

St. Juliens Creek Annex Partnering Team Meeting Minutes: February 7 - 8, 2008

Attendees: Tim Reisch/NAVFAC MID LANT
Josh Barber/EPA (Region III)
John Burchette/EPA (Region III)
Karen Doran/VDEQ
Kim Henderson/CH2M HILL
Janna Staszak/CH2M HILL

Tier II Link: Tim Reisch/NAVFAC MID LANT

Guests: Carol Aziz/Geosyntec (Site 21 ESTCP topic)

From: Janna Staszak/CH2M HILL

Date: June 18, 2008

Location: VDEQ, Richmond, Virginia

Thursday, February 7, 2008

0900 Welcome/Check In

Roles and Responsibilities for this meeting:

Meeting Manager: Josh Barber
Timekeeper/Gatekeeper: Tim Reisch
Host: Karen Doran
Goalkeeper: Tim Reisch
Facilitator: John Burchette
Recorder: Janna Staszak

Ground Rules

I. Review Agenda, Meeting Minutes, Action Items, and Parking Lot from the Previous Meeting

Review Agenda: The Partnering Activity was moved to 4:00 PM and the SROD and eBERA topic will be moved to tomorrow to allow for a 4:30 PM end time to enable John to attend a RAB meeting at Fort Monroe. Additional changes will be made as necessary.

Review Meeting Minutes: The September meeting minutes will remain in the parking lot and will be reviewed later in the meeting.

Review Parking Lot: Parking Lot items were reviewed.

- Site 4 Groundwater Monitoring at 5-Year Review: Remains in Parking Lot.
- Phone numbers on IR signs.

- Site 21 SROD
- September Meeting Minutes

Review Action Items: The action items were reviewed.

Action Tim – Check on Mr. Mann and notify him of next RAB meeting June 17.

II. Site 5 Removal Action Update

Objectives: Review the site background, update the team on the removal action (waste characterization results, MEC delays), review path forward.

Overview of Discussion: Copies of the presentation were distributed. Janna presented a background on Site 5.

Janna provided an overview of the Phase 1 removal action activities conducted. Mobilization and site setup initiated January 2. An MEC was encountered during installation of silt fence, and the activities were halted so that an Explosives Safety Submission (ESS) could be prepared and submitted to Naval Ordnance Safety and Security Activity (NOSSA).

The results of the waste characterization sampling were presented. Three of the sample grids were classified as hazardous based on Toxicity Characteristic Leaching Procedure (TCLP) lead concentrations exceeding the non-hazardous disposal criteria. AGVIQ-CH2M HILL Joint Venture II (JVII) is currently evaluating alternatives for the disposal of the hazardous soil. Stabilization using Portland cement, phosphoric acid, and triple super phosphate are being considered. Hazardous disposal can also be evaluated. The team discussed the approach for stabilization of the hazardous soil. Tim indicated there are concerns with dust when using Portland cement, so phosphate may be more appropriate. Janna indicated that if a phosphate amendment is used, ex-situ stabilization may be recommended due to the wetland presence and potential phosphate loading. Josh agreed that ex-situ stabilization seemed to make sense. Karen indicated the State will likely concur with ex-situ treatment if it is performed within the site boundary, preferably within an area that will be removed in a future phase. Appropriate erosion and sediment controls must be implemented, and the material may not be stored for more than 90 days.

Josh asked if BioSocks can be incorporated into the work plans for Phases 2 and 3 in place of silt fence. EPA Region 3 is promoting the use of BioSocks because they are less intrusive and biodegradable. They are geotextile tubes filled with material such as wood chips. They are easy to install, and also collect organics as water passes through them. They naturally biodegrade, or they can be rolled up and removed.

Action Josh - Send team the BioSocks cost calculator for evaluation to use at Site 5 instead of silt fence and vendor information.

Action Karen - Look into acceptance of BioSocks for application at Site 5 by VDEQ.

Janna reviewed the schedule for Site 5. She indicated that it is dependent on the submission and approval of the ESS. The ESS will be submitted as soon as possible. Once it is approved, it will be incorporated into a revised work plan for the Phase 1 removal action.

The stabilization plan will also be incorporated. The work plans for Phases 2 and 3 of the removal action are scheduled to be submitted to the team on February 29.

Path Forward: CH2M HILL and the Navy will continue to coordinate with NOSSA for submission and approval of the ESS. JV II will develop a stabilization plan for the grids with hazardous characteristics. Work Plans for Phases 2 and 3 of the removal action will be submitted by February 29.

III. Site 4 Data Update

Objectives: Review the site background, discuss voluntary groundwater monitoring and results, and review the schedule.

Overview of Discussion: Copies of the presentation were distributed. Kim reviewed the Site 4 background, focusing on the Land Use Control (LUC) Remedial Design components. Josh asked if trenching was performed to determine the specific waste present at Site 4 during the RI. Trenching was not performed due to the MEC hazard at the site. However, soil testing and downgradient groundwater sampling was performed. No risk was identified in groundwater.

Kim reviewed the basis for the voluntary groundwater performance monitoring being performed at Site 4 and presented graphs of the concentrations for each contaminant over time. The team discussed the results. The arsenic concentrations have increased in one of the downgradient wells: MW04S. The cadmium concentrations have been consistently low since the start of the voluntary groundwater performance monitoring, with the exception of a spike in the upgradient well (MW01S) concentration in August 2007. John asked if there was a potential source of contamination upgradient of the site. Kim responded that no further action Site 3 is upgradient, and does not have any groundwater concerns. The elevated concentrations may be due to the fact that the site is located in dredge fill. Iron concentrations have been consistent and are well below the background concentration. Lead concentrations have also been consistent and have been below the action level since the start of the voluntary groundwater performance monitoring in all wells. There have been no thallium detections since the start of the voluntary groundwater performance monitoring.

Kim reviewed the schedule for Site 4. The next round of data will be collected February 19 and presented at the next partnering meeting. LUC inspections will be conducted in September. The first 5-year review will be performed in 2010.

Path Forward: CH2M HILL will continue collecting groundwater data and presenting to the team. CH2M HILL will perform required inspections and reporting.

IV. Site 21 Work Plan Comment Resolution

Objective: Review the site investigation history, review air vapor guidance, review and resolve comments on the air vapor work plan, develop a path forward for air vapor, and review the schedule.

Overview of Discussion: Copies of the presentation were distributed.

Kim reviewed the site layout and the site investigation history of VOCs, beginning with the Site Investigation (SI). She reviewed the data collected during the Supplemental SI (SSI), the

development of the plume over time, and the human health risk screening (HHRS) conducted. A SSI report was drafted in 2006 presenting the results of the investigations through 2005 and presenting the HHRS. Because it was determined that the plume extended under Building 1556, Johnson and Ettinger (J&E) modeling was used to evaluate potential risk to the building occupants during the HHRS. The results of the model did not indicate unacceptable risk. The Draft SSI report recommended the collection of additional data to further delineate the CVOC plume. The Partnering Team jointly scoped the additional investigation activities, and followed the same sampling approach as previously used at the site. Tim indicated that in the same timeframe, Little Creek developed a work plan for investigation incorporating top-of-aquifer groundwater monitoring to support evaluation of indoor air vapor. However, SJCA did not incorporate the depth-specific sampling because the modeling and human health risk assessment (HHRA), thought to be worst-case scenario, did not show any potential risk. John asked if the site at Little Creek where shallow depth-specific groundwater samples were collected was suspected to have DNAPL present. The Little Creek specifics are unknown.

The additional investigation was conducted at SJCA under SSI work plan addendums. However, the SSI report was not finalized because the team determined that the nature and extent had been adequately addressed to fully evaluate risk. Therefore, an RI report was prepared to expedite the CERCLA process to site closure. Kim presented the results of the RI, focusing on its HHRA, which showed potential risk to Building 54 occupants from inhalation. John asked why at that point, a building-specific investigation was not scoped. Tim responded that the evaluation did not indicate an imminent threat, and therefore, in line with draft Navy guidance, a tiered investigation approach was planned. A building survey was conducted, and recommended additional evaluation of Building 54.

John indicated that because the groundwater is so shallow at the site, the next step in accordance with EPA 2002 guidance would be sub slab sampling. He said that EPA 2002 guidance indicates attenuation factors cannot be used to screen for risk for shallow groundwater (< 5 ft below building foundation). The team discussed the use of screening criteria for groundwater, and the applicability for MCLs as screening criteria. John indicated that he agrees that a detection alone should not lead to sub slab sampling; however, EPA guidance provides no alternative for shallow groundwater screening.

The team discussed other uncertainties associated with the model. The EPA guidance indicates that use of the J&E model may not be appropriate when DNAPL is present at the site; however, the guidance does not provide contingencies or recommendations for large sites, where the DNAPL may be far enough away to not impact buildings (e.g., provide a minimum vertical and lateral distance from buildings to the DNAPL to prevent/allow use of modeling).

Josh indicated that his biggest concern is the unpredictability of DNAPL and that because DNAPL is present at the site, it had to get there somehow (through the soil), and there is limited site data to assess the presence of DNAPL in soil and throughout the aquifer. Kim indicated that there has been a significant amount of data collected; including MIP, soil samples, and depth-specific groundwater samples; that does not indicate the presence of DNAPL throughout most of the site. In addition, the concentrations of TCE at Site 21 are borderline with regards to being indicative of DNAPL, based on the 1% of solubility rule of

thumb referenced in the RI report (the highest concentrations at Site 21 are 13,000 µg/L and 16,000 µg/L, whereas the "rule of thumb" concentration for presence is 11,000 µg/L).

The team discussed the EPA comments and their responses.

Josh indicated he understands the need for data quality objectives (DQOs), and the need for a use for data collected, but that his technical support was unable to provide a screening mechanism. Josh and John expressed frustration over the gap in guidance and understand the Navy's desire to have such an endpoint; however, they feel bound by technical support recommendations.

In reviewing the decision logic, EPA requested clarification on the use of new data. EPA prefers to use the maximum detection within 100 feet of a building in the top of aquifer samples for decision making. Tim concurred.

EPA indicated timing of a sampling event should be incorporated in the work plan, and sampling should not be conducted immediately after a rain event to prevent collection of results biased low through dilution.

The team discussed uncertainties with the model, including the presence of preferential pathways. As-built drawings for Building 1556 indicated the presence of a 4" porous fill layer and vapor barrier; however, it is unclear if the porous fill is the vapor barrier or a separate barrier is present. EPA feels that porous fill won't necessarily act as an effective barrier; it can be a positive or negative, depending on whether it diffuses vapors or allows for the formation of vapor pockets. If another form of vapor barrier is present, EPA will withdraw the comment.

The presence of sumps in Building 1556 is unknown. EPA indicated that if present, they may act as a preferential pathway. The presence will be confirmed/denied, and incorporated into the response to comments.

Action Tim - Follow-up on definition of vapor barrier at Building 1556.

For the depth interval of groundwater sample collection, EPA requests changing to a 1- to 2-ft screen interval at the top of the aquifer. Tim agreed to incorporate the comment into the work plan.

The team discussed the SUMMA sample duration and size. Navy recommends the use of a 10-minute duration sample in a 1 liter canister, where EPA recommends use of a 24-hr sample in a 3L SUMMA canister. EPA will discuss the size and duration with its technical consultants.

The team discussed the list of sample parameters, which was determined based on the understanding of the nature and extent of contaminants determined through extensive previous investigations. EPA is uncomfortable with refining the list of VOCs to be analyzed to just those proposed, which are the site-related COCs, due to the potential for cumulative risks. Josh and John will discuss the selection with their technical consultants.

EPA would like to collect samples around all buildings to address the "patchy fog" phenomenon. Josh and John are willing to eliminate samples requested around Building 46 and other unoccupied buildings if LUCs are implemented, including further evaluation if

building use changes. The team agreed to refine the sampling approach to fully evaluate active buildings and hot spots.

The team discussed the VDEQ comments and their responses.

Karen indicated most of VDEQ's (Pat McMurray) comments were based on knowing that at a minimum, sub slab samples would be collected at Building 54. By potentially eliminating sub slab sampling in the first step at Building 54, Karen is uncertain of the impact on the comments. She would like to discuss the response to comments with Pat prior to proceeding with any work plan revisions.

Karen would like to add a table of slope factors to the response to comments regarding cancer slope factors. She also requested adding that Navy would like to use decision logic approach for buildings other than Building 54 with regard to sub slab sampling to the response (not specifically stated in the current response).

Action Kim/Janna - Send "draft" Site 21 RTCs, including revised sample figure from work plan.

Karen indicated that VDEQ does not rely on groundwater data alone with regards to air vapor decision making. They recommend sub slab sampling or indoor air vapor sampling. For Site 21, they recommend sub slab sampling be performed, at a minimum, in Building 54.

Tim indicated that he is going to work to develop a work group to determine a methodology for screening and modeling of groundwater at sites with a shallow water table.

The team briefly discussed the RI report. It was submitted in December and comments are due February 15. EPA indicated they have comments pulled together and are just waiting on their risk assessors, but did not discuss the comments due to time constraints in the meeting. They indicated they expect to provide comments on time.

Path Forward: The draft response to comments will be distributed for the air vapor work plan and the team will work toward resolution so that the investigation can be conducted. Tim will work to develop a work group to develop a consistent approach for sites that is acceptable to all agencies. The team will provide comments on the RI report. The FS report is being drafted; its submission schedule will be determined based on the comments received on the RI report.

Friday, February 8, 2008

0800 Welcome/Check In

Reviewed Roles and Responsibilities

Reviewed Ground Rules

Reviewed Agenda: The agenda was reviewed. Two topics that were missed yesterday (Partnering Activity and SROD and eBERA) will be added today if time permits. The Partnering Activity was added after the ESTCP topic. The SROD and eBERA topic may be postponed until the next meeting.

V. Site 2 Remedial Investigation Report, RAOs, and Remedial Alternatives

Objectives: Review the site background, present site risks and Expanded RI conclusions and recommendations, discuss preliminary RAOs, discuss preliminary remedial alternatives, and review the schedule.

Overview of Discussion: Copies of the presentation were distributed.

Kim reviewed the Site 2 background and summarized the investigation activities.

Action Kim/Janna – Send team poster-size Site 2 and Site 21 CSMs, laminated if possible.

Kim reviewed the results of the investigation and risk assessments by media.

The team discussed the figures for the Expanded RI report. Kim presented the nature and extent figures, which show all of the screening criteria exceedances. Kim indicated that the results would be pared down in a later figure of the Expanded RI to summarize the site-related risk drivers. Josh is concerned that going from these exceedance figure to the site-related risk driver figure will not capture all exceedances. Tim suggested shading the call-out boxes without detections/exceedances gray.

Josh indicated that plume cross sections are helpful, and would like to see them in the RI. The team reviewed the cross-section figures.

Josh asked if any of the contaminants being proposed for risk management would not be treated by the methods of treatment being considered. Kim indicated that they would not, citing the inorganics as an example, but an evaluation would have to be performed to provide a more specific answer for each parameter.

Karen asked how the high VOC result in the soil is incorporated into the HHRA. Because it is below the water table, it is not included in the HHRA for subsurface soil. However, the HHRA acknowledges that there would be risk.

Kim reviewed the RAOs that were drafted in the Dynamic Work Plan. The RAOs for groundwater remediation are focused on CVOCs. Josh indicated that if other contaminants are not risk managed, they will need to be incorporated into the RAOs. Kim indicated that preventing exposure to shallow groundwater would likely be the RAO for the other COCs.

Kim presented the remedial alternatives that were developed in the Dynamic Work Plan. The remedial alternatives in relation to the RAOs were included in the presentation, but not discussed in detail due to time constraints.

Tim reminded the team that MNA should be considered as an alternative alone. Monitoring after other remedies as part of a treatment train approach should be considered as performance monitoring.

Karen asked if the movement of the drainage has been/will be evaluated. It will.

Tim asked how the FS will be structured, whether all the media will be considered together or will groundwater be separate. He recommends considering everything together. It is possible that it can be done; however, the alternatives will have to be reduced prior to a detailed evaluation.

Kim discussed the schedule for the site. The ERI is targeted to get to the Navy by the end of February. However, it will realistically be closer to the end of the March. The team indicated that they are OK with a later submission.

Path Forward: The Draft Expanded RI report will be distributed for review in March/ April. The RAOs will be refined and remedial alternatives will be developed. A meeting for the FS planning will be scheduled. (Meeting scheduled during Roundtable: will be held in Amherst, MA if team attends the Triad Conference June 10 – 13.)

VI. Tier II Update

Meeting: Tier II will meet next week.

Partnering training: Partnering training was held last week and John attended.

Streamlined ROD: Tier II will discuss next week how to meet the Navy's goals of completing 50% of RODs in a streamlined format in FY09 and 100% in FY10.

RIP/RC dates: The EPA and Navy dates don't match for a lot of sites. Tier II is working to make tracking more consistent. SJCA is correct/aligned.

VII. Roundtable

NFA site in SMP: Josh asked about the AOC 7 City of Portsmouth Outgrant area. It is listed as no further action, but no description is available in the current SMP. He asked if investigation was conducted or the site has been classified for reuse. The team reviewed the historical photographs, and an area of material storage was identified. Tim referred EPA to the FY2004 SMP, which should provide a summary of the site's evaluation.

Triad Conference: Site 2 was accepted for a poster presentation. The team decided to attend the conference and hold a Site 2 FS planning meeting.

Action Janna – Send team information on the Triad Conference/poster presentation June 10 to 13; Combine with meeting (focus on Site 2 alternatives).

NIRIS: Naval Installation Restoration Information Solution (NIRIS) is a universal system for maintaining updates in mapping that has been under development for several years. It is now up and running. Everything from ENDAT (CH2M HILL database) and Enterprise web sites need to be migrated to NIRIS this year. RPMs and Activity Managers received training. Hampton Roads bases will be migrated by the end of the fiscal year. The Enterprise Portal will go away when NIRIS is implemented. The NIRIS portal will be as

similar to the Enterprise layout as possible. GIS will be made uniform to support base planning. Security clearance will be required to gain access to the site.

VIII. Site 21 ESTCP Topic

Objectives: Provide information on the proposed ESTCP study at Site 21.

Overview of Discussion: Copies of the presentation were not distributed, but will be posted to the web site.

Carol Aziz/Geosyntec presented information on the study proposed for Site 21. A partnership of Geosyntec, Cornell University, and Georgia Tech has received funding from Naval Facilities Engineering Service Center (NFESC) for testing an aerobic bacteria that degrades cis-1,2-DCE. The project was developed because many PCE/TCE plumes stall at cis-1,2-DCE during remediation, thereby continuing to migrate. The bacteria being evaluated is JS666, which uses cis-1,2-DCE as a sole carbon and energy source under aerobic conditions. The bacteria has been shown to degrade TCE, cis-1,2-DCE, tDCE, 1,2-DCA, and VC. Several microcosm studies were conducted, and in all cases cis-1,2-DCE was degraded to non-detect within 15 days. The next step is to determine if JS666 is as effective in the field. Many sites were evaluated and Site 21 has the most promising characteristics.

Carol explained the scope of the study, and presented the proposed schedule.

The team discussed potential impact on the Site 21 remedial action. The most significant difference between the study and planned action is the aerobic versus anaerobic process. Based on the size of the Environmental Security Technology Certification Program (ESTCP) study and the timing (prior to the remedial action), the opposite process should not be an issue. Extra substrate may be required to reverse the process during the remedial action, but it should not be a significant challenge.

ESTCP will obtain a Underground Injection Control (UIC) permit, unless there's a variance for pilot studies. Karen would like to be able to review the work plan for compliance with laws and regulations. Carol indicated permitting requirements will be incorporated into the work plan.

Josh and Karen indicated they are supportive of the study, and do not see the need for a full work plan review, only a courtesy copy.

Action Team – Check with agencies regarding ESTCP at Site 21.

Action Tim/Kim – Send fact sheets and meeting presentation to the team.

Path Forward: Carol/Mark Watling from Geosyntec will proceed with the site selection memorandum. The team will complete action items and follow up with any questions/concerns.

IX. Partnering Activity

John facilitated a partnering activity to improve the team's working relationship and ability.

VIII. Schedule and FY 2008 Team Goals Update

Schedule: The Schedule was updated and is included as a separate file.

FY 2007 Team Goals: The FY 2008 Goals were updated, included as an attachment, and will be posted on the Virginia/Maryland Joint IR Teams web site.

X. Agenda Building – April Meeting Agenda

<u>Topic</u>	<u>Goal</u>	<u>Lead</u>	<u>Time</u>
Site 21 Vapor Intrusion Investigation	Update on vapor intrusion investigation	Tim	1 hr
Site 21 Feasibility Study (RAOs and remedial alternatives)	Present the Feasibility Study	Janna/Guest	1.5 hr
Navy IR Conference Site 21 Presentation	Present the IR conference presentation	Kim	0.5 hr
Site 5 Removal Action Update; Phase 2 & 3 Work Plan Finalization	Update team on removal action status; finalize work plans	Janna	1 hr
Site 2	General update	Kim	0.5 hr
Site 4 Data Update	Present the latest results from groundwater monitoring	Kim	0.5 hr
Adobe document review/comment training	Learn how to review documents electronically	Kim	0.5 hr
Partnering Deliverables	Review & update deliverables	Janna	0.5 hr
SROD and eBERA	Informational	Kim	0.5 hr
Partnering Activity (MBTI)	Improve team working ability	Team	0.5 hr
Roundtable	Introduce new topics	Team	0.5 hr

Next meeting: April 9 - 10, 2008

Location: CH2M HILL, Philadelphia, Pennsylvania

Lodging: TBD, Philadelphia, Pennsylvania

Start time: 12 PM

Finish time: 5 PM

Chair: John Burchette

Host: Josh Barber

Timekeeper: Josh Barber

Goal Keeper: Tim Reisch

Recorder: Janna Staszak

Facilitator: Karen Doran

Tier II: Tim Reisch

Guests: TBD

Action Janna - Change the Philadelphia meeting reservations.

Pre-Meeting Agenda Conference Call: 9:00 AM on March 27, 2008

XI. Future Meetings Schedule

June 10 – 13, 2008	Triad Conference & Site 2 Meeting, Amherst, MA
June 17, 2008	Site 5 visit
June 17, 2008	Tidewater, Virginia RAB (5:00 PM)
July 30 – 31, 2008	Washington, DC (Hotel Helix)

September 17 – 18, 2008 Philadelphia, PA

November 19 – 20, 2008 Tidewater, Virginia RAB (5:00 PM November 18)

XII. Meeting Evaluation

John provided facilitator feedback. During the Partnering Session, the Team filled in “+” and “Δ” to list the positives and negatives of the meeting.

XIII. Parking Lot

- Site 4 groundwater monitoring during the 5-year review
- Phone numbers on IR site signs
- SROD for Site 21
- FY09 CNO Award Package
- Guest for DNAPL
- UFP SAPP Training
- NIRIS Migration Training

Consensus: The team agrees to accept these meeting minutes for the September 2007 meeting as final. The final minutes will be posted on the Virginia/Maryland Joint Installation Restoration (IR) Teams web site.

