St. Juliens Creek Annex Partnering Team Meeting Minutes: July 31 – August 1, 2008

Attendees: Tim Reisch/NAVFAC MID LANT (Day 1)
Walt Bell/NAVFAC MID LANT
John Burchette/EPA (Region III)
Karen Doran/VDEQ
Kim Henderson/CH2M HILL
Janna Staszak/CH2M HILL

Tier II Link: Tim Reisch/NAVFAC Mid-Atlantic

Guests: Mike Niemet/CH2M HILL (Day 1, Site 21 Feasibility Study)
Loren Lund/CH2M HILL (Day 1, Site 21 Vapor Intrusion)
Kim-Lee Yarberry (Day 2, Site 2 Feasibility Study)
Adrienne Jones/CH2M HILL (Day 2, afternoon)

From: Janna Staszak/CH2M HILL

Date: August 21, 2008

Location: The Hospitality House, Williamsburg, Virginia

Thursday, July 31, 2008

0900 Welcome/Check In

Roles and Responsibilities for this meeting:

Meeting Manager:	Kim Henderson
Timekeeper/Gatekeeper:	John Burchette
Host:	Janna Staszak
Goalkeeper:	Walt Bell
Facilitator:	Tim Reisch (Day 1), Kim Henderson (Day 2)
Recorder:	Janna Staszak/Kim Henderson

Ground Rules

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

Review Agenda: No changes were made to the agenda. Topics will be adjusted throughout the meeting as necessary.

Review Meeting Minutes: The June 2008 meeting minutes will be reviewed on a break and discussed later in the meeting. They were placed in the parking lot.

Review Parking Lot: Parking Lot items were reviewed and will remain in the Parking Lot:

- Site 4 Groundwater Monitoring at 5-Year Review
- FY09 CNO Award Package
- Guest for DNAPL
- NIRIS Migration
- Draft June Partnering Minutes

Action Team – Review the draft June RAB Meeting minutes by August 15.

Review Action Items: The action items were reviewed and tracked separately.

Action Kim - Send Walt two new CDs for the SMP.

II. Site 2 Expanded Remedial Investigation

Objectives: Present the response to comments. Resolve comments and prepare for final submission.

Overview of Discussion: The team reviewed the response to comments and made changes to the redline version of the RI report.

The team reviewed the VDEQ comments that were outstanding from the last meeting:

VDEQ Comment #1: Information regarding the salinity and oxidation-reduction potential (ORP) will be added to the text. The response is acceptable to Karen.

VDEQ Comment #4: Naphthalene and heptachlor epoxide will be retained as contaminants of concern (COCs). Text will be added regarding consideration of the arsenic levels in the evaluation of remedial alternatives, similar to Site 21. Thallium was not included because shallow groundwater data prior to 1999 was not included; however, the human health risk assessor evaluated the 1997 data and indicated it would not have been retained as a COC if it were included. Karen will discuss the response with Pat and get back to the team. The team discussed the risk management of methylene chloride and chloroform. CH2M HILL will generate figures showing the results of the two constituents, including the detection limits. The team will discuss the figures during a conference call on August 14 to resolve the concerns/develop a path forward.

Action Kim - Create chloroform and methylene chloride figures for Site 2 by August 8.

The team reviewed the EPA comments that were outstanding from the last meeting:

EPA Comment #17: Revisions were made to the text to clarify the exclusion of the 1997 data in the risk assessment.

EPA Comment #19: The team discussed the placement of the risk management discussion. John indicated that he is okay with leaving the discussion where it is in the document, rather than moving it into the uncertainties section.

EPA Tox Comment #1: Kim explained that for saturated soil, a quantitative risk assessment was not performed, but risk was assumed.

EPA Tox Comment #2: Because there is risk present in sediment, collection of additional samples for 1,4-dioxane would not change any remedial alternatives being considered; the sediment will still need to be addressed.

Path Forward: CH2M HILL will modify the response to comments based on today's discussion, and distribute them to the team by August 8. Karen and John will discuss the responses with their technical consultants. The team will discuss chloroform and methylene chloride during the August 14 conference call. The report will be finalized following the conference call.

III. Tier II Update

Meeting – Meeting last week was cancelled. A conference call was held to discuss key items:

- **Cheatham Annex**: A new partnering team was formed for Cheatham Annex (Susan Haug – EPA, Chris Murray – NAVFAC, Marlene Ivester – CH2M HILL, Wade Smith – VDEQ).
- **Partnering training**: A new basics of partnering training is being planned, most likely in December.
- **iROD**: The Navy has agreed that a CD is not required to allow RODs to count toward the Navy's goal.
- **LUC RD**: LUC RDs are currently being held up due to a dispute between the Navy and EPA Region III lawyers over the wording. Bob Schirmer and Hank Sokolowski (Tier III) are working out the language, using examples from different regions of the country.
- **NIRIS Training**: NIRIS is up and running. Facilities are converting, beginning with NAVFAC Washington facilities (Indian Head). The migration of all data from Enterprise to NIRIS will begin soon by Tetra Tech NUS. Soft cards will need to be acquired in order to access the data. As part of their contract, Tetra Tech NUS will provide NIRIS training. (NIRIS Training was removed from the Parking Lot.)

IV. Site 21 Feasibility Study Alternatives Comparison

Objectives: Review the Feasibility Study (FS) alternatives and key points form the June meeting, define the target areas and key assumptions of the alternatives, present the preliminary evaluation of the alternatives, present the preliminary recommendation, and discuss the schedule.

Overview of Discussion: Mike Niemet (CH2M HILL) joined the meeting by phone. Copies of the presentation were distributed. Mike reviewed the key points from the June partnering presentation, including the groundwater COCs and Remedial Action Objectives (RAOs). Mike presented the two remedial target areas: high-concentration zones and low-concentration zones. The dividing point between the zones is 1,000 ppb. Both zones vertically extend from approximately 5 to 17 ft bgs. Mike indicated that the only COCs that are present with concentrations exceeding 1,000 ppb are TCE and cis-1,2-DCE, and displayed a figure showing the areas, which combined for the high-concentration zones. John asked what the basis was for the selection of 1,000 ppb. The value was based on a combination of cost-effectiveness and the ideal size for the technologies being evaluated. The high-concentration zones extend over approximately 1 acre. Mike displayed a figure showing the low-concentration zone, which extends approximately 7 acres to address areas

where any of the COCs exceed their respective MCL. John asked if the isolated area surrounding TW122 would be included within the low-concentration zones. The area appears to be currently missing from the FS figure, and will be added.

Action Mike – Incorporate the TCE area surrounding TW122 into the low concentration zone in the Site 21 FS.

Mike reviewed the alternatives that were retained for evaluation and the key assumptions for each (see presentation).

Tim asked if it would make more sense to conduct the monitoring more frequently in the first year and less frequently later. Mike indicated that it was possible, and it may be more appropriate to leave the monitoring flexible and adjust it based on the effectiveness of the remedy.

Walt indicated he'd like to clarify terms used to be consistent with Navy milestones. Remedial action (RA) construction, RA operation, and O&M should be used within the FS, along with the terms annual/periodic monitoring during Remedial Action operation phase. Post-injection monitoring should be conducted before moving into O&M; the phrase "long term monitoring" should be avoided.

Mike indicated that DPT/pneumatic injections are assumed as the method of delivery for all of the substrates. The advantages of the method are that it is fast and inexpensive; it does not generate investigation derived waste (IDW); there is no screen, filter-pack, or development needed; there is a large radius of influence; and the atomized mist can inject slurries (like ZVI). Disadvantages of the method are that it requires overburden to prevent daylighting, and that it could damage older utilities. Mike indicated for newer utilities, the injection companies prefer to stay at least 5 feet from the utilities; for older, more fragile utilities, a 20-ft buffer is preferred.

Walt asked what the vertical placement of the injection would be. Mike indicated that it begins at the bottom, then is raised at 3-ft intervals to facilitate distribution through the entire aquifer. John asked if the high-pressure injection at the bottom of the aquifer could damage the confining unit. Mike indicated that the injection would not extend into the confining unit, and that the pressure is directed horizontally rather than vertically, so impacts to the confining unit should not occur.

Mike presented figures showing the conceptual layout of the injection points for the high and low concentration zones. The conceptual layouts showed injections within site buildings. The team discussed the injections within the buildings, and was concerned over creating a potential vapor intrusion pathway into the building through the injection points. Injection points were placed within Building 1556 due to the groundwater flow direction in the vicinity of the building. However, the placement and utilities will need to be addressed during the remedial design. Walt asked if horizontal or angular drilling would be possible. Mike indicated that those options could be considered during the remedial design, but should not impact the recommendation of the FS because the changes would impact both Alternatives 3 and 4. Mike indicated that injection at the building perimeter is possible; however, the groundwater flow direction appears to be toward the storm sewer line and therefore the substrate may not get under the building. Walt suggested that 1 injection point may be sufficient to address the TW122 area, potentially bound by 4 injection points if

determined appropriate. Walt asked if the wells within the buildings would also be temporary or permanent. Mike indicated that it may be best to make them temporary so they could be abandoned and sealed; however, permanent can be considered for cost-effectiveness.

Mike reviewed some common concerns between the injection technologies. The shallow treatment depth presents a challenge due to potential daylighting. The large treatment area is challenging due to the number and extent of the injections. Many utilities are present in the area, including the storm sewer system that appears to be influencing the groundwater flow direction. Additionally, the buildings in the site are active, presenting a logistical challenge.

Mike presented a table comparing the alternatives to the National Contingency Plan (NCP) criteria. The content of the table is similar to last month's presentation. The key addition is the cost data, which is based on preliminary pricing from vendors. Alternatives 3 and 4 are very similar in cost, both at approximately $3 million for the capital cost. Mike presented the advantages and disadvantages of each of the alternatives (see presentation).

Action Tim – Talk with legal about the waiver of the 15% royalty charge for use of ZVI.

An advantage Mike provided for ISCO and ISCR is that the reaction is complete. Tim asked what is meant by "the reaction is complete". Mike indicated that the technologies result in non-chlorine end products (by-products are not created).

Mike presented a table rating the alternatives for the first seven NCP criteria. Alternatives 3 and 4 scored similarly to each other, with Alternative 3 slightly better. Alternative 3 is the preferred alternative because it works best with the existing site conditions and the two technologies (ISCR and ERD) are compatible. Tim suggested reducing the short-term effectiveness of ISCO to 3 (from 4), due to the health and safety concerns of the workers during implementation.

Michael Singletary from NAVFAC southeast has contacted Walt to request information regarding Site 21 as a potential candidate for an ISCO study. The team concluded that the study would not be appropriate for Site 21 based on overall site status (FS in progress).

Regarding the common components of the alternatives, Tim requested the "deed restrictions" be revised to "deed notifications."

The team discussed the implementation of a permeable reactive barrier (PRB) immediately adjacent to the building downgradient of the CVOC plume, rather than injection points within the building. The PRB would provide treatment for the groundwater as it diffuses from under the building without creating potential vapor intrusion pathways within the building. The PRB would apply to each of the alternatives, and would therefore not impact the outcome of the feasibility study. The implementation of the PRB around Building 1556 can be considered during the Remedial Design.

Path Forward: The draft FS for shallow groundwater is planned for submittal by the end of August with comments due by the end of October.

V. Site 21 Vapor Intrusion Investigation

Objectives: Discuss the vapor intrusion investigation approach and come to consensus on the decision tree.

Overview of Discussion: Loren Lund (CH2M HILL) joined the meeting by phone. Tim updated the team on NAVFAC's approach for vapor intrusion investigation. While the SJCA team was developing an approach for Site 21, the Little Creek team was also developing a vapor intrusion investigation work plan. In working with both teams, Tim realized that the teams were each taking different approaches. Therefore, NAVFAC is attempting to develop a uniform approach for addressing sites across the region. John indicated that by creating the decision tree with the level of detail that NAVFAC is planning, the decision tree will need to be reviewed by EPA technical experts.

The key difference in the revised approach for Site 21 is that it relies more heavily on sub slab data than indoor air data. Loren presented the revised decision tree. He explained that the screening levels are the EPA regional screening levels (RSLs) adjusted by a factor of 10, based on the attenuation factor from the 2002 USEPA guidance that a maximum of 10% of subslab vapor concentrations migrate to indoor air. He indicated that there have been several case studies that show that the actual amount of attenuation is much lower. Karen indicated that the use of the attenuation factor of 0.1 seems reasonable, but that she will have to run it by the VDEQ risk assessor.

Loren discussed the spatial and temporal variability of subslab data versus the variability of indoor air data. ESTCP has published a study to evaluate the variability. The study concluded that the indoor air data does not vary much either spatially (room to room) or temporally (season to season). However, the subslab data varied considerably. Therefore, collection of multiple rounds of subslab data is more useful than multiple rounds of indoor air data.

Action Janna – Distribute copy of ESTCP study evaluating the spatial and temporal variability of indoor air and subslab data to the team.

Loren indicated that a factor of 10 is proposed for defining significance when comparing indoor air concentrations to ambient air concentrations and subslab vapor concentrations to indoor air concentrations. John asked what the source of the factor of 10 for defining significance is. Loren started by discussing indoor air concentrations versus outdoor air concentrations: New York vapor intrusion guidance, Appendix C, compiles a number of studies (2003 department of health vapor intrusion study, EPA 2001 Building assessment and data base, 1997 NY, 1988 EPA Ambient Air Study, 2005 National Health Institute Study). Loren pulled out three common indicators (benzene, PCE, and TCE) and compared the indoor air to outdoor air concentration. The studies indicated a 2 to 4 times higher concentration in indoor air than outdoor air in background conditions (no sub-surface source). The reason is likely that even though you exchange your indoor air for outdoor, you have pockets where you don't get true mixing and your volatiles accumulate. Loren also discussed the ESTCP study, which looked at the spatial and temporal variability of 2 to 3 times. Therefore, a factor of 10 is reasonable for indicating a significant difference. Loren also discussed the significant difference between indoor air and subslab vapor. The basis is similar to indoor/outdoor air. The EPA database indicates worst case of 10% of sub slab concentrations reach indoor air.

The team discussed the placement of the HHRA in the decision tree. The multiple lines of evidence have been incorporated earlier in the decision tree to determine whether or not a pathway is actually present. Vapor intrusion is different than HHRA with other media, where it is clear if there is or is not a pathway present.

The team discussed the use of the background data. The background data will be factored into the multiple lines of evidence approach. It seems most appropriate for consideration down the road if mitigation is necessary. John asked if it was necessary to collect the data. Loren and Walt indicated they would prefer to collect the data for comparison.

Tim indicated he would like the team to consider proceeding with FS and ROD for groundwater. If it is determined that vapor intrusion is a problem, the team could amend RI, FS, and ROD, or address the changes through an explanation of significant differences (ESD) for the ROD. Kim indicated that the ROD wording would be tricky because VI risk would still be under evaluation.

Action team – Look into ROD guidance to determine if a ROD will be possible if VI is still being assessed. Consider an interim ROD.

The Site 21 ROD schedule was placed in the parking lot.

Path Forward: CH2M HILL will revise UFP-SAP worksheets 10 and 11 and the decision tree based on the discussion and distribute to the team by August 8.

Friday, August 1, 2008

0800 Welcome/Check In

Reviewed Roles and Responsibilities

Reviewed Ground Rules

Reviewed Agenda

The team reviewed the agenda. No changes were made.

VI. Site 5 Removal Action Update

Objectives: Update the team on the removal action, present the stabilization technical memorandum, and review the path forward.

Overview of Discussion: Copies of the presentation were distributed. Janna presented a figure showing the phases of the removal action, and identifying the areas that have been approved for removal (Phase 2 and areas of Phase 3 not adjacent to the waste/burnt soil area). Agviq-CH2M HILL Joint Venture II (JV II) mobilized on July 28 to initiate the removal action. JV II is currently conducting site setup, including installation of erosion and sediment controls, utility clearance, and clearing to gain access to the removal areas. It is anticipated that excavation will begin during the week of August 4.

Janna reviewed the status of Phase 1 and the portions of Phase 3 adjacent to the waste/burnt soil area. The ESS is still undergoing NOSSA review. NOSSA provided partial comments on July 16. However, the person reviewing the site approval portion of the ESS

has been out of the office and therefore has not provided comments. Once comments are received, the ESS will be finalized. The work plan for that portion of the removal action will then be revised and resubmitted, incorporating the ESS, UXO-related work procedures, updated health and safety plan, and stabilization approach for the hazardous grids.

Janna presented the contents of the stabilization technical memorandum, which was distributed to the team electronically on July 29. The memo presents the approach for stabilizing the 4 grids that exceeded the criteria for non-hazardous disposal due to high TCLP lead concentrations. Karen provided comments on the memo:

- Clarify the rate of application of the stabilizing agent. Indicate if it will be uniform across all of the grids, or if it will be adjusted based on the detected lead concentrations
- Add construction details for the stabilization area (e.g., liner?)
- Clarify if the stabilization agent will be added based on weight or volume
- Clarify the schedule/order of excavation and stabilization

Karen requested that JV II notify the team when the stabilization is scheduled. She would like to conduct a site visit to observe the activity. John indicated that he has not yet reviewed the memo, but that he will provide comments shortly.

Janna reviewed the schedule for Site 5. Phase 2 and a portion of Phase 3 of the removal action are ongoing. The stabilization technical memorandum was submitted July 29, and comments are requested by August 20. The content will then be incorporated into the work plan for Phase 1 and the remaining portion of Phase 3. The ESS is still undergoing NOSSA review. After NOSSA comments are received and addressed, the ESS will be submitted to Department of Defense Explosives Safety Board (DDESB) for a 30-day review period. Upon DDESB approval, the ESS will be incorporated into the work plan.

Path Forward: John will provide comments on the stabilization technical memorandum. NAVFAC and CH2M HILL will continue working with NOSSA to resolve comments on the ESS.

Action Walt – After the Site 5 ESS is resubmitted, schedule conference call with NOSSA to expedite comment resolution.

VII. Site 4 Groundwater Performance Monitoring

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

Overview of Discussion: Copies of the presentation were distributed. Kim reviewed the site background and the voluntary groundwater performance monitoring plan. The monitoring approach was based on the December 2005 consensus statement. The purpose of the monitoring is to evaluate the site's impact on groundwater quality to confirm no potential future releases will pose unacceptable risk. Samples are analyzed for arsenic, iron, cadmium, lead, and thallium. Three downgradient monitoring wells and one upgradient monitoring well were selected for analysis quarterly for 2 years. The results of all 8 rounds of data will be incorporated into a report after the last round. The report will include a summary of field activities, data evaluation, and recommendations.

Kim presented graphs of the data for each of the analytes, updated to include the latest round of data. Karen asked if the detection limits were higher in previous rounds, is it possible that a problem/risk may have been present and we didn't know about it. Kim indicated that detection limits would not be a problem because all metals were detected in the earliest rounds of samples.

John asked if deep groundwater is being monitored. Kim responded that it is not. The team previously determined that site activities at SJCA have not impacted the deep aquifer, and deep groundwater at Site 4 was determined to require no further action in the ROD. John asked if the 1997 data will be used in the evaluation. Kim responded that it would be included in the time trend analysis if needed.

Walt indicated that there is a new RSL value that indicates what concentrations in soil could potentially impact groundwater. Kim responded that she didn't think the value would apply to Site 4 because there is a soil cover in place.

Path Forward: The last round of voluntary groundwater monitoring data will be collected in August. The report will then be prepared and submitted in November. The annual LUC inspection will be conducted in September 2008.

VIII. Roundtable

Pipe near Site 5 discharging to Blows Creek: Karen asked if anyone knows the source of the pipe near Site 5 that appears to discharge to Blows Creek (observed during June site visit).

Action Janna – Look into the source of the pipe near Site 5 that appears to discharge into Blows Creek.

ESTCP Project: The ESTCP project has been delayed due to challenges of gaining passes for foreign nationals. In addition, NOSSA is re-evaluating the ESS Determination previously approved for work at Site 21.

EPA ROD Tracking: Please keep John informed of the ROD schedules so Tier II can be notified early of goals that will not be met.

IX. Site UXO-01 Update

Objective: Update the team on Site UXO-01 status.

Overview of Discussion: Walt summarized the status of UXO-01. Contractually, the scope of work has been submitted for the PA. It will be negotiated and awarded. An SI scope of work will follow in FY09. Johnny Noles (biologist, NAVFAC Technical Support) continues to provide technical support. His team had intended to perform an underwater topographic survey in July; however it has been delayed to August due to operational commitments. The survey will include bottom contouring and an anomaly survey using sonar. The data will help focus a future SI, if required.

Path Forward: The PA will be awarded. Walt will keep the team updated on the data collection being performed by Johnny Noles.

X. Partnering Activity

The team conducted a partnering activity involving MBTI to improve the team's performance.

XI. Site 2 Feasibility Study

Objectives: Review the remedial action objectives, review the remedial alternatives, present a preliminary screening of the remedial alternatives, describe the retained alternatives, and discuss the feasibility study schedule.

Overview of Discussion: Kim-Lee Yarberry (CH2M HILL) joined the meeting by phone. Copies of the presentation were distributed. Kim-Lee reviewed the Remedial Action Objectives and site layout. Kim-Lee presented a figure showing the preliminary human health and ecological remediation area. The human health-driven remediation for soil and sediment extends over most of the site. There is one additional sample location that will require removal based on potential ecological risk. Karen asked if the sediment in the drainage ditch on the western side of the side would need to be removed/posed risk. Janna indicated that the samples collected most recently in the ditch were for pore water analysis, and that the sediment samples previously collected did not pose unacceptable risk. Kim-Lee presented a figure showing the CVOC plume location and identifying the high and low concentration areas, which are distinguished by a COC concentration of 10,000 ppb. The distinction was selected based on the likelihood of DNAPL presence.

Kim-Lee reviewed the preliminary screening of alternatives. She discussed the alternatives that had been screened out. Kim-Lee provided a detailed description of why ISCR (soil mixing with ZVI) had been eliminated, as requested by the team during the July 21 conference call, as an alternative for complete evaluation. Because waste and ABM are present, they would need to be removed before ISCR could be implemented in order to enable distribution of the substrate. The waste removal would present a safety and operational challenge due to the presence of MEC. Significant health and safety concerns to on-site workers may be present due to the extremely high level of contamination. Additionally, mixing could also result in the back diffusion of CVOCs into groundwater. John asked if Site 2 is a reducing environment, and Kim-Lee responded that it is. John asked why the inert material would need to be removed prior to ISCR. Kim-Lee indicated that ZVI is not as mobile as other substrates, and that distribution would be limited if the waste (including inert) is not removed.

Kim-Lee discussed the elimination of the PRB, which was removed because it is less effective under tidal flow conditions and difficult to construct due to the presence of MEC and utilities. Also, PRB does not provide area treatment.

Kim-Lee listed the alternatives that were retained for evaluation:

- No action
- Capping, MNA (high and low CVOC areas)
- Capping, sheet piling (high CVOC area), MNA (low CVOC area)
- Capping, ERD (high CVOC area), MNA (low CVOC area)
- Capping, ERD (high and low CVOC areas)

- Excavation, ERD (high and low CVOC areas) *or* capping, excavation (high CVOC area), and MNA (low CVOC area)

Karen indicated that she disagrees with carrying through the sheet pile alternative because she feels that it does not meet the RAOs. She indicated that the first three alternatives (no action; capping and MNA; and capping, sheet piling, and MNA) would all be rejected by VDEQ if recommended. John indicated that he consulted with an EPA coworker who has used sheet piling at several sites, and that he is not comfortable with using it at a site with such high concentrations. Walt indicated that he would like to carry the sheet pile alternative through the evaluation, and cited the Tier III agreement for evaluation/application of a containment options at DNAPL sites.

The team discussed the excavation alternative, and chose to evaluate capping to address the human health and ecological risk, source excavation, and MNA in the plume in lieu of excavation with ERD in the source and plume.

Kim-Lee reviewed the common components of the alternatives, including MEC support, monitoring well installation/modification, erosion and sediment controls installation, site clearing, vegetative stabilization through native grasses and wildflowers, compensatory wetland mitigation, LUCs, and monitoring.

Kim-Lee reviewed the details of each alternative (see presentation). She provided some case studies where ERD had been used at sites with high CVOC concentrations. In each of the case studies, ERD broke down the contaminants to the final breakdown products. The ERD also helped facilitate dissolution of sorbed CVOCs. The case studies indicate that ERD is a viable alternative at DNAPL sites.

Action Kim – Send ERD case study links.

The team discussed the sheet piling alternative. Karen indicated her concerns are the high concentrations of CVOCs and the timeframe associated with meeting MCLs, as well as VDEQ's beneficial use policy. John's concern with sheet piling is that not actively treating the source may result in migration of the CVOCs to the deep aquifer over time; he suggested monitoring of the deep groundwater may be necessary as a result. Kim responded that the FS will consider the need for monitoring of the deep aquifer.

The team discussed the RAO for reducing the contaminant mass to the maximum extent practicable. Karen indicated that the sheet pile alternative cannot meet her interpretation of the RAO, and if the alternative is recommended VDEQ may not be able to concur with the FS. John asked if MNA will continue within sheet pile. Kim-Lee indicated that dilution/physical processes would stop, but degradation would continue.

Action Kim – Research sites where MNA has been used and instances where monitoring has demonstrated continued reduction in contaminants after sheet piling (in Virginia, in particular).

Kim-Lee presented a table containing the preliminary comparison of the alternatives. Janna provided the criteria descriptions from the RI/FS guidance to assist with the comparison of the alternatives. Kim indicated that the "Reduction of Toxicity, Mobility, and Volume Through Treatment" criteria requires treatment; therefore, the sheet pile and MNA

alternatives will rank very low in that category and another alternative may be recommended.

Path Forward: Complete action items. The FS schedule may be delayed slightly due to the resolution of the action items. The draft will be submitted in September.

XII. NAVFAC Organizational Brief

Objective: Present the NAVFAC organizational structure to the team.

Overview of Discussion: Walt provided an overview of the NAVFAC structure and spending plans.

VIII. Schedule and FY 2008 Team Goals Update

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

Action Janna – Mail Walt a color schedule.

FY 2008 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.

FY 2009 Team Goals: The team drafted the FY 2009 Goals.

XIII. Agenda Building – September Meeting Agenda

Topic	Goal	Lead	Time
Site 21 Vapor Intrusion Investigation	Resolve comments on decision tree & work sheets 10 & 11.	Janna/Walt	1.5 hr
Site 21 FS	Discuss preliminary comments.	Janna/Guest?	1.5 hr
Site 2 FS	Present the draft FS to team.	Kim/Guest?	2 hr
Success Story Review	Present draft success story.	Kim	0.5 hr
UXO-01 Update	Present results from Underwater Construction Team (UCT)-1 work.	Walt	0.5 hr
Site 5	Update team on removal action.	Janna	1 hr
FY 2009 Goals & Guidelines	Finalize goals for FY09	Walt	0.5 hr
Partnering Activity	Improve team working ability	Team	0.5 hr
Roundtable	Introduce new topics (ESTCP)	Team	0.5 hr

Next meeting: September 17 - 18, 2008

Location: CH2M HILL, Philadelphia, PA
Lodging: Crowne Plaza, Philadelphia, PA
Start time: 1 PM
Finish time: 5 PM

Chair: Tim Reisch/Walt Bell
Host: John Burchette/Janna Staszak
Timekeeper: Karen Doran
Goal Keeper: Walt Bell
Recorder: Janna Staszak/Kim Henderson
Facilitator: Janna Staszak
Tier II: Tim Reisch?
Guests: Adrienne Jones, Technical

Pre-Meeting Agenda Conference Call: 10:30 AM on September 9, 2008

XIV. Future Meetings Schedule

November 18 – 19, 2008	Washington, DC (The Helix!)
February 4 – 5, 2009	Tidewater, Virginia RAB (5:00 PM February 3 RAB, PP Meeting?)
April 2 – 3, 2009	Richmond, VA

XV. Parking Lot

The team reviewed the parking lot and made the following changes:

- Site 4 groundwater monitoring during the 5-year review
- ~~FY09 CNO Award Package~~ (Added to FY09 draft goals)
- ~~Guest for DNAPL~~ (Addressed through FS technical guests)
- ~~NIRIS Migration Training~~ (Addressed through Tier II update)
- Draft June Partnering Minutes
- Draft June RAB Minutes
- ~~Site 21 RI consensus statement~~ (Addressed through finalization of RI)

XVI. Meeting Evaluation

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