

FINAL MEETING SUMMARY

CH2MHILL

St. Juliens Creek Annex Partnering Team Meeting Minutes: August 29 – 31, 2006

Attendees: Agnes Sullivan/NAVFAC MID LANT
Josh Barber/EPA (Region III)
Karen Doran/VDEQ
Kim Henderson/CH2M HILL
Janna Staszak/CH2M HILL

Tier II Link: Stacie Driscoll/EPA (Region III)

Guests: None

From: Janna Staszak/CH2M HILL

Date: February 1, 2007

Location: Waterside Motor Inn, Chincoteague, Virginia

Tuesday, August 29, 2006

1200 Welcome/Check In

Roles and Responsibilities for this meeting:

Meeting Manager: Agnes Sullivan
Timekeeper/Gatekeeper: Karen Doran
Host: Kim Henderson
Goalkeeper: Agnes Sullivan
Facilitator: Josh Barber
Recorder: Janna Staszak

Ground Rules

I. SJCA Team Deliverables

Objective: Review the St. Juliens Creek Annex (SJCA) Team Deliverables, roles, and responsibilities and update to better fit the new team.

Overview of Discussion: The team read through the deliverables and made changes as appropriate. The updated and newly titled "Partnering Guidelines" will be posted on the team and Tier II web sites.

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

Review Agenda: The Tier II discussion on Day 2 was moved to 9:30 AM. Additional revisions were made throughout the meeting as needed.

Action Janna – Play with agenda to get rid of codes & change preparation/purpose/outcome.

Review Parking Lot: There were no items in the parking lot.

Review Meeting Minutes: No comments on meeting minutes.

Consensus: The July 2006 Draft Meeting Minutes were accepted as is. The final minutes will be posted on the Virginia/Maryland Joint Installation Restoration (IR) Teams web site.

Review Action Items: The action items from the July meeting were reviewed. As a result, the following action item was created:

Action Karen/Josh/Agnes – Provide signatory information for Site 4 Remedial Action Completion Report (RACR) to Kim and Janna for incorporation into the RACR.

II. Site 5 Confirmation Sampling & Wetland Monitoring

Objective: Provide a site summary, discuss the wetlands, discuss cleanup goal development, and review the path forward.

Overview of Discussion: Copies of the presentation were provided. Kim briefly reviewed the site history, status, layout, and Engineering Evaluation/Cost Analysis (EE/CA) recommendation. A figure of the site layout was displayed.

The team discussed the Virginia Department of Environmental Quality (VDEQ) comments regarding wetlands. VDEQ had recommended 3 to 5 years of wetland monitoring. Kim indicated that pre-construction notification will be made to the United States Army Corps of Engineers (USACE) and Virginia Marine Resources Commission (VMRC) indicating that the existing wetlands will be temporarily impacted for the removal action. USACE and VMRC will be given a 45 day review period. A compensatory mitigation plan will be developed to address mitigation from the temporary impacts, and the partnering team will jointly develop a monitoring plan.

Kim reviewed the site risks:

- Surface soil (0" to 6" below ground surface [bgs]):
 - human health chemicals of concern (COCs) (arsenic, copper, iron, and lead)
 - ecological chemicals of potential concern (COPCs) (pesticides, metals)
- Subsurface soil ($\leq 5'$ bgs):
 - human health – no risk
 - ecological – risk not evaluated (no exposure pathway)

The team then discussed the human health cleanup goal development. Kim reviewed the logic of the initial development of the goals. She then reviewed changes that will be incorporated based on comments received. Instead of two separate cleanup goals (trespasser in wetland and residential in upland) as originally proposed, one cleanup goal (residential use) will be used across the site. This will eliminate most of the Environmental Protection Agency (EPA) comments. Additionally, it is recommended that iron be removed as a COC because it is an essential nutrient and the exposure point concentration (EPC) falls

below the recommended daily allowance. Copper should then be calculated based on a hazard index (HI) of 1 (instead of 0.5) since iron is not a concern (originally 0.5 used for each for a total of 1 because both affected the same target organ). The team agreed with the logic and the changes.

Kim then discussed the initial approach to mitigating ecological risk. The team had planned source removal (waste/burnt soil) followed by backfill of a minimum of 6 inches of clean fill to eliminate the exposure pathway for ecological receptors.

Because the timeline for the site funding has been extended beyond what was originally expected, Kim suggested the team take the time to consider a consistent site-wide strategy. Originally, a feasibility study was planned to address the surrounding impacted surface soil and drainage sediment. This approach assumed that 1-foot of surface soil and drainage sediment would be excavated for off-site disposal without confirmation sampling. However, it may be difficult to demonstrate unlimited use/unrestricted exposure (UU/UE) in the future Record of Decision (ROD) for the site if this approach is used. In order to ensure a consistent site-wide strategy is used, these areas should be considered for incorporation into the EE/CA.

In addition to the waste/burnt soil area, areas in surface soil posing potential human health risk were identified as removal areas and delineated by adjacent samples not posing potential risk. For two isolated sample locations (SS19 and SS66), a 50-foot radius was assumed for the removal area. Based on the removal of the human health risk-based areas, an ecological risk evaluation was performed to determine if the areas remaining in place would pose a potential ecological risk. Key assumptions in the ecological evaluation included the following:

- Surface soil and sediment were combined into one data set because the habitat overlaps and is part of the overall area where complete exposure pathways exist, and an average represents an area-wide exposure.
- Low concentrations of thallium and cyanide can be risk managed even though they exceed the ecological screening value. The ecological screening value is extremely low.
- Pesticides (DDD, DDE, and DDT) can be risk managed because they are likely a result of the historic application at SJCA and not from site-specific activities.

Based on the ecological screening evaluation, removal of the waste/burnt soil area and the human health risk-based areas would result in potential ecological risk remaining; therefore, additional removal areas were identified that would result in a site-wide average for the ecological COPCs below the 95% background level and/or the ecological screening value. The team agreed that the new approach made sense and would result in a consistent site-wide application of risk-based removal and cleanup goals.

Based on the revised approach, the team discussed the options for finalizing the current EE/CA. Options were to incorporate the additional areas into the draft EE/CA or to finalize the EE/CA for the waste/burnt soil area and prepare a new EE/CA for the surface soil and sediment. The team decided to prepare a draft final EE/CA that incorporates the surface soil and sediment.

The team discussed the use of x-ray fluorescence (XRF) for the pre-confirmation sampling to delineate the waste/burnt soil area. Pros of using XRF are that it provides real-time depth-

specific data and reduces the number of analytical samples needed. Cons are poor correlation between XRF and confirmatory analytical results and that there won't be a significant cost or time savings through its use at Site 5. Research has indicated that XRF more accurate at lower concentrations than higher, so the poor correlation may not be a problem.

Action Team - Look into XRF for pre-con sampling at Site 5.

The team discussed the overall concept of the recommended alternative from the draft EE/CA, which consists of excavating the waste and backfilling with only 6 inches of material to provide a vegetative support layer. Janna clarified that the final site elevation would be based on the confirmation samples and that additional excavation/grading to smooth out the area was not planned.

Action Janna - Distribute topography map of Site 5 to team.

Path Forward: Prepare a draft final EE/CA incorporating the surface soil and sediment, the cleanup goal development, and the confirmation sampling by September 30, 2006. The next round of groundwater sampling will be conducted in October, followed by an Expanded Remedial Investigation (ERI) Addendum report to re-evaluate human health risk in groundwater. The non time critical removal action (NTCRA) is planned for FY2007.

Wednesday, August 30, 2006

0830 Welcome/Check In

Reviewed Roles and Responsibilities.

Reviewed Ground Rules

Reviewed current agenda: Changes will be made as necessary.

III. Government Performance and Results Act

Objective: Explain how Government Performance and Results Act (GPRA) impacts the Federal Facilities Program at EPA and SJCA.

Overview of Discussion: Josh provided copies of a presentation. Within GPRA, there are targets that are reported to Congress (actual numbers of what is expected to be accomplished [i.e., goals]) and there are measures (that are less strict and might not be achieved). Josh reviewed the different GPRA measures. Final remedy decisions will no longer be a GPRA measure starting in FY2007. Construction Completion indicates when physical construction is complete for the entire site (facility) and is a GPRA measure. Site-wide ready-for-reuse is being added as a GPRA measure beginning in FY2007.

Josh reviewed the Targeting and Reporting GPRA Measures. The EPA Strategic Plan is a 5-year goal. EPA has a strategic plan for the Superfund program from 2003 through 2008, this includes both non-federal and federal sites. They are now finalizing the 2006 through 2011 strategic plan by September 30, 2006. They also set annual goals and annual program work planning. Programs retain flexibility to decide how much each program will contribute to achieve Superfund Program's GPRA goal. Universe indicator is the total number of acres in the program (federal facilities, private, brownfields). The ready for reuse measure is the

number of acres that are ready for reuse. The team will need to identify what portion of the site (facility) is ready for re-use (not necessarily unrestricted use, but remedy in-place and able to be used for another use).

Action Josh/Janna – Update CERCLIS with SJCA Sites ready for re-use.

Josh then reviewed the environmental indicators. One is the long-term human health protection indicator, which measures the incremental progress achieved in controlling unacceptable human exposure at the site (facility). The second measure is whether the migration of contaminated groundwater is under control.

The team discussed the sites at SJCA that are currently considered to not have groundwater migration under control. Josh reviewed the worksheet on Superfund migration of contaminated groundwater under control (page 33 of the guidance document). Josh would like to talk with his colleagues to find similar sites and how they are considered.

Action Josh – Look into how to address the groundwater migration under control environmental indicator.

IV. Tier II Update

Stacie Driscoll provided the Tier II update by phone:

Goals: FY2007 goals need to be established. SJCA has drafted FY2007 goals and will finalize them during the meeting.

Success Stories: Teams should try to document success stories; may want to include as a team goal. Success stories can be sent to Doug and posted on the team web site.

Training: SJCA would like to receive Training on the Triad approach, which may also be valuable for other teams. Tier II will be meeting in October and will discuss all training requests. Agnes is attending the Tier II meeting.

V. UFP QAPP

Objective: Provide an introduction to the new Uniform Federal Policy (UFP) Quality Assurance Project Plan (QAPP) and discuss what SJCA needs to do in order to be in compliance with EPA and Department of Defense (DOD) QAPP policies.

Overview of Discussion: Josh showed an informational EPA video on the UFP QAPP and provided a web site address for more information:
epa.gov/fedfac/documents/qualityassurance.htm

Josh indicated that SJCA projects do not need to develop revised QAPPs because there is a recent facility-wide plan in place. Existing approved QAPPs are acceptable as-is until their revision is required. Guidance is directed at future work. If projects need to deviate from the existing QAPP, the guidance will need to be followed and the QAPP needs to be revised every five years (maximum). When it is revised, there is a table that can be cross-referenced to relay where the new QAPP elements are located in the existing QAPP format (rather than re-arranging formats). There is no law requiring the implementation, so the Navy will not receive a notice of violation (NOV) for not following the new QAPP process format. However, signature mandated its application for DoD projects.

VI. Site 4 RACR and Groundwater Performance Monitoring

Objective: Review the site background, review changes to the draft RACR, present the draft work plan, discuss comments on the draft work plan, and review the site schedule.

Overview of Discussion: Janna provided copies of a presentation, displayed an aerial photo of the site, and reviewed the site background. She then reviewed the revisions to the RACR based on comments received, including grammatical changes, removal of references to dredge fill cleanup goals, clarification of the wetland mitigation area, and the addition of the remedial action fact sheet. The RACR is currently in Navy legal review. Agnes will follow-up on Tuesday in order to finalize for signature by September 15, 2006.

Action Agnes - Check with Navy legal for Site 4 Draft RACR comments by September 11, 2006.

Janna then reviewed the voluntary groundwater monitoring plan. The work plan, based on the December 2005 consensus statement, is currently out for review. It calls for two years of quarterly groundwater monitoring. No comments have been received to date; they are due October 1.

Path Forward: Submit the signed RACR by the end of September 2006. The groundwater monitoring work plan will be finalized in October after comments are received. The first round of groundwater samples will be collected in late October or November, following approval of the final work plan. The next quarterly land use control (LUC) inspection is scheduled in September 2006 and the first annual support will be submitted in October.

VII. Partnering Activity

Overview: The team conducted a partnering activity to welcome Josh to the team and to help develop a successful team.

VIII. Electronically-Enhanced Baseline Ecological Risk Assessment

Objective: Provide background information, review the two phases of the baseline ecological risk assessment (BERA) field investigations and results, present conclusions and discuss technical comments, present conclusions and discuss technical comments, determine path forward for Blows Creek for inclusion in the final report, and develop final document schedule.

Overview of Discussion: Kim provided copies of the presentation. She then provided background information and described the Blows Creek watershed and environmental conditions of the site.

Josh asked about the sample depth (0 to 6 inches depth for sediment samples). Kim indicated that Biological Technical Assistance Group (BTAG) had commented during the initial work plan requesting a deeper sampling depth, but ultimately did not require deeper samples be collected based on evaluation of existing sediment data (Bohicket background collected from 0 to 6 inches and 1 to 3 ft bgs) where there was no statistical difference between concentrations in shallow and deep sediment.

Kim explained the bioassay test procedure and presented the bioassay results. An organism is exposed to sediment from the site, reference sediment, and "clean" laboratory sediment. The results of each exposure situation are statistically compared. Results indicated that mean percent survival was statistically less than lab control in SD11 and SD36, but there was no significant difference in those samples when compared to our reference samples. The

mean percent survival was significantly less in SD06 and SD36 when compared to reference samples.

The team reviewed the EPA technical comments and responses. Josh asked if there was potential for Site 19 to have contributed to the mercury levels at the outlet of Blows Creek. Kim responded that Site 19 does drain to Blows Creek, but because mercury was not identified as a COC at Site 19 it is unlikely. Karen asked if there needs to be follow-up sampling after the removal and remedial actions are complete. Kim responded that if the team concludes Blows Creek can be closed with NFA, no additional sampling would be conducted.

The team discussed BTAG's conceptual comments on the electronically enhanced BERA (eBERA). Agnes indicated that she does not have funding to address BTAG's conceptual comments. Therefore, she would like to address the technical comments and finalize the document. Josh agreed.

Action Agnes – Send Response to Comments to EPA and VDEQ on eBERA concept/format comments.

Path Forward: The team will review the eBERA and prepare to make a decision on the path forward for the site at the next partnering meeting. The eBERA will then be finalized, addressing only technical comments.

IX. Site 2 Path Forward

Objective: Review site status, review results of deep groundwater pump test, begin planning for additional investigation using Triad approach, and review the schedule.

Overview of Discussion: Kim provided copies of the presentation. She then reviewed the site history and current status. Kim presented the deep groundwater analytical results from December 2004 through June of 2006. The pump test concluded that the shallow groundwater level was not impacted by the pump test, indicating it is not likely the confining unit is leaking. A technical memorandum is being prepared to summarize the results, and will be distributed to the team. The technical memorandum will recommend the collection of two additional samples at six month intervals, then abandoning the deep well if the results are favorable.

Additional investigation at Site 2 will be conducted using the Triad approach. Kim summarized the Triad approach, including the systematic project planning, dynamic work strategy, and real-time technologies. Kim then presented the draft proposed additional investigation activities:

- Chlorinated volatile organic compound (CVOC) plume horizontal and vertical extent delineation
 - Membrane interface probe (MIP) investigation to further delineate volatile organic compounds (VOCs) in groundwater
 - Direct push technology (DPT) sampling – depth-specific groundwater and soil samples for VOCs and total organic carbon (TOC) (soil only)
 - FLUTE liner installation to detect dense, non-aqueous phase liquid (DNAPL)
 - Shallow monitoring well installation and groundwater sampling for VOCs
 - Vibracore sampling – depth-specific sediment sampling for VOCs analysis

- o Passive-Vapor Diffusion (PVD) sampling to identify the interface between the CVOC groundwater plume and inlet sediment
Flow measurement to evaluate dilution

The team discussed the schedule for the development of the dynamic work plan. Each entity is to identify the appropriate attendees to attend a working meeting, and the meeting will be tentatively held during the week of November 27.

Action team – Determine representatives to attend Site 2 planning meeting (DNAPL experts/risk assessors) week of November 27.

Action team – Look for Triad training.

Path Forward: The Deep Groundwater technical memorandum is scheduled for submission September 15, 2006. A conceptual site model (CSM) will be prepared in September 2006 for use in the systematic planning for the dynamic work plan. The team will schedule a meeting to develop the dynamic work plan for submission in December 2006, followed by the field work in February of 2007. The draft final ERI report will be submitted in June of 2007, followed by the final ERI report in August of 2007.

X. Site 21 Additional SSI Activities Work Plan

Objective: Review the site status, review an accept work plan revisions, prepare for field activities, and review the schedule.

Overview of Discussion: Handouts of the presentation were distributed. Kim then briefly reviewed the site history and status then displayed a figure of the site. Kim reviewed the changes that have been made to the draft work plan for Site 21 and showed the redline revisions.

Josh asked if the investigation activities determine there is a pool of DNAPL present, should it be further investigated to try to find the DNAPL rather than conducting the treatability study. Kim responded that the data collected during this evaluation will be evaluated and that if the treatability study is recommended, it is not considered as the site remedy. Additional investigation may be needed as part of an RI prior to, during, or following the treatability study. Josh suggested the team look into Soy Gold for the treatability study.

Consensus: The Team agrees to accept the redlined Draft Tech Memo: Addendum to Work Plan for Additional Groundwater Delineation Activities at Site 21 as Final.

Path Forward: Finalize the work plan then conduct the investigation activities. The draft final supplemental site investigation (SSI) report will be submitted based on the results of the investigation in mid-December 2006, followed by the final SSI report in March 2007. The draft treatability study work plan is planned for January 2007.

XI. Roundtable

Agnes provided Navy opportunities for training, EPA, VDEQ, and consultants are invited to attend:

Civil Engineer Core Officer School (CECOS) Training in Norfolk:

- January 23, 2007 for 3 days. CECOS munitions response seminar.

- May 15, 2007 for 2 days. CECOS environmental background analysis seminar.
- July 23, 2007 for 5 days. CECOS environmental data quality assurance.
- August 14, 2007. Human risk assessment class for 3 days.

Environmental Restoration, Navy (ER,N) Manual: Has been finalized and is available on the NAVFAC's web site.

Indoor Air Vapor Intrusion Guidance: Agnes indicated discussion for finalization is ongoing.

Implications of the National Research Council (NRC) Report on trichloroethene (TCE): Karen indicated that the maximum contaminant level (MCL) for TCE may be revised from 5 parts per billion (ppb) to 1 ppb based on recent findings.

Remediation Innovative Technology Seminar (RITS): Agnes informed the team that the next Navy RITS in Norfolk is scheduled for November 8, 2006.

XII. Schedule and FY 2006 Team Goals Update

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

Action Janna - Send Josh the date for signature for Final Site 19 Action Memorandum by September 8, 2006.

Action Kim/Janna - Send Josh a hard copy of Final FY07-11 Site Management Plan.

FY2006 Team Goals: The FY2006 Goals were updated, included as an attachment, and will be posted on the Virginia/Maryland Joint IR Teams web site.

XIII. FY2007 Goals

Objective: Finalize the goals for FY2007.

FY 2007 Team Goals: The draft FY2007 goals were created, included as an attachment, and are finalized.

XIV. Agenda Building – October Meeting Agenda

<u>Topic</u>	<u>Goal</u>	<u>Lead</u>	<u>Time</u>
Site 5 EE/CA and Confirmation Sampling	Preliminary comments on EE/CA, consensus on addressing eco risk, confirmation sampling plan	Janna	1.5 hr
Blows Creek Path Forward	Discuss response to comments and get consensus on path forward	Kim	1 hr
Site 19 Closeout Report	Present the Site 19 closeout and obtain team signatures	Kim	1 hr
Site 2 Conceptual Site Model & Remedial Action Objectives	Present the CSM, draft RAOs, and begin planning for additional investigation	Kim	2 hrs

Enterprise Training	Familiarize new team members with web site.	Becky	0.75 hr
Partnering Activity	Team building	Team/Facilitator	0.5 hr
Site 21 Field Activity Summary	Present preliminary results and path forward.	Kim	0.5 hr
Roundtable	I - open	Team	0.5 hr

Next meeting: October 17 & 18, 2006 w/RAB evening of October 18

Location: Courtyard Marriott, Norfolk, Virginia

Lodging: Courtyard Marriott, Norfolk, Virginia

Start time: 11:30 AM

Finish time: 2:00 PM

Chair: Josh Barber

Host: Agnes Sullivan

Timekeeper: Kim Henderson

Goal Keeper: Agnes Sullivan

Recorder: Janna Staszak

Facilitator: Karen Doran

Tier II: TBD

Guests: Becky Jackson/CH2M HILL

Pre-Meeting Agenda Conference Call: 2:00 PM on October 5, 2006

XV. Future Meetings Schedule

December 13 - 14, 2006 Washington, DC

January 31 - February 1, 2007 Richmond, VA

March 21 - 22, 2006 Philadelphia, PA

XVI. RAB Agenda

October 18, 2006

3:30 PM until 5:30 PM

Major Hillard Library, Chesapeake, Virginia

Action Agnes - Reserve the meeting room for the RAB meeting.

Agenda:

- Site 19 Closeout - Kim
- FY 2007 Goals - Agnes
- St. Juliens Creek Site Assessment - Linda Baxter & Josh
- Site 5 Removal Action - Janna

XVII. Meeting Evaluation

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

XVIII. Parking Lot

- Meeting minutes to be finalized during meetings?
- Incorporate Environmental Indicators into FY2007 Goals