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THE MEMPHIS DEPOT
TENNESSEE

ADMINISTRATIVE RECORD
COVER SHEET

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The Memphis Depot

Meeting Minutes
BRAC Cleanup Team

August 20th and 21st, 1998

Meeting Minutes
BRAC Cleanup Team
August 20 - 21, 1998

In Attendance

Name	Organization	Phone
Scott Bradley	CEHNC	(256) 895-1637
Wilson Walters	CEHNC	(256) 895-1578
Dorothy Richards	CEHNC-PM	(256) 895-1463
Kurt Braun	CESAM	(334) 690-3415
Ted Valentine	CESAM	(901) 948-9931
Greg Underberg	CH2M HILL	(423) 483-9032
Leslie Shannon	CH2M HILL	(334) 271-1445
Denise Cooper	DDSP-FE	(901) 544-0610
Jack Kallal	DDSP-FE	(901) 544-0614
Shawn Phillips	DDSP-FE	(901) 544-0611
Pam Gowdy	DDSP-FX	(901) 544-0605
John DeBack	DoD Base Transition Field Office	(901) 544-0622
Jennifer Hall	Frontline	(888) 848-9898
Terry Flynn	Frontline	(888) 848-9898
Steve Offner	OHM	(770) 326-2571
John Garrison	RAB	(901) 754-7672
Jordan English	TDEC/DSF	(901) 368-7953
Dann Spariosu	USEPA/Region IV	(404) 562-8552
Turpin Ballard	USEPA/Region IV	(404) 562-8553
Ank Webbers	USGS-WRD	(615) 837-4774
Jack Carmichael	USGS-WRD	(615) 837-4704

Action Items from August BCT Meeting

Action Item	Responsible Party	Date
Initiate bioremediation field pilot study and attempt to schedule it before Winter 1998.	CEHNC	TBD
Prepare draft Basis for NFA Recommendations at DDMT Document.	CH2M HILL	Sept BCT
Confirm if Dr. Ted Simon and Dr. Ruth Chen have reviewed the Preliminary Risk Assessment.	EPA, TDEC	Sept BCT
Prepare overview of typical health and safety requirements.	OHM	9/11
Prepare health and safety calculation memorandum for the corridor area.	CH2M HILL	9/14

Action Item	Responsible Party	Date
Prepare subsurface conceptual model for BCT review.	CEHNC/CH2M HILL	Sept BCT
Prepare groundwater monitoring program and pump and treat fact sheet.	CH2M HILL	Sept BCT
Set up conference call to discuss EPA and TDEC comments on the Parcel 3 Streamlined Risk Assessment. Report outcome.	CH2M HILL	Sept BCT
Present preliminary Dunn Field soil gas results.	CH2M HILL	Sept BCT
Prepare Standard Operating Procedure Addendum for rotasonic push groundwater sampling and issue for review.	CH2M HILL	9/14

Meeting Minutes

Groundwater Extraction System Sewer Hookup

Steve Offner reported that OHM has nearly completed installation of the groundwater extraction system. Only some minor actions and ground seeding need to be completed.

Ron Kirby with the City of Memphis recommended three contractors for installation of the sewer tie-in. OHM attempted to get bids from them, but they were not responsive due to workload. OHM offered the bid to three other contractors and is currently evaluating their bids. OHM has also received the traffic control plan from the City of Memphis which is required due to the need to restrict traffic flow on Person Avenue. The City of Memphis needs to establish bonding with the construction contractor.

As soon as the sewer system hookup is operational, OHM is currently contracted for two weeks of functional testing followed by two weeks of operation. OHM has received the Request for Proposal for Operations and Maintenance of the system that will enable continued operation of the system.

Housing Removal Update

Steve Offner discussed the status of the housing soil removal action. Field screening has been completed in Areas A (between the housing units), B (adjoining grass areas to the north and south of the housing units, and C (the sloped area east of the housing units).

As identified in the sampling plan, all of the sampling grids in Area A was to be removed to a depth of 6 inches. Sampling results indicated that 6 grids need to be excavated to 12 inches. Excavation below a depth of 12 inches will not be performed in any of these areas since soil below 12 inches does not provide a surface soil exposure pathway. All of the soil from Area A has been removed, as required. Confirmation samples from 10,000 square foot areas in Area A were taken. These samples were taken below the removed surface soil and will be used to document the chemical characteristics of the soil that is left in-place.

Eight grids in Area B will require removal to a depth of six inches. Of these, five will require further excavation to a depth of one foot.

Of the seventeen grids in Area C, fourteen will require removal to a depth of six inches. Of these, seven will require further excavation to a depth of one foot. Shawn Phillips proposed that within Area C, all of the soil should be excavated, confirmation samples collected, then the fill material should immediately put in place so that the soil does not remain exposed. Exposed soil presents a potential for sediment runoff if heavy rains occur. The BCT confirmed that this was the appropriate way to remove the soil in Area C.

Dunn Field Soil Gas Sampling

Greg Underberg reported that the soil gas detectors were removed from Dunn Field on August 17th. The data is scheduled to be available and presented in the September BCT Meeting.

CWM Characterization Work at Dunn Field

Wilson Walters discussed the status of the CWM characterization at Dunn Field. Eight of fourteen boreholes and wells have been installed. No CWM breakdown components have been detected. A CWM detection was reported using the field screening equipment; however, review of the data from the independent analytical laboratory did not confirm the screening detection. The screening detection was determined to be the result of interference from other compounds, likely pesticide compounds.

Status of Dieldrin Bioremediation

Scott Bradley reported on the status of the bench-scale dieldrin bioremediation study. Results of the laboratory study using DDMT soil are encouraging so far. There was a 25% reduction in concentration within the initial 3-4 weeks followed by a lag period, then further reduction in concentration.

Given the promising bench-scale results, Mr. Bradley said that a field pilot study should be the next step in the bioremediation evaluation. Shawn Phillips gave the CEHNC authorization to proceed with contracting to conduct the field pilot study. One complication discussed was that this work should not be done during the winter and there was concern that there was not enough warm weather left to complete the field pilot study.

The BCT decided to wait until the bench-scale study was complete before requesting a presentation by Dr. Fuchs, University of California at Riverside, who is conducting the study.

There was some discussion regarding implementation of a Record of Decision (ROD) for the golf course that included bioremediation as a remedial option. Turpin Ballard suggested developing a contingency ROD that proposed bioremediation as a remedial option, provided it was successful in the pilot test phase.

Parcel 3 Risk Assessment

CH2M HILL will contact Dr. Ruth Chin/CEHNC and Dr. Ted Simon/EPA to discuss CH2M HILL's comment responses on the Parcel 3 Streamlined Risk Assessment. CH2M HILL will propose a completion date for the Final Parcel 3 Streamlined Risk Assessment document.

TDEC Staffing

Jordan English reported that TDEC has funding for three positions. If and when these three positions are filled, TDEC will have more continuity with oversite of the Depot. Mr. English said the positions would be new hires or internal transfers and would not be filled by contractors.

No Further Action Documentation

No Further Action (NFA) documentation was discussed. Jordan English asked what was driving the urgency of the need for NFA documentation. Shawn Phillips replied that the NFA documentation was needed to support transfer of property. Dann Spariosu did not recommend implementing a NFA Record of Decision (ROD) on just the current NFA sites within the operable units. Turpin Ballard suggested preparing a "comfort letter" similar to that prepared in EPA Brownfield Initiative. Dr. Spariosu said that EPA Headquarters policy was that if the groundwater is contaminated beneath a soil site, the NFA documentation would have to include an encumbrance prohibiting groundwater use.

CH2M HILL has the action to prepare a document recommending NFA for NFA candidate sites. The document will not constitute a ROD, but will provide a recommendation for NFA. The document will be entitled *Basis for NFA Recommendations at DDMT*. A draft document will be presented in the September BCT.

Onsite Worker Health Calculations

Shawn Phillips identified a need to produce a generic health and safety calculation regarding risks to onsite workers, specifically landscapers and soil excavators, from exposure to DDMT surface soil. There was some discussion by the BCT regarding how this would be accomplished. It was determined that use of the PRE calculations would provide an expedient means to calculate the permissible exposure duration at a 10^{-6} risk level for an industrial worker. The calculations will be performed for each of the seven functional units. The first iteration of the calculations will use the soil sample location within each functional unit with maximum risk as a conservative estimate of the risk level within the entire functional unit. If the permissible exposure duration is acceptable for an industrial worker, this will suffice for a conservative health and safety calculation. CEHNC will task CH2M HILL to conduct the calculations and produce a functional unit map displaying the permissible exposure durations within each functional unit.

Mr. Phillips requested a one page summary from OHM on best management practices for worker safety. This prelude would be attached to the risk calculations. OHM and the Federal Government are not responsible or liable for any actions by taken by subcontractors or other workers relative to the information presented in the memo. This will merely be provided as an example of what is typically performed on a construction site.

United States Geologic Survey (USGS) Involvement at DDMT

Dann Spariosu introduced Jack Carmichael and Ank Webbers with the USGS to the BCT and recommended that USGS be brought on as a DDMT team member. USGS is currently one of EPA's oversight contractors. Shawn Phillips supported USGS involvement in the program to enhance its credibility. Mr. Carmichael has been involved with the characterization effort at Dunn Field for about one year. There are currently water levels being taken at six locations. Ank Webbers discussed the water level data and again presented the coincident change in water levels in the Fluvial Aquifer/underlying sand well pair, as previously discussed in the July BCT meeting minutes. Greg Underberg said that he checked the sampling schedules and the lowering in groundwater levels did not coincide with the well sampling schedule. There was some discussion between USGS, OHM and CH2M HILL whether the pumping during well development and testing at Dunn Field could have lowered the groundwater level. The wells will continue to be monitored during operation of the full seven-well system to monitor potential changes in the aquifer characteristics downgradient of the groundwater extraction system.

Mr. Carmichael discussed the geologic stratigraphy in the DDMT area. The stratigraphy in the DDMT area potentially impacted by DDMT operations consists of the uppermost unconfined Fluvial Aquifer separated from an underlying unconsolidated sand by a clay unit of the Cockfield Formation. The underlying unconsolidated sand observed in wells MW-36 and MW-37 was at one time considered to potentially be the Memphis Sand aquifer, supplying water to the City of Memphis. Based on an evaluation of regional stratigraphy and borehole logs, Mr. Carmichael said that this sand is more likely to be a sand member of the Cockfield Formation. In the Memphis area, this lower sand is underlain by 60-70 feet of clay composing the Cook Mountain Formation which is the actual confining unit to the Memphis Sand. Wells and boreholes have not been drilled deep enough at DDMT to determine if Cook Mountain Formation clay exists below the Fluvial Aquifer basal clay.

There was some discussion regarding the impact of this potential change in stratigraphy on the remedial action program at DDMT. It was determined that deeper wells at DDMT are not necessary since there is no evidence that the underlying sand is contaminated in the vicinity of Dunn Field and therefore no need to risk breaching the Memphis Sand confining unit with a borehole. Greg Underberg said that the most protective scenario in the groundwater exposure assessment would assume that groundwater leaving Dunn Field would migrate to the Allen Well Field and not account for a second confining unit since its presence and extent have not been established, even though this has not been proven to be the case. Well MW-43 is being drilled deeper to monitor groundwater in the offsite flowpath and therefore will provide additional groundwater quality information for the Fluvial Aquifer. Shawn Phillips pointed out that there is evidence of "windows" (locations where the confining unit is absent) in the Memphis area.

Dann Spariosu proposed that USGS continue to conduct the continuous water level monitoring for DDMT, including new monitoring locations installed for the groundwater extraction system.

FOSL Comments

Dann Spariosu said that he would have comments on FOSL 7 completed by Monday, August 24th. Jordan English said that if DDMT wanted to move ahead with a FOSL to do so with the understanding that TDEC may provide comments at a later date. Shawn Phillips stated that FOSLs 4 and 7 have priority.

Public Relations

Jennifer Hall said that Frontline had received numerous calls on the community relations information call line regarding the ATSDR hosted public meeting. Overall, the former employees said that the meeting was intense and emotional regarding potential health impact concerns. Alma Black Moore and John DeBack both stated that coordination with the former employees group was necessary. Jordan English suggested that DLA may have the moral responsibility to do research on potential exposures for former employees.

Restoration Advisory Board

Shawn Phillips asked James Covington to attend the RAB on a regular basis.

There was some discussion of the Concerned Citizens Committee participation in the RAB and how that issue should be put to vote to the RAB members. The BCT agreed that the three BCT members, because they are paid government employees, cannot vote regarding participation of private groups and individuals on the RAB.

The BCT determined that a presentation on the groundwater program at DDMT was needed and should be presented in the October RAB. Components of the presentation should be an overview of the general groundwater program at DDMT, differentiating between pumping and monitoring wells; an overview of the groundwater monitoring results showing trends and extent of VOC and inorganic constituents; and a presentation of a conceptual groundwater flow model. Jordan English suggested that a three-dimensional model be presented to provide a conceptual model of the stratigraphy and groundwater flow. CEHNC has an action to prepare a draft conceptual model figure for presentation and discussion by the BCT in the September BCT Meeting.

Jordan English suggested having Memphis Light, Gas, and Water attend future RAB meetings. Mr. James Webb who is a member of the RAB is a MLG&W employee.

Main Installation Sampling Plan Addendums

Leslie Shannon and Greg Underberg presented the draft OUs 2,3, and 4 sampling plan addendums which identify additional sampling locations to complement the approved field sampling plans. The sampling plan addendum's were prepared to collect additional environmental data to assess environmental conditions based on the results of the first round of BRAC, screening and remedial investigation samples. A total of 103 surface soil samples, 108 feasibility study samples, 13 soil borings, 5 groundwater, 6 sediment and 4 surface water samples are proposed. Primary constituents being sampled are PAHs, metals, TAL/TCL, pesticides/PCBs with some VOCs and BTEX samples being collected.

There was some discussion of the groundwater characterization program technical memorandum. A couple of points regarding groundwater sampling for metals were agreed to:

CH2M HILL proposed using rotasonic push methods to obtain a groundwater grab sample for metals analysis. A two-inch push rod can be pushed which will enable a Grundfos pump to be used to purge and obtain the sample. Once the push rod is purged, reducing the discharge of the Grundfos should allow a low-turbidity sample to be obtained. In the event that a low turbidity sample cannot be obtained, Turpin Ballard indicated that a 4-5 micron filter could be used to reduce sample turbidity. Finer filters (i.e. 0.45 micron) should not be used as they can remove mobile colloids. CH2M HILL will prepare a push sampling procedure for EPA review prior to starting the field sampling.

EPA, TDEC and DDMT recommended converting all of the onsite push sample locations to piezometers to provide better control on the configuration of the water table. CH2M HILL agreed to the configuration presented in the meeting.

9/17/98
DATE

SHAWN PHILLIPS
Memphis Depot Caretaker
BRAC Environmental Coordinator

9/17/98
DATE

TURPIN BALLARD
Environmental Protection Agency

9/17/98
DATE

JORDAN ENGLISH
Tennessee Department of Environment and Conservation

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