



# THE MEMPHIS DEPOT TENNESSEE

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## ADMINISTRATIVE RECORD COVER SHEET

AR File Number 827

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C.H. 212,700,000 a

AR# 827

**Final**

**Memphis Depot**

**BRAC Cleanup Team**

**Meeting Minutes**

**March 24, 2005**

BRAC Cleanup Team	Organization	Phone/email
Michael Dobbs	Defense Logistics Agency (DLA)/Defense Distribution Center (DDC-DES-IE)	717.770.6950
Turpin Ballard	Environmental Protection Agency, Region IV (EPA)	404.562.8553
James Morrison	Tennessee Department of Environment and Conservation, Division of Remediation (TDEC-DoR)	615.532.0910
Project Team	Organization	Phone
Evan Spann	TDEC-DoR	901.368.7916
Tom Holmes	MACTEC Engineering	770.421.3373
Denise Cooper	MACTEC Engineering	901.767.1249
Bruce Railey	Corps of Engineers - Huntsville	256.895.1463
David Nelson	CH2M Hill	770.604.9182 x645
John K. Miller	Mitretek Systems	703.610.2560

#### *Previous Meeting Minute Approval*

The BCT approved and signed the minutes from the February 24, 2005 meeting.

#### *Early Implementation of Selected Remedy (EISR) status*

Mr. Holmes reported the field team was collecting post-injection samples this week and that no additional data had been obtained since the February meeting. Mr. Holmes also presented information to answer questions from the February meeting regarding effectiveness of the borehole seal during injections.

#### *Disposal Sites Remedial Action (RA) Status*

Mr. David Price and Mr. Greg Wrenn of MACTEC joined the meeting via conference call. Mr. Lane Smith, the Disposal Sites RA Construction Manager, attended this portion of the meeting. Mr. Price provided the status of work on Disposal Sites 4.1, 10 and 13 from the March 24, 2005 weekly project progress report. Excavation of the three sites had been completed and confirmation samples collected.

Mr. Price reported that excavation of Site 3 began on March 23. About 5 feet below ground surface, the team encountered many small glass bottles containing liquid, potentially orthotoluidine dihydrochloride. Work on the site stopped in order to determine proper procedures for dealing with the bottles. The team covered the site and was awaiting confirmation of the contents via lab analysis. Mr. Holmes indicated the historical information regarding the number

of bottles was not included in the Disposal Sites Remedial Design (RD) and that the Disposal Sites Pre-Design Investigation noted presence of a bottle in one of the two trenches for this site; MACTEC had not anticipated encountering so many intact bottles containing liquid.

Mr. Price reported that the health and safety plan might be amended to include PPE requirements for the substance, if the requirements exceed what the plan currently included. Mr. Morrison asked if the substance was included in the sampling suite in any monitoring wells down gradient from the site. Mr. Holmes responded that upon confirmation of the substance, he would be able to provide more information. Both Mr. Morrison and Mr. Ballard remarked that confirmation sampling should include this substance, and Mr. Holmes agreed.

Mr. Price reported that he had received and was reviewing the analytical data for the samples collected from the proposed excavation backfill soil source. He planned to forward the data to Mr. Spann on March 24 and upon approval from TDEC would stage the soil onsite in anticipation of confirmation sample results. He also reported that he had received and was reviewing the pre-characterization analytical data for soil samples collected from Site 31. His initial review indicated the soil appeared to be non-hazardous. He forwarded the data to BFI and TDEC for approval to dispose of the soil in the BFI South landfill. Mr. Spann agreed to work with TDEC's Solid Waste Division to facilitate the review and approval process.

Mr. Ballard suggested that the Disposal Sites Remedial Action Completion Report include site historical info as well as results of the Disposal Sites Pre-Design Investigation.

#### ***Source Area Remedial Design***

Mr. Nelson reported that CH2M Hill was working on the Source Area RD. CH2M Hill was refining the soil to iron ratio based on the EISR data. Although the question of the most optimal ratio remained, Mr. Nelson anticipated the assumptions going into the ratio would be better refined upon review of the EISR post-injection sample results. He indicated that the current goal was 0.5% of iron to soil until receipt of the EISR results.

Mr. Nelson discussed four areas slated for SVE based on information from the soil gas survey, remedial investigation soil sample borings and groundwater monitoring. Based on Mr. Ballard's comments, CH2M Hill was reviewing gaps in the proposed SVE areas. Mr. Nelson has submitted a proposal to the Corps of Engineers to collect soil gas and soil samples to further refine the proposed SVE areas. Because the loess is so tight and treatment alternatives can be expensive, the treatment areas need to be better defined to ensure treatment occurs where it is most needed. Mr. Railey indicated he was working to quickly turn around the statement of work in order to facilitate the sampling effort.

Mr. Spann asked how CH2M Hill was selecting the sampling locations. Mr. Nelson responded that they were focusing on areas inside the proposed treatment zones that were not sampled previously; those were the areas CH2M Hill could not access previously due to potential chemical warfare materiel disposal sites. Mr. Nelson indicated the sampling grid would be within the proposed SVE treatment area. Mr. Holmes asked why the sampling grid would not correspond to the soil gas survey hot spots. Mr. Ballard suggested Mr. Nelson base the sampling points on the proposed treatment zone boundary and, depending upon sample results, step out from the boundary and collect additional samples.

Mr. Nelson noted that based on Mr. Ballard's comment CH2M Hill was also working with Mr. Railey to install a few more monitoring wells in the area. Mr. Ballard asked if the intermediate Source Area RD would be delayed in order to collect more data. Mr. Nelson indicated that the

sampling was specific to treatment effectiveness within the loess and that those portions of the RD could be refined later on. He said that the remainder of the RD for the fluvial aquifer was on target and that the footprint of treatment area may change, but nothing else.

Mr. Nelson presented the conceptual model of the SVE system that included pushing air into the loess taking advantage of the vertical permeability of the formation. The RD would include covering the area with gravel and impermeable barrier material to create negative pressure in the fluvial aquifer and along the ground surface. The team discussed aspects of the conceptual SVE system regarding the air being pushed into the loess affecting the efficacy of the extraction system in the fluvial aquifer and the design aspects necessary to reduce impact of the loess system on fluvial system.

Mr. Nelson indicated that in general the Source Area RD comments were well received and very helpful. He responded to Mr. Ballard's comment regarding treatment within the 50 ug/l contour rather than within the 100 ug/l contour. Although CH2M Hill was not depending on a halo effect to encompass the 50 ug/l contour, they did anticipate some halo effect to occur. He continued that the natural attenuation component of remedy would reduce contamination within the 50 ug/l contour and that groundwater contamination from Dunn Field would flow toward the permeable reactive barrier and be treated in the future.

Responding to another of Mr. Ballard's comments, Mr. Nelson clarified the need for the Industrial Wastewater Discharge Agreement since the RD includes discharging the condensate from the SVE system into the IRA groundwater discharge system, so contaminant concentrations within the condensate must comply with concentrations allowed by the agreement.

Mr. Nelson presented several alternatives to enhance the SVE system and the associated cost estimates in response to Mr. Dobbs' directions from the February meeting. He also discussed CH2M Hill's level of confidence that the SVE system would effectively treat the loess and what to do to increase the team's level of confidence. The team discussed running a long-term (up to one year) treatability study specific to the loess in the existing area used for the SVE treatability study. Mr. Nelson does not intend to delay the Source Area RD, but suggested conducting the treatability study during the RD process and, if necessary, revise the RD. Mr. Ballard opined that since the team knew the loess must dry out before the system would effectively treat the loess, then the question was how long would that take. Whether the team determined the time to dry the loess now or later, Mr. Ballard felt DLA would spend the same amount of money.

Mr. Ballard asked if Mr. Nelson would use the intermediate Source Area RD to construct the loess treatability study. Mr. Nelson agreed that was the plan. Mr. Nelson indicated that while the loess treatability study was underway CH2M Hill would complete the Source Area RD assuming the system would work as designed, so he did not anticipate a schedule delay as they would just be collecting more engineering information.

Mr. Ballard indicated that the BCT was taking a risk that there would be a delay if the treatability study did not provide the anticipated results and that DLA was taking a risk that the money spent on the Source Area RD would not be sufficient as the results may indicate a change to the RD. Mr. Holmes interjected that although DLA would take a budgetary risk on the RD, it would reduce the risk of spending additional funds on the remedial action if it was not as effective on the loess as assumed. Mr. Ballard confirmed that the idea of the loess treatability study was that the basic design was adequate given the constraints of the system, but the study would help work out the restraints before RA implementation. Mr. Ballard agreed with the concept, but did not want the study to impact the schedule for RA construction in September 2006.

Mr. Nelson confirmed for Mr. Holmes that the footprint of the current SVE treatability study area was large enough to provide an effective long scale test. Mr. Ballard indicated that DLA must make the decision to conduct the loess treatability study, but that he did not want it to delay the document and implementation schedule.

Mr. Dobbs asked if the team had received and reviewed the results from Phases 2, 3 and 4 of the SVE treatability study. Mr. Holmes indicated the results would be included in the intermediate Source Area RD and that the internal team planned to conduct an internal review of the document in April. Mr. Dobbs indicated that upon receipt and review of the SVE treatability study results and the additional soil gas data he would discuss it with the internal team and make a decision about the loess treatability study as the additional data may provide the confidence needed. Mr. Railey indicated the Corps of Engineers would be ready contractually to proceed.

#### ***Offsite Plume Northeast of Dunn Field***

Mr. Spann provided several sets of aerial photos of the area in question that were used by TDEC to determine possible sources of the contamination plume moving onto Dunn Field. Two industrial facilities were identified on the aerial photos that could be the potential source. TDEC's pre-CERCLA screening identified General Machine Works at 2001 Wabash as the potential source, but Mr. Spann believed it could be the General Machine Works facility on Castalia as the Wabash location came about in 1981 and appeared to be outside the contaminant plume flow regime. Mr. Spann has worked to obtain funds to install some monitoring wells. The team discussed potential well locations. Mr. Spann indicated that TDEC was moving forward with EPA to continue preliminary assessment/site investigation of the potential sources.

Mr. Holmes indicated that the Off-Depot Groundwater RD should include a contingency to treat this plume.

#### ***Off-Depot Groundwater Remedial Design***

Mr. Nelson provided several preliminary groundwater models presenting modeled flows in the fluvial, intermediate and Memphis aquifers. The team discussed the assumptions used in the model as well as the model information. Mr. Nelson indicated that CH2M Hill would input this data into another model (RT3D) that would assist in determining well locations for the point of compliance wells.

#### ***Main Installation Remedial Action Work Plan***

Mr. Holmes asked if there were any preliminary comments on the work plan. Mr. Ballard anticipated providing comments soon. Mr. Spann did not have any comments yet, but intended to provide comments. Mr. Ballard asked Mr. Spann to closely review the waste handling and transportation portion of the work plan.

#### ***Groundwater Interim Remedial Action System Status***

Mr. Holmes reported that the funding issue was resolved with AFCEE, so MACTEC could proceed with repairs to four recovery wells that were currently not working. He indicated that two wells had been out of operation since December and that initial repairs had not been effective. Mr. Ballard voiced concern that there was not a ready fund for repairs to the system in order to avoid down time and potential for contaminant migration past the system. Mr. Dobbs asked if the repair issues were uncommon. Mr. Holmes indicated the repair issues were due to basic wear and tear. Mr. Morrison suggested having spare pumps and controllers on hand. Mr.

Holmes has a list of system repairs and upgrades developed during the last few months, and MACTEC would work these issues over the next month.

**AI: Mr. Holmes will review the SOW in terms of having spare parts on hand.**

***Community Involvement***

Mr. Holmes reported funds for community relations activities were forthcoming. He indicated that the next Restoration Advisory Board (RAB) meeting would not be in April as there would not be sufficient time to prepare. He anticipated postponing the RAB meeting until May or June. Mr. Holmes also indicated that he anticipated conducting a risk communication refresher in conjunction with a BCT meeting prior to the next RAB meeting.

***Adobe 7***

Mr. Nelson reported that CH2M Hill was working to provide the team with licenses for the necessary upgrades from 6 to 7.

**AI: Team members to provide Mr. Nelson with the number of copies they require.**

***Next Meeting***

The BCT confirmed the next meeting would be held at the MACTEC office in Kennesaw, GA on April 20, 2005. Mr. Morrison proposed meeting at Henry Horton State Park south of Nashville and agreed to check availability for June 15-17, 2005.



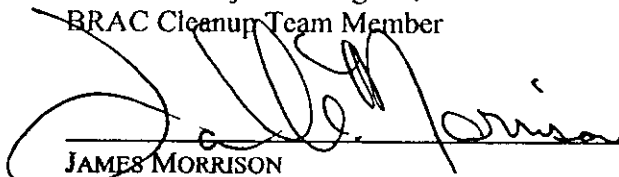
MICHAEL DOBBS  
Defense Distribution Center  
BRAC Environmental Coordinator  
BRAC Cleanup Team Member

DATE



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

DATE



JAMES MORRISON  
Tennessee Department of Environment and Conservation  
Memphis Field Office  
Division of Superfund  
BRAC Cleanup Team Member

DATE

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