

**PROJECT REVIEW MONTHLY CALL SUMMARY**  
**FORMER DEFENSE DEPOT MEMPHIS, TENNESSEE**  
**15 September 2015**  
**10:30-11:45 AM ET**

**LOCATION:** Conference Call

**ATTENDEES:**

Army, Base Realignment and Closure Division (DAIM-ODB): Carolyn Jones

USACE: Tulsa - Tyler Jones

CALIBRE: BEC - Joan Hutton

TDEC Division of Remediation, DDMT Project Manager: Jamie Woods

U.S. Environmental Protection Agency, Region 4, DDMT Project Manager: Diedre Lloyd

HDR EOC: Tom Holmes

**GENERAL**

No items

**MAIN INSTALLATION**

**Remedial Action** - No current remedial action

**Supplemental Remedial Investigation/Focused Feasibility Study**

Mr. Holmes discussed preliminary findings for SRI Phase 1 including results for the final three wells installed in July. Draft figures, distributed prior to the meeting, were reviewed.

- Top of Clay - cross-section locations shown on the map are to be updated to include the new wells and additional cross-sections may be created. Features of interest were the higher elevation of the clay which forms a ridge along the southern boundary, the NE-SW trending channel in the NE MI and the trough in the central MI. The final three wells did not change the map presented previously.
- Groundwater Elevations – The water levels in the two IAQ wells (MW-262 and MW-273) installed near the NW MI indicate groundwater flow was to the north rather than to the northwest as previously indicated. The elevation contours in the south-central MI near MW-271 and MW-272 indicate groundwater flow is to the south but the elevations could be shown with closed contours indicating a sink with groundwater leakage into the IAQ. Some wells in the area penetrated sands typical of the IAQ. Mr. Woods asked if the clay was tagged in the borings. Mr. Holmes replied “Yes” and also noted that the data was still being reviewed. Ms. Lloyd asked if boring logs would be provided in the report; Mr. Holmes replied boring logs and well diagrams would be included.
- Concentration isopleths maps for PCE, TCE, cDCE and CT were discussed. Mr. Holmes noted that well symbols would be changed to reflect the groundwater concentrations as for the LTM wells shown.
  - The two SRI IAQ wells (262 and 273) were non-detect (ND) for all CVOCs.

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- SRI wells upgradient of identified plumes had elevated CVOCs at MW-263 (TCE) North-central plume, MW-267 (PCE, TCE and CT) TTA-2, and MW-269 (PCE) TTA-1N.
- MW-270 on the southern MI boundary had unexpectedly high concentrations of TCE (270 µg/L) and cDCE (122 µg/L). The surrounding wells have low concentrations of TCE and cDCE from ND to near the RL. The groundwater contours indicate MW-270 is not downgradient of TTA-2 and thus the high cDCE concentration is different from other areas at the MI where cDCE was at low concentrations until EBT began.

Mr. Holmes noted that SRI field work had extended 11 weeks past the projected end date, primarily due to time required to obtain off-site access. The report preparation is more involved than originally planned, but that should aid preparation of the final SRI report. Adjusting the report schedule for the extension in field work, the report would be due October 16 and is expected to be completed by the end of October.

#### **DUNN FIELD**

**Remedial Action** - FSVE system shut down in 2012. AS/SVE system operating.

The AS/SVE system is in full operation for the month of September with the AS manifold open (for 12 hours per day) and one blower operating 24 hours per day, with the two blowers alternating. Minor repairs have been made to the equipment but there has been no system down-time recently.

Mr. Holmes noted that EPA and TDEC comments on the quarterly report submitted in July were due 29 September.

#### **Offsite Plume**

Mr. Woods discussed his review of the HRS scoring for the Cintas site. Cintas was recommended for the NPL based on results of the initial SI, primarily due to the DCE concentration in groundwater. However, the results of the Expanded SI, including the potentiometric map and the soil gas survey results, were considered to indicate the Cintas site was not responsible for CVOC concentrations in MW-130, immediately upgradient of Dunn Field. Mr. Woods noted there were discussions with the contractor performing the ESI regarding the conclusion and differences of opinion regarding the decision; the validity of the *Gore-Sorber*<sup>TM</sup> soil gas survey data was also questioned. Mr. Woods stated that he would provide the ESI report to the project team.

Mr. Woods stated that the Cintas building had been demolished with the building slab left in place. TDEC is planning to request funds for additional SI at Cintas to include a new soil gas survey (*Beacon*). Mr. Woods stated he had greater confidence in the soil gas sampling procedure/equipment to be used and that sample locations beneath the slab should provide useful data. Mr. Woods requested Ms. Lloyd's assistance in supporting the importance of additional sampling at Cintas and she agreed to discuss it with EPA staff involved in the funding decision.

Ms. Lloyd stated that EPA needs definitive proof of off-site contamination and that an EPA contractor is reviewing the off-site plume data. Ms. Hutton stated that historical data from DDMT wells, especially high CVOC concentrations at MW-128, adjoining the Cintas property, supported a

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contaminant source in that area and should be factored in by the regulators. Ms. Hutton will provide laboratory reports for the referenced groundwater data.

Ms. Lloyd stated the additional soil gas survey was a good starting point, but additional data would be needed. She considered the data from the four wells to be limited. (Note: There are two remaining off-site DDMT wells in the area, MW-129 and MW-130; the other two wells, MW-65 and MW-128, have been abandoned.) Ms. Lloyd suggested Army consider installing additional wells after the soil gas survey.

### **LONG TERM MONITORING**

LTM continuing with 99 wells on the MI and 86 wells on Dunn Field/Off Depot Area.

Ms. Lloyd stated EPA comments on the April 2015 LTM Report were near completion and would be submitted in the next few days. Mr. Holmes noted that EPA and TDEC had been asked to consider whether plume delineation was considered sufficient in their review and EPA was asked to clarify their concern on well classification. Mr. Holmes asked that Ms. Lloyd make comments as detailed as possible to aid in preparing a response.

Mr. Holmes noted that responses to Mr. Woods' TDEC comments were provided as a meeting hand-out. The comments mainly requested clarification on changes from past LTM events (MCL exceedances and CVOC concentrations above 50 µg/L). The requested information was provided in the comment responses and Mr. Holmes stated similar comparisons would be provided in the annual LTM report. The annual report text will also be reviewed for clarity in response to a separate TDEC comment.

Mr. Holmes stated that next LTM sampling event would begin in early October. The field staff will travel to Memphis on 1 or 2 October; the field work will require two days for the water level sweep and about five days for sampling.

### **OTHER ISSUES**

Mr. Holmes stated LUC Annual Site Inspection Report comments are due 5 October. Ms. Lloyd was not sure if she would submit comments on the document.

### **Site Management Plan**

Mr. Holmes stated preparation of the 2016 Site Management Plan (SMP) had begun. The FFA requires submittal to EPA and TDEC by 1 December and there is a 30 day review period, in contrast to the 60-day period for other documents. The content is fairly standardized and will be similar to the 2015 SMP with some changes to the Site Completion section. The issues affecting site completion are presented in order to seek consensus on moving site restoration forward. Mr. Holmes stated that the identified issues were 1) Off-site Plume, 2) changes to the MI remedy which is the focus of the SRI/FFS, and 3) the MI vapor intrusion (VI) study. Mr. Woods agreed that those were the three main issues.

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## **Vapor Intrusion**

### Soil Investigation Results

Mr. Holmes reviewed results of the soil investigation performed in 2008, which will be considered in conducting the VI study. The RI did not identify significant CVOC soil contamination on the MI; CVOCs were listed as contaminants of concern for groundwater only. The groundwater contamination is considered to result from small spills at several locations on the MI with some potential off-site impacts as well.

Following the initial EBT in 2006-2009, Source Area Investigation (SAI) was performed in order to identify source areas for remediation to prevent continued groundwater impacts. The plumes were taken as the indicators of overlying soil contamination and the upgradient portions of the plumes were reviewed for potential sources and investigation grids were established. The soil remediation goals (RGs) from the Dunn Field ROD were used to screen the sample results because the proposed property use was similar and the MI ROD did not include remedial action objectives or cleanup goals for VOCs in soil.

The SAI hand-out included a summary of the number of samples collected and the samples that exceeded RGs, a map of the MI with the plumes outlined and the sample grids, and maps with results for each area. The five sample locations with results above RGs are located in two areas, one above the west-central plume and the other above the TTA-2 plume. These two areas would be considered the worst-case analysis for the MI.

Mr. Holmes noted that the CVOCs detected in groundwater were sufficiently volatile and toxic to warrant review of potential exposure. The conceptual model includes contamination in the loess and in the underlying groundwater. A previous study at Dunn Field indicated the loess provides a good barrier to VI from groundwater. There is potential for VI from soil contamination, even though the loess is fine-grained with low permeability. If vapor samples are collected for the VI study, the SAI locations with the highest CVOC concentrations would be appropriate locations.

### VI Process

Ms. Hutton provided handouts with a summary of the VI study process to be used at DOD facilities and flowcharts from recent EPA and TDEC guidance documents. Ms. Hutton stated that, since Army was the lead agency, the DOD guidance had to be followed but wants to identify TDEC and EPA concerns in order to address them prior to submitting documents for review. Ms. Hutton noted that the VI study was a component of the protectiveness statement for the next five-year review.

Ms. Hutton went over the DOD guidance and noted that there was significant overlap but activities may occur in a different order. Ms. Lloyd expressed concern about DOD Step 3, Screening Level Assessment and whether it included sample collection; she was also concerned about using 'old' data such as that from the SAI. Ms. Hutton noted that DOD Step 4, Site-Specific Evaluation included sampling. Ms. Lloyd recommended an in-person meeting to review the scope of the VI study and would include Mr. Bentkowski. Mr. Woods stated that he was comfortable with the overall process and would be flexible.

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**Health Concerns**

Ms. Jones stated Ms. Lloyd and Mr. Woods may be contacted by a former employee at DDMT (Betty Hayes) who believes her health problems are due to her employment at DDMT. Ms. Jones and Ms. Lloyd have each spoken to the individual. Ms. Jones has provided the proper contact at Fort Campbell, KY and requested others, if contacted, refer Ms. Hayes to Fort Campbell. Ms. Lloyd stated she had informed the individual that EPA could not do anything further regarding her claim.