2</sup>M include an additional graph in the

next Quarterly Report that expands the vertical scale to show in more detail the change in concentrations.

### **Groundwater Interim Remedial Action (IRA)**

e<sup>2</sup>M collected semi-annual groundwater samples in April 2008 and is currently preparing the IRA Semi-Annual Groundwater Sampling Report with an anticipated submittal date of 18 June 2008.

As discussed at the last meeting, e<sup>2</sup>M replaced the multiple permeable diffusion bags (PDBs) with a single PDB in the center of the saturated zone after collecting the groundwater samples. Also as discussed, e<sup>2</sup>M sampled all the monitoring wells installed by CH2M Hill during the Intermediate Aquifer Investigation.

Preliminary sample results indicate that concentrations within wells on Dunn Field are below 1,000 parts per billion (ppb). The highest concentration for total VOCs is 240 ppb, which is below the level at which Zero-Valent Iron (ZVI) would be injected into the groundwater.

The Source Areas RAWP proposed installing additional monitoring wells to better delineate the area with groundwater levels at or above 1,000 ppb that would be treated by ZVI. Since concentrations are below 1,000 ppb on Dunn Field, no additional monitoring wells are required to be installed.

Concentrations have reduced within monitoring wells MW70 and MW77 that have historically been high. Concentrations in off-Depot wells indicate no continuing source and no dense non-aqueous phase liquids in the groundwater. The concentration trends indicate that the plume is shrinking.

EPA noted that if ZVI will not be injected at Dunn Field based upon the concentrations then e<sup>2</sup>M should ensure that the Dunn Field Revised Proposed Plan and ROD Amendment clearly state that ZVI is a contingency remedy. The Source Areas RAWP includes ZVI injections as a contingency action, and e<sup>2</sup>M will ensure this contingency is clear in the Revised Proposed Plan and ROD Amendment.

e<sup>2</sup>M's evaluation of the Fluvial SVE system influence on groundwater concentrations identified that the system is having a significant influence on Dunn Field with more impact on the northern section than on the southern section.

Concentrations are also reducing within monitoring wells within the middle of the plume extending out from Dunn Field. e<sup>2</sup>M contributes reduction of groundwater concentrations in some of the monitoring wells closest to Dunn Field to the Fluvial SVE system. e<sup>2</sup>M will continue to monitor these wells to evaluate the impact of the Fluvial SVE system.

Regarding changes to the IRA system, e<sup>2</sup>M recommends ceasing operations of the IRA system at RW5 through RW9 as there are no concentrations exceeding 50 ppb (the threshold for operating the system). The BCT concurred with turning off RWs 5 through 9. e<sup>2</sup>M will not mothball the system at this time, but will keep systems operational and tested routinely in the event groundwater samples indicate the need to restart RWs 5 through 9. It is anticipated that the effluent discharge from the remaining wells will continue to be below the Industrial Wastewater Discharge Agreement limits.

The next groundwater sampling event is planned for August 2008 during operation of the thermal-enhanced SVE system. The next IRA semi-annual groundwater sampling event will be in October 2008.

**AI: EPA/TDEC to provide a letter of approval for the IRA Annual Report by 13 June 2008.**

**Source Areas Loess/Groundwater Thermal SVE**

Construction and the start-up checklist for the thermally-enhanced SVE system are complete and the system is operating. Terratherm has raised the temperature in the heater wells slowly beginning on 27 May 2008 and is now holding the heater well temperature at 1,000 degrees.

Wireless temperature monitors are spaced at 5 feet intervals and all indicate heat radiating from the heater wells. The ramp-up phase for most of the soil within the treatment area to reach the treatment temperature is about 50 days. Soil in the central treatment area could take up to 90 days to reach treatment temperature. Over the next few weeks, the subcontractor will optimize the heater well temperature to maintain soil temperature at 190-210 degrees F.

Condensate sample results indicate an acidic pH. e<sup>2</sup>M is draining the condensate and buffering it with cooling tower water prior to discharge via the IRA discharge system.

The team discussed the potential for CVOs to migrate to shallower depths during operation of the thermally-enhanced SVE system (based upon similar concerns from a site in Paducah, KY that operates a thermally-enhanced SVE system). Mr. Holmes clarified that negative pressure is being created within all the SVE wells and there is sufficient pneumatic control to pull contaminants to the SVE wells. Confirmation sampling is currently planned in the top 3 feet of soil in 3 locations with known upper-level contamination. e<sup>2</sup>M will evaluate whether additional samples are needed based on observations during the remedial action and make recommendations to the team accordingly.

**AI: TDEC to provide a letter of approval for the Rev. 3 Loess/Groundwater RAWP by 13 June 2008.**

**Revised Proposed Plan/ROD Amendment**

e<sup>2</sup>M submitted the Rev. 1-1 Revised Proposed Plan to the BCT on 20 May 2008. BCT agreed to provide comments by 30 June 2008 in order to initiate the public comment period 1 August with a public briefing on 26 August 2008. The BCT noted that the next revision must address the potential for not injecting ZVI if the groundwater does not meet the criteria. e<sup>2</sup>M will clarify that the ZVI is a contingency remedy.

The ROD Amendment is on schedule for submittal to the BCT on 16 July 2008. e<sup>2</sup>M will also clarify the ZVI issue in the ROD Amendment.

**Northeast Off-Depot Plume**

TDEC has drafted an Expanded Site Investigation (ESI) work plan that is undergoing internal TDEC review. Mr. Woods provided copies to the project team. The purpose of the ESI is to close a groundwater data gap between MW128 and MW130 and to determine if Cintas is the potential source of the contamination. TDEC will install additional monitoring wells and conduct a passive soil gas survey in the Cintas area and in other areas (Glory Circle and Wabash Avenue). TDEC anticipates field work to begin in July 2008.

Mr. Dobbs approved the project team reviewing the draft ESI work plan and providing comments.

If groundwater sampling results indicate contamination in the newly installed wells, then TDEC will continue the investigation. Mr. Woods will have TDEC produce and will provide to the team a potentiometric surface map to include monitoring wells to be installed during the ESI as well as those installed during the Production Specialties and Wabash Avenue investigations.

The team discussed various scenarios for addressing the contamination if a responsible party is not identified. Mr. Woods indicated that if the source is not within 2 miles of a window to the Memphis Sand aquifer, then groundwater will not score high enough on the hazard ranking system to place the plume on the National Priorities List and will not receive funding for clean up.

Mr. Ballard discussed the issue of transferring property over a co-mingled plume with the EPA legal department. Once the plume is on Department of Defense (DoD) property, it becomes DoD's plume. Mr. Ballard suggested that Mr. Dobbs discuss the issue with the DoD legal department and ask how the issue has been addressed at other sites.

**AI: TDEC to provide upon completion a potentiometric surface map that includes all monitoring wells to be installed during the ESI as well as those installed during the Production Specialties and Wabash Avenue investigations.**

**AI: Project team to review TDEC's draft ESI work plan and provide comments by 27 June 2008.**

### ***Off-Depot Groundwater Remedial Design (RD)***

#### **Rev. 0 Final (100%) Off-Depot Groundwater RD**

CH2M Hill submitted the Rev. 0 Final (100%) Off-Depot Groundwater RD to the BCT on 17 May 2008.

Mr. Ballard reported that EPA Headquarters and the Department of Army (DA) continued to discuss the Land Use Control Implementation Plan (LUCIP) and continued to disagree about including EPA checklist item #10. Mr. Dobbs will continue to work with DA to resolve the issue.

TDEC has not yet finalized requirements regarding vapor intrusion monitoring as discussed in the last BCT meeting. Mr. Dobbs reported he has received, and will distribute to the project team, a draft Tri-Services Agreement regarding requirements to perform vapor intrusion monitoring. CH2M Hill will include the agreement in the Off-Depot Groundwater RD as a reference.

**AI: Mr. Dobbs to make a decision regarding LUCIP language by 16 June 2008.**

**AI: Mr. Dobbs will distribute the draft Tri-Services Agreement regarding vapor intrusion monitoring to the team by 13 June 2008.**

### ***Main Installation***

#### **Remedial Action (Enhanced Bioremediation Treatment (EBT))**

e<sup>2</sup>M submitted the Annual Operations Report for internal review and is currently incorporating comments. e<sup>2</sup>M anticipates submitting the report to the BCT on 20 June 2008. e<sup>2</sup>M is evaluating the use of a more long-term substrate as well as bioaugmentation in future injections. The planned injection period ends in August 2008.

#### **Long Term Monitoring (LTM)**

e<sup>2</sup>M is preparing a draft report for submittal on 26 June 2008.

#### **Main Installation Source Area Evaluation**

e<sup>2</sup>M submitted the MI Source Area Evaluation Work Plan to the BCT on 3 April 2008 with comments due on 2 June 2008. EPA and TDEC are still reviewing. TDEC agreed to provide comments by 13 June 2008. Upon completion of field work, e<sup>2</sup>M will provide recommendations.

### *Miscellaneous*

#### BRAC Cleanup Plan (BCP) Version 11 Master Schedule Review

The BCT agreed to provide Rev. 1-1 Revised Proposed Plan comments by 30 June 2008 in order to start the public comment period on 1 August 2008 with the public comment briefing on 26 August 2008.

#### *Upcoming BCT Meetings*

The next BCT meeting is tentatively scheduled for 24 July 2008 at the CH2M Hill office in Atlanta, GA. The project team meeting will begin the afternoon of 23 July 2008. Meetings are also tentatively scheduled for 26 August and 9 October 2008 in Memphis, TN. The project team meetings will begin the afternoon before the BCT meetings.

#### *Upcoming Community Meetings*

The Dunn Field Revised Proposed Plan public comment meeting is tentatively scheduled for 26 August 2008. A RAB meeting is tentatively scheduled for 9 October 2008.



7-24-08

MICHAEL DOBBS

DATE

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BRAC Environmental Coordinator  
BRAC Cleanup Team Member



7/24/08

TURPIN BALLARD

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Environmental Protection Agency  
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**FINAL PAGE**

**ADMINISTRATIVE RECORD**

**FINAL PAGE**