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# THE MEMPHIS DEPOT
# TENNESSEE

## ADMINISTRATIVE RECORD
## COVER SHEET

AR File Number 946

**FINAL**

# Memphis Depot
# BRAC Cleanup Team
# Meeting Minutes
# 24 July 2008

| BRAC Cleanup Team | Organization | Phone/email |
|---|---|---|
| Michael Dobbs | Defense Logistics Agency (DLA)/Defense Distribution Center (DDC) DDC-DES-EE | 717.770.6950 |
| Turpin Ballard | Environmental Protection Agency, Region IV (EPA) | 404.562.8553 |
| Jamie Woods | Tennessee Department of Environment and Conservation, Division of Remediation (TDEC-DoR) | 901.368.7910 |
| **Project Team** | **Organization** | **Phone** |
| Brian Renaghan | Air Force Center for Environmental Excellence | 210.536.7595 |
| Angela Clark | $e^2M$ | 404.799.1046 |
| Tom Holmes | $e^2M$ | 404.237.3982 |
| Denise Cooper | $e^2M$ | 901.774.3681 |
| Bruce Railey | Corps of Engineers – Huntsville | 256.895.1463 |
| David Nelson | CH2M Hill | 678.530.4250 |
| Mike Perlmutter | CH2M Hill | 678.530.4271 |

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

The BRAC Cleanup Team (BCT) approved and signed the minutes from the 5 June 2008 meeting.

***Dunn Field***

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

$e^2M$ distributed Fluvial SVE Operations Summary #6 to the BCT on 14 July 2008 for operations from 2 February 2008 through 2 May 2008. As of 2 May, the Fluvial SVE system had extracted 2,363 pounds (lbs) of chlorinated volatile organic compounds (CVOCs) since operations began on 25 July 2007. The Operations Summary includes the results of the rebound test conducted during March and April 2008.

$e^2M$ continues to collect weekly photo ionization detector (PID) measurements to estimate VOC concentrations. As expected, PID measurements in SVE B, C and D wells have increased since starting the Thermal SVE system. Quarterly samples were collected 17 July 2008 and the results will be provided in the next Operations Summary.

**Interim Remedial Action**

$e^2M$ turned off RWs 5 through 9 as agreed at the 5 June 2008 BCT meeting. The discharge rate dropped from approximately 60 to 10 gallons per minutes (gpm). The shut-down recovery wells are being maintained in case they need to be restarted.

Quarterly effluent samples were collected on 7 July 2008, and the results will be provided in the next IRA Operations Report. Turning off RW 5 through 9 is estimated to reduce the sanitary sewer discharge fee by about 85% on a per gallon basis and the electricity bill by about 50%. The next sampling event is scheduled for October 2008.

**Source Areas Loess/Groundwater Thermal SVE**

The Thermal SVE system has reached day 54 of heating and is near the end of the initial heating phase. The system is about half way through the treatment period and is now entering the target temperature phase where soil in the center of the treatment areas will reach the target temperature of 90 to 100 degrees.

The SVE system has removed about 3,500 lbs of CVOCs to date. The combination of the Fluvial SVE system and the Thermal SVE system has removed about 6,000 lbs of CVOCs.

The power used by the system is just below the target power usage. The remedy is on schedule to achieve the target temperature for all treatment areas, except Treatment Area 3 (TA3), before 9 September 2008. $e^2M$ and the subcontractor have discussed how to increase the soil temperature in TA3 and will direct more power to the area to the extent feasible.

The work plan calls for soil samples to be collected at about day 80 of heating. Depending upon the sample results, some heaters may be turned off. The work plan calls for additional soil samples to be collected at the end of 105 days of heating, which is 9 September 2008, to determine if the soil remedial goals (RGs) have been achieved. The goal of the sampling is also to determine if there is a difference between results from samples collected at day 80 and collected at day 105. The sample results will enable $e^2M$ to recommend whether the Thermal SVE system should operate for an additional 30 days, as allowed in the work plan.

$e^2M$ is reviewing the temperature data and results of vapor samples from each Treatment Area. Based on the review, $e^2M$ will determine whether this initial sampling round will include all planned samples locations or only selected locations in each treatment area.

$e^2M$ anticipates that the system will remove most of the contaminant mass during the 46 days of the target temperature phase. Vapor sample results should peak and then decline as mass is removed during this phase. During the 30-day cool down period, the SVE system will continue to operate to remove additional CVOCs.

If the soil RGs are not achieved after heating is complete, the Source Areas Remedial Action Work Plan flow chart allows for the team to evaluate alternative remedies, alternate RGs, or a Technical Impracticability waiver.

**AI: EPA to provide letters with signature for Rev. 3 Loess/GW RAWP and for 2007 IRA Annual Report.**

**AI: $e^2M$ to notify BCT of actual start date of Thermal SVE soil sampling event.**

**Dunn Field Revised Proposed Plan/Record of Decision Amendment**

$e^2M$ received EPA and TDEC comments on the Rev. 1.1 Revised Proposed Plan (RPP) and submitted the responses to comments. The team reviewed the comments.

$e^2M$ submitted the Rev. 0.1 Dunn Field Record of Decision (ROD) Amendment on 1 July 2008 with comments due 29 August 2008. Based on RPP comments, the ROD Amendment will need to be revised to state that the only fundamental change is Air Sparging (AS)/SVE system.

The team discussed the RPP. The team determined the need to clarify text regarding sample results collected from the compliance well network immediately down gradient of the AS/SVE system to state that concentrations must be at or below 50 parts per billion (ppb) and to clarify the rationale for determining the length of the AS/SVE system.

Since additional revision was necessary to include the 50 ppb and AS/SVE length information in the RPP, the team agreed to revise the RPP and ROD Amendment schedule, including the public comment period and public meeting scheduled for August (but still maintaining the master schedule). The team also agreed that the ROD Amendment needed clear end points for achieving Operating Properly and Successfully in order to move forward with the remedial action and transfer the property.

**AI: Internal team to review the Dunn Field ROD for any additional changes and prepare to discuss with BCT.**

**AI: $e^2M$ to prepare and submit a schedule for the internal team to resolve the RPP/ROD Amendment issue.**

**Northeast Off-Depot Plume**

TDEC has not received EPA approval on the Extended Site Investigation work plan, so it is still open for comment by the team.

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

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

CH2M Hill received EPA comments on 22 July, but has not received TDEC comments. Mr. Woods reported that he is awaiting approval from TDEC headquarters to release the comments and that he will work to expedite the approval process.

The team reviewed the EPA comments. The team discussed the Land Use Control Implementation Plan (LUCIP) language. Mr. Dobbs directed CH2M Hill to revise the language to be consistent with the EPA LUCIP checklist. CH2M Hill will revise and submit the LUCIP to Mr. Dobbs and EPA.

Since it may be some time before TDEC's investigation of the northeast off-Depot plume identifies a potentially responsible party, the internal team will discuss options for remediating the northeast off-Depot plume and provide the options for Mr. Dobbs. No change will be made to the language regarding the northeast off-Depot plume in the Off-Depot Groundwater RD.

Based on a meeting with Memphis Light, Gas and Water, the AS/SVE treatment building location will move to the west side of treatment area. The western most point of the treatment pad will be about 50 feet from the back fence of the closest neighbor. $e^2M$ measured sound levels at the Fluvial SVE treatment building and sound levels at 60 feet from the treatment building were at 60 decibels, which is below the level considered a nuisance by local noise ordnances.

**AI: TDEC to provide comments on the Rev. 0 (100%) Off-Depot Groundwater RD by 1 August.**

**AI: Upon receipt of TDEC comments, CH2M Hill to prepare and submit for M. Dobbs signature a Request for Extension letter regarding Rev. 1 (100%) Off-Depot Groundwater RD submittal date. Just cause: receipt of TDEC comments after the scheduled due date.**

**AI: Internal team to prepare written rationale for the 50 ppb treatment objectives and the length of the AS/SVE and provide to BCT.**

**AI: CH2M Hill to provide D. Cooper with 1 hard copy of the Rev. 0 (100%) Off-Depot Groundwater RD for the RPP administrative record.**

**AI: CH2M Hill to send revised LUCIP to M. Dobbs and T. Ballard.**

***Main Installation***

**Remedial Action (Enhanced Bioremediation Treatment [EBT])**

$e^2M$ is preparing the Annual Report and will submit it to the BCT soon. $e^2M$ reviewed elements of the Annual Report. August will mark two years of sodium lactate injections.

$e^2M$ will continue injections until the end of 2008. During that time, $e^2M$ will double the sodium lactate concentrations and inject a cellulose material as a long-term donor to aid the number of microorganisms. $e^2M$ anticipates the cellulose will remain near the injection points and improve anaerobic conditions in some injection areas (MW-21 area). $e^2M$ also recommended, and the team agreed, to add biological enhancements beginning in August.

In May 2008, $e^2M$ began injecting sodium lactate into monitoring wells at the more distant locations where sample results indicated no reductive dechlorination was occurring. Reductive dechlorination is occurring in the Treatment Areas, but at the end of the two-year mark contaminant levels will not have achieved the RGs.

**Long Term Monitoring (LTM)**

$e^2M$ submitted the April 2008 LTM sampling results memorandum to the BCT on 8 July 2008. All the LTM wells will now be sampled on a semi-annual or annual basis. The next sampling event is scheduled for October 2008.

**Main Installation Source Area Evaluation**

$e^2M$ is preparing the MI Source Area Investigation work plan based on the recommendations contained in the MI Source Area Evaluation Report submitted to the BCT on 3 April 2008. Field work is scheduled to begin at the end of August 2008 and will continue for about two months. $e^2M$ will use the investigation results and the findings from the additional sodium lactate injections and bioaugmentation to develop recommendations for the MI Remedial Action.

Mr. Holmes asked if EPA and TDEC had any comments regarding the MI Source Area Evaluation recommendations, as they had provided no comments on the document. EPA had no comments.

The team discussed the basis for the sampling locations that is to cover a large part of the additional plumes, especially where there is little information regarding a potential source area. The membrane interface probe (MIP) points will be installed on a 30 to 50-foot grid depending on the area.

The work plan will include a decision chart to determine areas for additional sampling. The focus of soil samples will be on MIP points with the highest electron capture detector responses.

***Upcoming BCT Meetings***

**The next meetings are scheduled for 26 August in Atlanta, GA, and 9 October 2008 in Memphis, TN. The 26 August meeting is an informal team meeting for the purpose of discussing changes to the Revised Proposed Plan, ROD Amendment and LUCIP. The 9 October meeting is a BCT meeting, with the project team meeting the afternoon preceding the BCT meeting.**

**AI: $e^2$M to provide J. Woods with steam incident press release and fact sheet.**

10/9/08

MICHAEL DOBBS — DATE
Defense Distribution Center
BRAC Environmental Coordinator
BRAC Cleanup Team Member

10/9/08

TURPIN BALLARD — DATE
Environmental Protection Agency
Federal Facilities Branch
Remedial Project Manager
BRAC Cleanup Team Member

10/9/08

JAMIE WOODS — DATE
Tennessee Department of Environment and Conservation
Memphis Field Office
Division of Remediation
Environmental Project Manager
BRAC Cleanup Team Member

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