

FINAL MEETING SUMMARY

CH2MHILL

St. Juliens Creek Annex Partnering Team Meeting Minutes: September 17 – September 18, 2008

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

Tier II Link: Tim Reisch/NAVFAC Mid-Atlantic

Guests: Pat McMurray/VDEQ

From: Adrienne Jones /CH2M HILL

Date: November 19, 2008

Location: CH2M HILL, Philadelphia, PA

Wednesday, September 17 2008

0100 Welcome/Check In

Roles and Responsibilities for this meeting:

Meeting Manager: Walt Bell
Timekeeper/Gatekeeper: Karen Doran
Host: John Burchette /Janna Staszak
Goalkeeper: Walt Bell
Facilitator: Janna Staszak
Recorder: Adrienne Jones

Ground Rules

Walt reviewed the meeting roles and responsibilities. The team discussed the procedures for new and exiting members, and planned to conduct an entrance activity for Adrienne and exit activity for Kim at the November meeting. Karen indicated that Jim Cutler/VDEQ will support SJCA during Karen's absence, beginning with attendance at the next partnering meeting. Presentations during the next meeting will include additional background information for Jim.

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

Review Agenda: The Site 2 FS and Site 21 FS topics were switched. Topics will be adjusted throughout the meeting as necessary.

Review Meeting Minutes: The team reached consensus to finalize the June 2008 meeting minutes, based upon resolution of John's comment. Karen provided editorial comments on the July 2008 meeting minutes; all comments were incorporated during the meeting in a redlined version. Walt indicated that he does not have any comments on the July 2008 minutes; however, John's comments are needed prior to finalization. Therefore, the July 2008 meeting minutes were placed in the parking lot.

Review Parking Lot: Parking Lot items were reviewed as follows:

- Site 4 Groundwater Monitoring at 5-Year Review (remain in Parking Lot)
- Draft July Partnering Minutes (remain in Parking Lot, pending John's comments)
- Draft June RAB Minutes (removed from Parking Lot; comments have been received and minutes have been finalized and posted to the public web site)

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

II. Site 5 Update

Objectives: Present a Site 5 status update, including the removal action, ESS, and stabilization memo response to comments.

Overview of Discussion: Copies of the presentation were distributed. Janna provided the Team with an update on the status of the ESS. Comments on the ESS have been resolved with NOSSA. NOSSA required that "Final" be added to the ESS cover for final review on September 11, 2008. NOSSA will endorse the ESS and provide it to Department of Defense Explosives Safety Board (DDESB) for review and endorsement. Walt explained that NOSSA may provide a conditional approval for the ESS, which would allow work to be conducted, but would require any changes resulting from the DDESB review to be implemented by the contractor. However, NOSSA has recently stopped issuing conditional approvals except under very special circumstances, and one is unlikely for Site 5. Walt indicated that NOSSA Instruction 8020.15A recommends project managers plan 1 year for the DDESB review and approval, but that hopefully DDESB will provide a more timely review and endorse the ESS. Janna indicated that Rick Urbanski (DDESB) said that the DDESB backlog has been reduced and review is currently averaging 3 to 4 weeks. Additionally, DDESB typically does not provide multiple rounds of comments, but rather provides any revisions in their letter of endorsement. John asked if the delay could affect the ROD submission, which was anticipated to occur in the forth quarter of FY 2009. The team will review the schedule tomorrow.

Janna reviewed the completed removal action items of the initial phase (ESS determination areas). Agviq-CH2M HILL Joint Venture II (JV II) mobilized on July 28 to initiate the removal action. Clearing, E&S control installation, excavation, confirmation sampling, transportation and disposal, backfill, and restoration were completed in August and demobilization occurred on September 3. No MEC or MEC-related items were encountered during the initial removal phase and 3,171 tons of material was disposed off-site. Karen

asked if there were any photos taken from the removal conducted in the wetland area. Janna responded that there are pictures but they have not been released from base security. Karen indicated she would like to visit the site to observe the removal action impacts and the restoration.

Action Walt – Check with Doug Taylor and Mark Robbins on releasing Site 5 photos.

Action Adrienne – Schedule Site 4 inspection and Site 5 visit.

Adrienne explained the confirmation sampling that was conducted. A 5-point composite soil sample was collected at each of the human health risk-based removal areas (SS19 and SS66) and analyzed for COCs. The results of both confirmation samples were below the established cleanup goals and no additional confirmation samples or excavation were necessary.

Janna reviewed the upcoming submittals and schedule. A tech memo will be prepared by JV II to summarize the initial removal action phase. A revised work plan will be submitted to include updated UXO procedures, the updated ESS, and stabilization of the hazardous grids. Janna requested John's concurrence for the response to comments provided by JV II regarding the stabilization tech memo; John will review the response and send an email when he returns to the office.

Path Forward: John will review the response to comments for the JV II stabilization tech memo. The draft tech memo report documenting the initial removal will be submitted October 15 and the revised work plan will be submitted approximately 14 days after approval of the ESS.

III. Site 21 ESTCP

Objectives: Provide a brief overview of the Environmental Security Technology Certification Program (ESTCP) project. Present a status update of the ESTCP project.

Overview of Discussion: Copies of the presentation were distributed. Walt reviewed the ESTCP project and specific site objective. John asked if the JS666 bacteria only degrades cis-1,2-DCE. Janna looked at the minutes from the February 2008 partnering meeting, which Carol Aziz (Geosyntec) had attended as a guest to present the proposed study, and responded that the bacteria also degrades TCE, TDCE, 1,2-TCA, and VC. The team discussed the project status and schedule. Mobilization began on September 15. During mobilization the treatment area was shifted immediately west of the proposed area due to utilities. Upcoming activities consist of installation of demonstration wells, tracer testing to confirm groundwater flow direction and seepage velocity, baseline groundwater sampling, and bioaugmentation, which will be completed by the end of October. Monthly performance monitoring will be conducted November through May. Janna indicated that the data being collected (e.g., the tracer data) by the ESTCP team will be useful for the Remedial Design.

Action Walt – Check with Carol Aziz to ensure groundwater flow information will be documented in the ESTCP report.

John asked if the project will affect the vapor intrusion investigation. Janna responded that the location of the study is greater than 100 ft from the buildings for which the vapor investigation is planned, and it's not expected to affect the VI investigation.

Path Forward: Geosyntec will continue with the project as scheduled and the team will be updated on the project status.

IV. Site 21 Feasibility Study

Objectives: Review the Feasibility Study (FS) process including the objective and content, present the Site 21 FS, and review the document schedule.

Overview of Discussion: Copies of the presentation were distributed. Janna explained that this topic will focus on the contents of the FS that have not been discussed during previous meetings. Janna presented an overview of the objectives and content of a feasibility study. She explained the three types of ARARs (chemical-, action-, and location-specific) and the difference between "applicable" and "relevant and appropriate" ARARs and to-be-considered criteria. Kim noted that new ARARs have not been received from the state in a few years; Karen responded that she was unaware of an updated version for distribution.

Janna reviewed the nine NCP criteria used during alternative evaluation. She indicated that the FS considered the first seven of the nine criteria. The first two, threshold criteria, comprise overall protection of human health and the environment and compliance with ARARs, and they must be achieved through the remedial action. The following five, balancing criteria, comprise long-term effectiveness and permanence; reduction of toxicity, mobility, and volume through treatment; short-term effectiveness; implementability; and cost; and are used by decision makers to balance decisions. The last two, modifying criteria, are state acceptance and community acceptance, and are addressed through the Proposed Plan and Record of Decision. Janna provided definitions for each of the criteria.

The draft FS was submitted on September 15. Janna presented the outline of the report and clarified that the FS focuses the findings of the RI report, which identified potential risk associated with CVOCs in shallow groundwater. The FS does not discuss other media, as the RI report did not identify any other unacceptable risks. The FS also does not address the potential risk associated with vapor intrusion because the pathway is still under evaluation; the uncertainty is identified upfront and not further discussed throughout the document. Janna indicated that the detailed individual evaluation of the alternatives was streamlined as a table. John asked if the team reviewed the alternative evaluation during the last meeting. Kim responded that the preliminary evaluation was presented and discussed but the detailed evaluation had not yet been performed. Kim indicated that the comparative evaluation is also presented in a table. Walt asked if the report explains the ranking of the comparative evaluation, and Janna responded that it does.

Kim indicated that ISCR/ERD and ISCO/ERD scored similarly in comparison. Janna explained the differences in the ranking between ISCO and ISCR. Based on comparison of short-term effectiveness, ISCO received a lower ranking than ISCR because of a greater risk to workers during implementation due to the hazards of working with highly oxidizing chemicals. ISCO also received a lower ranking than ISCR for implementability because the oxidizing conditions that would be created for the ISCO component would have to be reversed for the subsequent ERD component, which requires reducing conditions. John

asked if the site is currently reducing, and Janna responded that it is. ISCO is more expensive than ISCR because more than one injection is assumed, in spite of the 15% proprietary fee associated with ISCR. Janna pointed out that both alternatives 3 and 4 have the potential to temporarily mobilize metals, which results in a similar score for short-term effectiveness.

Janna pointed out that a recommendation was not included in the report and asked the team if they want to include a recommendation. John responded that the guidance doesn't clearly state whether a recommendation should be included, so he is okay either way. Janna indicated that the NERP guidance also does not indicate whether or not a recommendation should be included, but seems to be written as though the FS will include a recommendation. Kim stated that the preferred alternatives are included in the PP, so it's better to have a recommendation provided in the FS to base the preferred alternative on. The team concluded that determination of whether or not to include a recommendation within the FS would be made at the next partnering meeting.

Action Walt - Provide CDs of NERP for Team.

Walt asked if the ROD for Site 21 is scoped as an iROD. Kim indicated that a ROD is currently scoped and that the cost between the two types of RODs is similar and a concurrence letter will not be needed if an iROD is decided on.

Path Forward: The team will review the draft FS and provide comments by November 14. The comments will be discussed during the next partnering meeting, if available, and the final FS will be submitted by December 15. The draft PP will be submitted the same timeframe as the final FS.

V. Success Story Review (Part 1)

Objectives: Present draft success story.

Overview of Discussion: Kim presented the draft success story for FY08, which was to be posted to the Tier II website. During the July/August partnering meeting, the team had decided the topic of the success story would be continued team success and progress through multiple team member transitions. Karen suggested that the success story should demonstrate how the team exemplifies the partnering process. She suggested adding details of the Site 2 Triad Investigation, including the dynamic work planning approach implemented by the team and how the team worked together to accomplish objectives of the investigation.

John suggested the addition of UXO-01 should be incorporated. Walt asked if Site 3 was mentioned. Kim responded that the ROD was signed in 2005; because the success story highlights the number of team changes since 2005, the Site 3 ROD signature will be incorporated into the bullet listing the Site 19 ROD.

Path Forward: Kim will incorporate the team suggestions and the team will refine the success story on Day 2.

Thursday, September 18 2008

0830 Welcome/Check In

Reviewed Roles and Responsibilities

Reviewed Ground Rules

Reviewed Agenda

The team reviewed the agenda. No changes were made.

VI. Site 2 Feasibility Study

Objectives: Describe the remedial alternatives retained for evaluation, present the preliminary evaluation of the alternatives, discuss the preliminary recommendation, and discuss the feasibility study schedule.

Overview of Discussion: Copies of the presentation were distributed. Kim explained that the information being presented is preliminary. Kim listed the alternatives that were retained for evaluation in the FS:

1. No action
2. Capping, MNA (high and low CVOC areas)
3. Capping, sheet piling (high CVOC area), MNA (low CVOC area)
4. Capping, ERD (high CVOC area), MNA (low CVOC area)
5. Capping, ERD (high and low CVOC areas)
6. Capping, Funnel & Gate (high and low CVOC areas), MNA (low CVOC area)
7. Capping, partial excavation (high CVOC areas), MNA (low CVOC area)
8. Capping, partial excavation (high CVOC areas), ERD (low CVOC area)

Kim explained that the alternative combinations shown as the lighter color blue in the presentation (Alternatives 6, 7, and 8) are alternatives that have been added or changed since the previous meeting. Alternative 6 is similar to Alternative 3, but was added because it is more active; the sheet pile in Alternative 3 restricts groundwater flow, whereas the funnel and gate allows groundwater flow and directs it/provides treatment. John asked if funnel and gate is similar to a PRB. Kim responded that it is; however, PRB relies on the natural flow of groundwater and the funnel and gate directs the groundwater to a smaller treatment area. Alternatives 7 and 8 were added as a response to the July partnering meeting discussion, during which the team indicated a preference to evaluate partial excavation over complete excavation, and the complete excavation alternative was excluded from evaluation.

Kim reviewed the common components of the alternatives, including UXO support, monitoring well installation/modification, erosion and sediment controls installation, site clearing, vegetative stabilization, compensatory wetland mitigation, LUCs, and monitoring. Karen asked if the wetland has *phragmites*. Kim responded that it does, but that it also has higher quality vegetation and that it is a higher quality wetland than the Site 5 area. Kim presented a photo of Site 2 to show where *phragmites* and other wetland plants are present.

Kim described the alternative combinations. Kim explained that for all of the alternative combinations, it has not yet been determined whether an impermeable cap or soil cover will be used, but that it is referred to as a cap in the presentation. A soil cover would reduce infiltration but a cap would be impervious. The team discussed the alternatives as follows:

Alternative 2: In reference to the figure showing the limits of the cover, Walt asked why the cover extends beyond the waste boundary in the west and north. Janna explained that it is because there surface soil risk has been identified in those areas. Walt asked if the building foundation north of the site would serve as a cover; Janna responded that it would not because it is elevated and does not prevent contact with the soil. Janna indicated that there are significant challenges associated with the implementability of the cap/cover due to the wetland presence, low site elevation, and drainage that would need to be re-routed, and that the challenges are still being evaluated.

Alternative 3: John indicated that his initial concern with sheet piling was that it might allow continued groundwater flow/contaminant transport through the sheet piling; however, if the Waterloo barrier would "seal" the sheet pile and prevent horizontal groundwater migration, he was concerned that MNA would be reduced. Kim responded that MNA processes would continue, but potentially at a reduced rate. John suggested that monitoring of deep groundwater may be necessary if sheet piling is used, as the slow rate of degradation may allow for the eventual migration of contaminants to the deep aquifer. Karen agreed. Kim indicated that monitoring assumptions would be included within the FS and the monitoring plan would be developed with the remedial design. Kim asked the team if MW10D can be abandoned; the well was sampled during the Triad investigation in 2007. Within the ERI report, it was concluded that deep groundwater had not been impacted by site activities and no further action was necessary. Kim indicated that because the well is located within an area of high CVOC concentrations in shallow groundwater, it may serve as a conduit to the deep aquifer and should be abandoned. John indicated that he would like to review the analytical results from MW10D. Abandonment of MW10D was placed in the parking lot and will be revisited after John reviews the data.

Alternative 4: Karen asked if it has been confirmed that ERD has been used at sites with similar concentrations, and Kim responded that it has and referenced case studies distributed by email. John asked if pneumatic fracturing would be used to achieve distribution of the ERD; Kim responded that DPT or injection wells would be used because of the potential for munitions.

Alternative 5: John asked how many ERD injection rounds would be required. Kim responded that the alternative is still being developed. Janna explained that the FS is conceptual and the wording will allow for flexibility in the injection details, which will be refined.

Alternative 6: John asked if there is life cycle with the barriers (e.g., ZVI, mulch) in the funnel and gate system. Kim responded that ZVI lasts for long periods of time (up to 8 years), but that the mulch may need to be replaced because it breaks down over time, and it will be factored into the O&M costs.

Alternative 7: Karen asked if when the removal is conducted to the Yorktown confining unit, the top 6 inches of the confining unit could be removed since that's where the DNAPL

is most likely to be present. Kim responded that it most likely would be, but there is still potential for recontamination if the DNAPL is present in a pocket of the clay not removed. Karen noted that for all the alternatives it is likely that we wouldn't remove all the contamination. John asked if the highest concentrations are all located at the confining unit, and Kim responded in general it is, but that high concentrations have also been observed higher in the Columbia aquifer. Karen suggested focusing excavation on particular areas of the site based on data rather than excavating down to the confining unit. Janna responded that this type of excavation would not likely be effective because of the nature of DNAPL; there would be a high level uncertainty/potential for remaining contaminants to recontaminate the groundwater.

Alternative 8: The alternative is similar to Alternative 7 but uses ERD in the low concentration area instead of MNA.

Kim listed the evaluation criteria used in the FS, presented a comparative analysis, and explained that the comparative analysis is preliminary. John asked if there is a good feel for the costs; Kim responded that the cost estimates have not been completed, but relative costs are known. Kim explained that all alternatives received high scores for the first two evaluation criteria because the alternatives must meet the criteria (threshold criteria).

Kim presented the key differences in ranking for the alternatives:

Long-term effectiveness and permanence: The alternatives with capping and ERD have the highest scores because all components actively treat the contamination; alternatives relying on MNA or containment of contaminants received lower scores.

Reduction of toxicity, mobility, and volume through treatment: The alternatives that received a high score include a treatment component. Karen asked if excavation counts as treatment, and Kim responded it does not. Walt asked about the difference in scores between Alternatives 4 and 5. Kim explained that ERD is used in both the high and low concentration areas in Alternative 5, while Alternative 4 uses ERD in only the high concentration area.

Short-term effectiveness: Alternative 5 has the highest score because capping and ERD presents the least risk to receptors and shortest timeframe to meet RAOs. Walt asked why Alternatives 2 and 4 have a lower score than Alternative 5; Kim responded that Alternative 5 includes ERD for the entire plume, resulting in RAOs being met more quickly.

Kim noted that without factoring in costs, Alternative 5 appears to be the preferred alternative. Karen suggested that Alternative 8 should have a higher score for short-term effectiveness. Kim responded that its lower score is based on the risk to site workers and the community during implementation. Kim indicated that although the costs appear the same for Alternatives 7 and 8 using the scale in the presentation, Alternative 8 will have a higher cost than Alternative 7 when the costs are calculated because it includes ERD. Karen asked if the alternatives without MNA would include performance monitoring; Kim responded that they would.

Walt asked why a draft final submittal is included in the schedule. Kim responded that there will most likely be several changes to the draft to incorporate following review. Karen suggested having a conference call in December before she leaves so that her comments can

be resolved. Karen asked if alternative costs will be provided in the FS; Kim responded that they will.

Path Forward: The Draft FS will be submitted in mid October. The team will consider scheduling a conference call in December prior to Karen's leave in order to resolve her comments.

VII. Roundtable

Annual Report to Congress Summary: Walt is currently preparing the update for the Annual Report to Congress. The update includes a report about the progress of the sites at each facility. Walt presented the SJCA component of the report, which includes general information about the facility and progress to-date.

UXO-01 PA: The PA for UXO-01 has been awarded to CH2M HILL. The PA will be completed during FY09 and the SI will be awarded in the upcoming year. The results of the PA should help scope the SI.

UXO-01 Underwater Construction Team work: Johnny Noles (Biologist, NAVFAC Technical Support Section) has been coordinating with the Underwater Construction Team to gather information at UXO-01. Sonar and depth data were collected September 10, and the data will be processed and provided to Walt. A magnetometer survey will be conducted in the future. The data collected so far is above-grade, so it will not identify anything buried. Karen asked if the PA is getting ready to start. Janna responded that the PA work plan will be submitted in October.

Karen's schedule: Karen expects to be out beginning December 23 and return beginning the last week of March, starting with half days then full time the first week of April. Jim Cutler will serve as Karen's proxy during her leave. Jim will attend meetings while Karen is out, and potentially attend the November meeting to transition. Karen will likely limit her travel when she returns to work.

VIII. Tier II Update

Tier II met last week in Virginia Beach. Tier III met after Tier II. The following topics were discussed:

- **Websites** - New team members should be added to the team websites.
- **USEPA groundwater to surface water guidance** - Guidance has been released and distributed to RPMs and activity managers. This guidance primarily applies to ecological risk assessments.
- **Navy MRP work group** - The Navy MRP work group exists to develop consistent approaches and provide support with Navy guidance, protocol, and the incremental sampling approach for MRP sites. If partnering teams would like additional guidance, a member of the work group could provide technical support. Linda Cole represents NAVFAC Mid-Atlantic and Steve Hurff represents NAVFAC Washington on the MRP work group.

- Vapor Intrusion** – Tier II will provide support to Tier I as the technical issues are resolved, but will not provide direction because the teams must develop path forward on a site-specific basis. A joint meeting between the Naval Amphibious Base Little Creek and SJCA teams, which are both investigating VI and using a similar approach, has been scheduled for November. The meeting is not intended to develop an approach that becomes the Navy-wide generic approach for VI approach. Tier II has developed an agenda for the meeting. The first part of the meeting will consist of combined (Little Creek and SJCA) introductions, review of ground rules, review of site characteristics and background, an overview of the VI investigation approach, and discussion of regulatory comments and recommendations. The teams will then separate to openly discuss their site and develop an acceptable investigation approach. Desired outcomes of the meeting include sampling methodology, data evaluation, and revised flow charts for the paths forward. The meetings will likely require team-specific decisions and consensus statements, so the second day of partnering should include additional discussion for each team. November 18 has been proposed for the meeting, but it may be adjusted based on availability. Pat McMurray will likely attend as the VDEQ technical consultant. The EPA representatives have not yet been determined, but may include Kathy Davies (senior hydrogeologist) and a senior RPM on the EPA VI work group Dan Waddill (NAVFAC Atlantic) and Loren Lund (CH2M HILL) will attend to provide technical support for the Navy. Tim indicated that Durwood Willis and Bruce Beach would determine the attendees for VDEQ and EPA and confirm their availability. Paul Herman will serve as the facilitator for the meeting. Tim will attend the meeting because he is a SJCA team member and the RPM for Little Creek, though his role at the meeting will be more to represent Tier II and aid Paul in facilitation.
- Facilitation** - Yorktown and Cheatham Annex will be separated into two partnering teams next week. Partnering teams are encouraged to consider facilitation if the team members are changing or if they have never had facilitation. Because of Kim's upcoming departure from the team, the recent addition of John, and the departure of Tim, SJCA may want to consider having a facilitator come for a few meetings to review meeting participation and make sure the team is functioning properly. Tim suggested team discuss facilitation with Tier II and requested the team provide Tier II with the decision. Facilitation was placed in the Parking Lot.

IX. Site 21 Vapor Intrusion Investigation

Objectives: Discuss the status and path forward for the Site 21 vapor intrusion investigation.

Overview of Discussion: The team discussed the status of the vapor intrusion UFP SAP work plan. Karen had provided comments on the latest version of the Worksheets 10 and 11 and the decision tree. She asked if responses to comments will be distributed. Janna responded that they have not due to the vapor intrusion meeting that is being planned and asked if there are any particular comments the team would like to discuss. John indicated that he has not yet provided comments on the decision tree, but plans to. John expressed concern over the consistency between the "environmental question to be answered" in Worksheet 10 and the decision tree. He explained that the question in the worksheet incorporates risk, but that the decision tree only results in the evaluation of risk in limited scenarios. Janna responded that the investigation approach must first determine whether

COCs are present in the shallow groundwater and a pathway is present prior to evaluating risk; John indicated that the evaluation of risk may need to be incorporated earlier in the decision tree. Walt clarified that if the investigation concludes that vapor intrusion is evident, risk will be addressed through the IRP; however, if vapor intrusion is not evident but an indoor air source is present resulting in unacceptable VOC concentrations in indoor air, the risk will be addressed through another Navy program. The team decided not to discuss the approach in detail, as it will be revised during the vapor intrusion meeting. John indicated that a decision tree is difficult to develop due to the need to consider the multiple lines of evidence during vapor intrusion evaluation, and suggested that the team should simplify or abandon the linear decision-making approach. Walt responded that approach doesn't follow the SAP process, which requires specific data quality objectives. Kim pointed out that the decision tree can't cover every possible scenario; therefore, professional judgment will be used in addition to the tree in evaluating the investigation results.

The Team discussed the upcoming meeting. In preparation for the meeting, team members should be hearing from Tier II or Tim Reisch. Everyone should come to the meeting with comments and suggestions. Karen asked if responses to comments for worksheets 10 and 11 and the decision tree will be distributed. Walt responded that the joint vapor intrusion meeting will serve as resolution to the comments.

Kim informed the team that the Navy is preparing for the RITS seminar and vapor intrusion is one of the technical topics. The presentation will discuss guidance, policies, and case studies, which will include Site 21. Donna Caldwell and Dan Waddill will be the presenters.

Path Forward: The team will prepare for the November joint vapor intrusion meeting.

X. Site 2 Expanded Remedial Investigation

Objectives: Resolve comments and prepare for the final submission of the Expanded RI report.

Overview of Discussion: Pat McMurray joined the meeting by phone. Kim provided Pat with a status of the ERI comment resolution: The Navy received regulator comments and the team worked through the majority of them during past meetings. The purpose of this topic is to resolve the outstanding comments, especially VDEQ comment 4 about risk management of thallium, methylene chloride, and chloroform. Pat indicated that VDEQ accepts the response to VDEQ comment 4 regarding risk management of thallium, but is not comfortable with the risk management of methylene chloride or chloroform without further discussion.

Kim explained that it is not possible to achieve detection limits below the MCLs for methylene chloride and chloroform due to the high concentrations of other CVOCs; however based on the data available, plumes associated with those constituents do not appear to be present. Pat agreed that there does not appear to be a plume associated with chloroform. She indicated concern over methylene chloride, which is a solvent and may have been used in the past at the site. Pat indicated that methylene chloride may have been used at the same locations as TCE and expressed concern over the fact that there was not a known source of TCE. Kim indicated that the source of TCE is most likely waste disposal, and that the highest TCE concentrations in groundwater have been detected in the vicinity of monitoring wells MW10S and MW12S, which is consistent with waste disposal. Karen

expressed that she doesn't think methylene chloride and chloroform can be ruled out as COCs based on current data. She suggested that since it is not possible to achieve detection limits below the MCLs while TCE concentrations are elevated, groundwater should be sampled for methylene chloride and chloroform following reduction of TCE concentrations in order to confirm their absence of presence. Kim indicated that because methylene chloride and chloroform are common laboratory contaminants, it may be difficult to obtain consistent results and detection limits demonstrating that concentrations of the constituents are below their MCLs. Kim indicated that a statistician is performing a geospatial evaluation of the data to determine if there is sufficient data to demonstrate that methylene chloride and chloroform plumes are not present at the site, but that the evaluation is not yet complete. Pat indicated she would like to see details on the approach and the results, and would consider it for risk management. She feels that there is a good amount of usable data, but is concerned with excluding the area with elevated detection limits. Kim pointed out that there are additional VOCs that have a similar situation as methylene chloride and chloroform. Janna asked Pat if she was comfortable with risk managing chloroform because it is not a solvent and was not historically used at the site; Pat responded that she is not comfortable.

Pat asked what EPA's stance was on the topic. John responded that specific wells within the highest concentration area should be further investigated to confirm whether or not methylene chloride and chloroform are present at concentrations exceeding their MCLs. Kim responded that data is available for those wells. Walt indicated that he feels there is sufficient temporal and spatial data to show that the constituents aren't a concern. John asked if methylene chloride and chloroform would be treated as part of the remedies being considered and if so, they can be carried through and monitored for. John is concerned that there is not enough data to definitively state that the constituents aren't present and feels that monitoring for them would not be additional work.

CH2M HILL will send the team an email with the geospatial analysis approach and results. Pat asked if all of the results for methylene chloride and chloroform are presented on the figures; Kim responded that it is. Kim indicated that the detection limits of the samples collected by DPT are elevated because the samples were collected for plume delineation and analyzed in an on-site laboratory. Pat would like to evaluate the permanent well data alone to determine if there is still uncertainty. CH2M HILL will provide figures that show only the monitoring well data. Pat will also like to look at the data tables to further review the results.

VDEQ indicated that the responses to all other comments are acceptable.

Kim asked John if he has had a chance to look at the RTCs. John replied that he has not.

Action John – Review RTCs for Site 2 by September 26.

Karen asked if a conference call could be scheduled to discuss the results of the statistical analysis for methylene chloride and chloroform in order to resolve the RTC and finalize the document. The conference call was scheduled for October 7 at 10:00 am to resolve the outstanding VDEQ and EPA comments.

Path Forward: CH2M HILL will distribute figures showing the methylene chloride and chloroform results for the permanent monitoring wells and the approach for the geospatial

evaluation of the data to the team. The team will discuss risk management of chloroform and methylene chloride, as well as the EPA RTCs, during the October 7 conference call. The report will be finalized following approval of the RTCs.

XI. Success Story Review (Part 2)

Objectives: Review the changes Kim made to the draft success story and prepare it for submission to Tier II.

Overview of Discussion: Kim presented the updates that she made to the draft success story and the team made additional changes.

Path Forward: Kim will have the success story formatted and submit it to the team and Tier II.

VIII. Schedule and FY 2009 Team Goals Update

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

Action Janna – Look for EPA & VDEQ concurrence on phases 2 & 3 work plan for Site 5. Email John and Karen.

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 finalized the FY 2009 Goals. They are included as an attachment and will be posted on the Virginia/Maryland Joint IR Teams web site.

XII. Partnering Activity

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

XIII. Agenda Building – November Meeting Agenda

<u>Topic</u>	<u>Goal</u>	<u>Lead</u>	<u>Time</u>
Joint Vapor Intrusion Discussion	Develop joint approach for VI evaluation		1 day
Site 21 Vapor Intrusion?	Rework decision tree & work sheets 10 & 11.	Janna	2 hr
Site 21 FS	Discuss preliminary comments.	Janna/Guest?	1.5 hr
Site 2 FS	Discuss preliminary comments.	Kim/Guest?	1 hr
UXO-01 PA	Draft work plan	Janna	0.5 hr
Site 5?	Update team on removal action.	Janna	0.5 hr
Site 21 Interim PP	Present draft PP	Janna	1 hr
Site 4 Voluntary Groundwater Monitoring Report	Discuss preliminary comments.	Adrienne/Guest?	1 hr
NERP Manual	Overview	Walt	0.5 hr
RAB Agenda	Agenda building	Team	0.5 hr
Partnering Activity	Entrance and Exit	Team	1 hr
Roundtable	Introduce new topics (ESTCP, facilitation)	Team	0.5 hr

Next meeting: November 18-20, 2008

Location: CH2M HILL, Washington, DC

Lodging: The Helix, Washington, DC

Start time: 1 PM

Finish time: 5 PM

Chair: John Burchette

Host: Adrienne Jones

Timekeeper: Kim Henderson

Goal Keeper: Walt Bell

Recorder: Adrienne Jones

Facilitator: Walt Bell

Tier II: ?

Guests: Technical

Pre-Meeting Agenda Conference Call: 10:00 AM on November 4, 2008

XIV. Future Meetings Schedule

February 4 - 5, 2009 Tidewater, Virginia RAB (5:00 PM February 3 RAB Meeting)

April 1- 2, 2009 Richmond, VA

June 2 - 3, 2009 Richmond, VA

XV. Parking Lot

The team reviewed the parking lot and made changes as appropriate:

- Site 4 groundwater monitoring during the 5-year review
(Will remain in the parking lot)
- Draft July partnering minutes
(Pending John's review)
- ~~Draft June RAB minutes~~
(Completed since the last meeting)
- Abandon Sites 2 and 21 deep monitoring wells
(Pending team review of data)
- Facilitation
(The team will leave the option open and evaluate based on future meeting performance. The team will consider having a guest observe during an upcoming meeting. If facilitation is desired, the team will consider the timing of Karen's leave when scheduling it.)
- Site 2 conference call
(The team scheduled a conference call for October 7 at 10:00 AM.)

XVI. Meeting Evaluation

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