FINAL MEETING SUMMARY CH2MHILL

St. Juliens Creek Annex Partnering Team Meeting Minutes: May 1 - 2, 2008

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

Tier II Link: Tim Reisch/NAVFAC Mid-Atlantic

Guests: Durwood Willis/VDEQ (Site 21, Day 1)
Sherri Eng/NAVFAC Atlantic (UFP SAP, Day 2)

From: Janna Staszak/CH2M HILL

Date: June 18, 2008

Location: VDEQ, Richmond, Virginia

Thursday, May 1, 2008

0900 Welcome/Check In

Roles and Responsibilities for this meeting:

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

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 September meeting minutes will remain in the parking lot and will be reviewed later in the meeting.

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

- Site 4 Groundwater Monitoring at 5-Year Review

- Phone numbers on IR signs
- Site 21 SROD
- FY09 CNO Award Package
- Guest for DNAPL
- UFP SAP Training
- NIRIS Migration

Review Action Items: The action items were reviewed. The following action item was added during review of the action items:

Action Janna/Kim – Send RAB notice by June 3.

II. Site 21 Remedial Investigation

Objectives: Review the site investigation history (scoping, objectives, outcome), review the site media (shallow groundwater, deep groundwater, soil), and develop a path forward for the site.

Overview of Discussion: Copies of the presentation were distributed. Durwood Willis joined the meeting for the topic. Tim and Kim presented the topic.

Tim provided an introduction to the topic, letting the team know that the presentation would provide a detailed background of the investigation of the site to help the team better understand how the site has progressed and why previous decisions were made. He indicated the team would then discuss the RI content and comments received, and attempt to resolve the comments during the meeting rather than providing an additional response to comments.

Kim reviewed the site layout, including NFA sites now encompassed by the Site 21 boundary, and presented the historical site activities and the investigations conducted at the site as follows:

- RCRA Facility Assessment (1989) – Kim summarized the RFA, which was a preliminary review of all available documents and a visual site inspection to identify sites for further action. The RFA identified 15 SWMUs (7 now encompassed by Site 21) and 8 AOCs (1 now within Site 21) for further action. Kim indicated that the site names don't match because they have changed as the sites shifted between regulatory programs; the FFA and SMP includes a table that includes all current and former site names for reference.

- SIMA Building Construction (1992 – 1993) – Kim presented the background of the SIMA building construction in relation to the IR sites. Several IR sites (Sites 9, 12, 13, and 14) were included within the footprint of the SIMA building. Soil removals were conducted prior to construction of the SIMA building, and the sites were therefore closed as NFA. A HHRS was conducted to confirm remaining soil would not pose risk to construction workers. Kim indicated that more detail on the soil removals would be provided later in the presentation.

- Relative Risk Ranking (1996) - Kim summarized the RRR, which was an investigation of 21 sites based on the RFA to identify and prioritize sites requiring further investigation. The RRR included soil and/or groundwater sampling at Sites 9, 10, 11, 18, and 21. The data was provided to the Navy for planning purposes, and would later be

evaluated in the SSA. Kim reviewed the historical uses and investigation conducted at each of the sites, including presenting figures of the sample locations at each site.

- Site Screening Assessment (2002) – Kim summarized the SSA. The SSA included a site visit/scoping session in July 2001 and evaluated the RRR data. Kim presented photos from the site visit and the observations and conclusions made by the team during the visit and follow-up meeting. The SSA recommended NFA for Sites 10, 11 (Site 11 groundwater to be incorporated into Site 21), and 18. Soil at Site 21 was recommended for NFA, and groundwater was recommended for further investigation (including Site 11 groundwater). The SSA was approved by the team through a signature page.

- Site Investigation (2003) – Kim summarized the SI, which was conducted to further characterize contamination in groundwater. Specific objectives were to identify the area of highest TCE concentrations in shallow groundwater, define the "source area", and determine if site activities had impacted the deep aquifer. The SI identified a VOC plume south of the former Site 21 boundary. It also identified antimony and arsenic in shallow groundwater above background UTLs but below MCLs. Arsenic was detected in deep groundwater in exceedance of the MCL. A HHRS identified VOCs and RDX as COPCs in shallow groundwater and arsenic, chloroform, and vanadium as COPCs in deep groundwater. An ERS concluded there was little ecological habitat for potential ecological receptors. The SI recommended further delineation of VOCs in shallow groundwater and sampling of existing wells to confirm or deny the elevated concentrations of arsenic, chloroform, vanadium, and RDX.

- Federal Facilities Agreement (2004) – Kim reviewed the FFA, which was the agreement between the Navy, EPA, and VDEQ to establish a procedural framework and schedule for developing, implementing, and monitoring response actions in accordance with policy and guidance. The FFA was signed in July 2004 and included documentation of NFA decisions for Sites 9, 10, 11, 12, 13, 14, and 18. It identified Site 21 as a Preliminary Screening Area.

- Supplemental Site Investigation (2003 – 2005) – Kim reviewed the Supplemental SI, which was conducted to address SI data gaps, including further characterization of shallow and deep groundwater and evaluation of storm water transport of contaminants to Site 2. Several phases of investigation were jointly scoped and conducted in five work plans. In May 2007, the team agreed to expand the SSI into a combined RI/FS due to the extensive nature of data collection and because the nature and extent of contamination had been fully delineated.

- Remedial Investigation (2003 – 2008) – Kim reviewed the objectives and activities of the RI. The objective of the RI was to define the shallow groundwater CVOC plume boundary and physical and geochemical characteristics of shallow groundwater, evaluate contaminant fate and transport to develop a CSM, and determine if the site poses unacceptable human health and ecological risks.

Kim then reviewed the results of the RI by media:

- Shallow groundwater – The RI concluded that the nature and extent of contamination was sufficiently characterized through the investigations. The team discussed the delineation of the plume to MCLs. Karen indicated that she's comfortable with the

delineation of the CVOC plume. John expressed concern over perimeter sample locations where reporting limits were at or above the MCLs (e.g., 5U for TCE). John was particularly uncomfortable with VC, for which there are several instances where a reporting limit of 10 µg/L was used. The team looked at the plume figures and discussed reporting limits. Kim explained that although the reporting limit was raised in some instances, the laboratory can frequently detect concentrations down to the Method Detection Limit. When that happens, the results are reported below the reporting limit with a "J" flag. With the exception of 2 locations, all sample locations in which the VC reporting limits were above the MCL had a method detection limit of 0.63 µg/L, indicating that if VC was present it would have likely been picked up in the analysis. Additionally, the team noted that the areas of concern for the VC plume fall within the TCE plume boundary; therefore, the selected remedial action for the TCE will address those areas. The team agreed that no additional delineation is needed to proceed with the FS.

- Deep groundwater – The RI concluded that deep groundwater had been sufficiently characterized and that deep groundwater had not been impacted. EPA had expressed concern over the continuity of the confining unit during review of the draft RI report. Kim presented a figure showing the deep wells across SJCA and the thickness of the confining unit at each well. John requested that the figure be incorporated into the RI report and indicated that he is comfortable with the RI conclusions on deep groundwater (NFA) based on the additional information. Karen indicated that she is not comfortable with deep groundwater due to the one detection of arsenic above the MCL. The team reviewed the deep groundwater analytical results. Arsenic was detected in 2003; however, it was not detected in 2004 and was detected below the MCL in 2005. Karen asked how the results compared to the SJCA background concentrations. Kim responded that background values were not established for deep groundwater because the team had previously concluded that deep groundwater was not impacted by site activities. John asked if background from another facility or regional groundwater could be used as an argument. The team discussed the test method for the deep groundwater analysis. The traditional sample method (ILM04) was used for the first two deep groundwater samples. The ICP/MS method was used in the final sample round, which is able to detect at lower concentrations, further substantiating the latest result. The team discussed abandoning the well because it is located within the CVOC plume and may act as a conduit for contamination to migrate to the deep aquifer over time. Karen said she may recommend to keep the deep groundwater well for potential future monitoring, as the well does not appear to have served as a conduit to date because the shallow groundwater COPCs have not been detected in deep groundwater. She indicated she thinks that it may be useful to monitor deep groundwater in the future, during or after the remedial action to ensure that the deep groundwater has not been impacted. Tim indicated that he is concerned with leaving the well in place as a potential pathway. John indicated he is comfortable with arsenic, and prefers to abandon the monitoring well and eliminate the potential conduit (as there are currently no site-related VOCs in the deep groundwater).

The abandonment of the Site 21 deep groundwater monitoring well was placed in the parking lot, and revisited at the end of the meeting. At that time, Karen indicated she accepts NFA for deep groundwater and that the well can be abandoned.

- Soil – Kim indicated that NFA was determined for soil prior to SI, so it was not evaluated in the RI. Kim also indicated that CVOCs detected in soil during previous investigations did not pose risk. John indicated concern over the characterization of CVOCs in soil/lack of analytical data. John expressed concern over the reliability of MIP for soil characterization. He understood the MIP data to have been unreliable at Site 2, which resulted in the collection of samples for laboratory analysis. The team explained that MIP is a reliable screening tool, and that soil and groundwater samples were collected at various depths and where different MIP response had been observed to provide correlation between MIP readings and the actual contaminant concentrations. The Site 2 MIP data evaluation indicated the MIP and groundwater data correlated moderately well. John indicated that the explanation provided a greater level of comfort with the existing data.

  Karen expressed concern over the previous use of unvalidated data in closing sites and the low number of soil samples in relation to the current site size. Because the data was being used as a screening tool, it had not been validated. Kim indicated that although data validation is required during current investigations, there is generally little change between unvalidated and validated data. She also indicated that although the number of samples seems low in relation to the current site size, the site boundary has grown to encompass the groundwater plume. The RRR sample locations were focused in areas of historical/potential risk in soil, representing worst case scenarios; because the results did not indicate risk, no additional samples were warranted. Karen also expressed concern over petroleum-contaminated soil at removal of Sites 9 and 14, and that there were no confirmation samples collected. Tim reviewed information from an interview he recently conducted with the SIMA building construction representative. The construction representative indicated that the petroleum-impacted areas had been removed, and had actually been much larger than they'd anticipated based on failed confirmation samples; however, documentation of the project had been destroyed based on records retention policies (destroyed after 5 years). The team reviewed temporary well data for wells analyzed for full suite and found that petroleum products were not detected. Karen indicated that the explanation helped with her understanding of the sites that were closed; however, she preferred more information on the sites that had been closed. Additional details on the closeout of the sites during the SIMA building construction were provided later in the discussion.

  Karen and John expressed concern over potential pesticides downgradient of the wash rack at Site 14, as historical records indicated that pesticides were used and stored at the site. Kim indicated that there were no records of disposal at the site, and therefore the area was not specifically investigated for pesticides. The team reviewed the site data, and found that pesticides were not detected in temporary wells downgradient of the Site 14.

  Kim presented additional information on the removal actions conducted during the SIMA building construction. The information was obtained from "Soil Testing Report for MCON P-320" (Baker, 1993). It was written while the removal actions were ongoing, and discussed confirmation sampling and characterization sampling. However, a follow-up report confirming the extent of the removals could not be located. Kim presented a figure showing the location of the samples collected. The team discussed

the fact that additional information may have been recorded and lost. Although it appears the closeout documentation for the sites is incomplete, the team that made the NFA decision may have had access to additional information. As no additional data to contest the closure of the sites has been identified, the team decided that the previous decision for NFA of the sites within the SIMA building construction would not change.

Kim presented additional data collected during a UST removal at Site 21. The information was obtained from "Site Characterization Report, Building 201" (Baker, 1994). Field activities were performed to comply with 40 CFR 280.63 and Virginia SWCB regulation VR 680-13-02 to investigate the extent and severity of contamination related to former USTs adjacent to Building 201. Activities include a soil gas survey, soil vapor permeability testing, and soil and groundwater sampling and analysis. Kim presented a figure showing the results of the soils sampling, which showed the location and results of TPH, benzene, and VOCs analysis, providing further support that those contaminants were not present across the site.

Karen indicated she would like a soil section added to the conclusions and recommendations of the RI report. She saw data gaps in soil as she read through the RI report, and felt that incorporation of a soil section would help present a clearer picture of the site. She sees NFA of small pieces of the site, but not as the overall site. Tim supports adding the new data presented into Section 2, and adding a section in the Conclusions and Recommendations section that summarizes all of the pieces of the site together.

John indicated that his only outstanding concern is RDX in shallow groundwater, based on the detection limits being higher than the EPA screening value.

Path Forward: Further response to comments will not be prepared. A redlined version of Sections 2 and 9 will be developed making the changes discussed today and distributed. The team will prepare to record consensus on which media require NFA, and future site documents will focus on only the remaining media.

III. Site 4 Data Update

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

Overview of Discussion: Copies of the presentation were distributed. Kim reviewed the basis for the voluntary groundwater performance monitoring being performed at Site 4 and discussed the reporting and evaluation of the groundwater data. It will be reported after the 2 years of data collection are complete, and will include a statistical evaluation of the data (ANOVA comparison). If there is no significant increasing trend of concentrations and downgradient concentrations do not statistically exceed upgradient concentrations, monitoring will be stopped. If a significant increasing trend is observed, the team will reevaluate the monitoring plan.

Kim presented graphs of the concentrations for each contaminant over time. The team discussed the results. The arsenic concentrations increased in one of the downgradient wells (MW04S) during the last round, but were back below background and the MCL in this round. The cadmium concentrations have been consistently low since the start of the

voluntary groundwater performance monitoring, with the exception of a spike in the upgradient well (MW01S) concentration in August 2007. Iron concentrations have been consistent and are well below the background concentration. Lead concentrations have also been consistent and have been below the action level since the start of the voluntary groundwater performance monitoring in all wells. There have been no thallium detections since the start of the voluntary groundwater performance monitoring.

Action Kim - Talk to Larry regarding use of data from different analytical methods (ICP/MS vs ILM04) in statistics for Site 4 groundwater.

Kim reviewed the schedule for Site 4. The next round of data will be collected during the week of May 19 and presented at an upcoming partnering meeting (June or July, depending on when it is available). LUC inspections will be conducted in September. The first 5-year review will be performed in 2010.

The team discussed the date of the 5-year review. The Navy interprets March 21, 2010 as the date they must sign the report, and EPA interprets the date as the deadline for their concurrence. The team will attempt to accommodate the EPA's concurrence in the document schedule.

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

IV. Site 5 Removal Action Update

Objectives: Review the site background, update the team on the removal action, gain team consensus of stockpiling of backfill material, and review the path forward.

Overview of Discussion: Copies of the presentation were distributed. Janna discussed the site background and phases of the removal action. Mobilization was in December 2007 and work was stopped based on MEC found during silt fence installation. An ESS is currently being resolved NOSSA to facilitate remobilization. Waste characterization was completed and three grids exceeded non-hazardous waste criteria for disposal. A memo summarizing the results and recommendations for stabilization is currently under Navy review.

A draft backfill stockpile tech memo work plan was submitted for team review April 18. Janna reviewed the contents and requested consensus on the approach for purchasing and stockpiling 9,700 cubic yards of backfill, which was expedited due to the potential for expiration of funding if it is not used. Erosion and sediment controls are planned around the perimeter; although hay bales were proposed in the work plan, the Navy requested silt fence be used and the change will be made. The area will be seeded to stabilize the stockpile with vegetation until it can be used for the site. Backfill testing was conducted and results were submitted to the Navy for approval. Arsenic was detected above residential RBCs but below background and was determined to be acceptable. A truck route will be implemented to minimize congestion and facilitate backfill delivery. Separate stockpiles will be established for the two material types (top soil and general fill) west of the site outside the removal action area. Josh requested the northern stockpile area be shifted to the northwest to be further away from the Phase 3 removal area. Janna indicated the request will be made.

Path Forward: Karen and John will review the backfill stockpile tech memo work plan and submit comments by close of business Monday, May 5th.

Action Karen/John - Review the backfill stockpile tech memo work plan for Site 5 by May 5th and provide comments to Janna, Walt, and Tim.

The draft Phases 2 and 3 work plan will be submitted May 7th for team review, a quick review time (2 weeks) is requested. The ESS was submitted to NOSSA and comments will be resolved by mid-May. Pending ESS approval, the final Phase 1 work plan will be revised and will also incorporate phases 2 and 3 work plan, ESS, stabilization, and revised operational procedures. The plan for remobilization is mid-May but will be based on the approval of the ESS. A site visit is planned during the June partnering meeting.

V. Site 2 Update

Objectives: Present the ERI conclusions and recommendations, and review the deliverables and schedule.

Overview of Discussion: Copies of the presentation were distributed.

Kim presented the risk drivers in soil, groundwater, sediment, and surface water from the conclusions and recommendations section of the draft ERI, which the team just received for review. Based on the nature of the waste materials, risk to human health and ecological receptors is assumed. The RI recommends a FS to evaluate potential remedial alternatives to mitigate unacceptable human health and/or ecological risk in soil, groundwater, and sediment.

Path Forward: The team will review the Draft ERI report and provide comments by June 16. The Final ERI will be submitted one month later, tentatively July 16. A Site 2 poster will be displayed during the Triad conference; the poster will be sent the team for review by May 15. The draft FS is tentatively scheduled for submission August 12.

VI. Roundtable

NIRIS: A few bases in NAVFAC Washington have migrated to NIRIS. NAVFAC is scoping a mod to migrate all of the Hampton Roads facilities into NIRIS. Tetra Tech will be the regional data manager. Tim is not sure if HILL will load data or if Tetra Tech will have to load it. A scoping meeting will be held to develop the process for migration when the RFP goes out. Tim's goal is to complete the SJCA update by the end of the fiscal year.

ESTCP Project: The project was submitted and approved by ESTCP. They are developing their demonstration plan, and will forward for review. They are planning to begin field implementation this summer (June/July).

Site 20/MRP Site 1: Site 20 was submitted to the MRP and was approved. It will now be known as UXO Site 0001. Walt has incorporated it into his budget plan, and has assumed that a PA/SI will be needed.

ER Conference: Tim and Kim presented the air vapor presentation during the conference. The topic was well received.

Tri-Services Handbook for Assessment of the Vapor Intrusion Pathway: The draft document has been released.

Action Tim/Walt – Distribute the Tri-Services Handbook for Assessment of the Vapor Intrusion Pathway.

VII. SMP Update

Objective: Discuss the content of the SMP.

Overview of Discussion: Copies of the presentation were distributed. Tim reviewed the content of the SMP, including this year's incorporation of Site 20 (UXO Site 0001). The site schedule was not discussed due to time constraints. However, the schedule will be reviewed during the Schedule Update on Friday.

Path Forward: A draft version of the SMP update will be submitted by June 15 in accordance with the FFA. The team will have 30 days to review and comment on the draft. Comments will then be incorporated and the update will be distributed by the end of July.

Friday, May 2, 2008

0800 Welcome/Check In

Reviewed Roles and Responsibilities

Reviewed Ground Rules

Reviewed Agenda

VIII. Tier II Update

Meeting: Tier II met in February.

ROD Changes: Tim indicated that one partnering team had a ROD in place to cleanup to industrial RBCs, but ended up cleaning up to residential RBCs. The team is determining how to address the change with respect to the ROD. Tier II may offer training to teams as to what changes impact RODs and how they should be addressed, using this team's project as a case study.

Risk Management: Tier II is considering offering a course on risk management, but has not yet developed it.

Land Use Control Remedial Design: LUC RDs are currently holding up several RODs at Little Creek, ABL, and NNSY. There is legal dispute over the LUC language exceeding what is in the Navy principles. The problem has been elevated, and Tier II will keep the teams updated on the status/resolution.

Natural Resource Trustees: Coordination with Natural Resources trustees was identified as a potential issue by an internal Navy audit. NAVFAC is working to provide NRT notification and availability of all CERCLA documentation and site schedules (which are provided in the SMP).

Teams: Yorktown and Cheatham Annex will be split into two separate teams.

IX. Site 21 UFP SAP

Objective: Introduce the team to the UFP SAP process and begin scoping the Site 21 air vapor investigation.

Sherri Eng joined the meeting and presented an introduction to the UFP SAP. The UFP SAP consists of 37 required elements in 37 work sheets that document and integrate all technical and quality aspects of the project throughout its life cycle (problem statement and objectives; CSM; sampling design and rationale; action levels and analytical methods; verification validation, and usability; and exit strategy). UFP SAP is driven by EPA OSWER Directive 9272.0-17, DoD Procurement Policy, OPNAVINST 5090.1C Chpt 29, and NAVFAC BMS, DUSD(E) Memo (April 2006).

Sherri provided the explanation for the use of the term UFP SAP. A QAPP documents and integrates all technical and quality aspects of the project through its life cycle. SAP = field sampling plan + QAPP. Work Plan = UFP SAP + HASP. NAVFAC does not review the HASP. UFP SAPs are required for any BRAC or ERN funded work initiated after October 1, 2007. NAVFAC has observed a cost increase of 15 to 30% for UFP SAP work plans over traditional work plans. However, NAVFAC is hoping that the cost is reduced as the system becomes more developed. NAVFAC also feels the additional upfront cost is off-set by savings over the life of the projects. Sherri indicated that the NAVFAC chemist review of UFP-SAPs is 21 working days, and a chemist review and signature are required. Changes resulting from the initiation of the UFP-SAP process include the document format, addition of collaborative scoping, revisions to work scope, and schedule delays. Things that remain the same as for the traditional work plans include: the authority and responsibility of RPMs stays the same, regulatory review and concurrence is still required, and the number of deliverables is the same.

Sherri explained the development process of the UFP SAP. Use of NAVFAC BMS worksheets (as opposed to EPA worksheets) is mandatory. All worksheets must be used; those that are not completed must still be included with a statement explaining why they were not completed. Worksheets are ordered for ease of review, rather than ease of data population; therefore, teams generally don't fill them out in order. The key scoping worksheets are 9, 10, 11, and 15. The site CSM and if-then statements/decision logic should be included within these worksheets. Key project elements are systematic project planning, establishment of the environmental questions needing to be addressed, and development of the decision processes and lines of communication.

Sherri provided examples of some of the most common comments from the chemist review, including that quantitation limits are above action levels or that things are being analyzed for that are not COCs, and that SOPs are not dated within a year (NAVFAC policy requires annual updates).

Sherri indicated that Worksheets 34 through 37 are the most challenging, focusing on verification, validation, and usability. The review process is not currently providing significant comments on these sections, while the chemists learn more about these requirements and inform teams what should be included.

NAVFAC currently writes a waiver for waste characterization sampling and in other limited situations where data collected has no impact on decision for the site. Additionally, UFP-

SAPs are not currently required for MRP sites (except for the investigation of munitions constituents, for which a UFP-SAP is required).

Action Janna – Send the team the Little Creek UFP SAP as an example.

The team discussed the upcoming investigation at Site 21

Worksheet #10, Problem Definition. The team identified the environmental questions to be answered during the investigation:

- Is there a complete exposure pathway from groundwater to site buildings?
- Is there unacceptable risk to building occupants?

Based on limitations in data evaluation and collection procedures because of the shallow groundwater depth, the team assumes that there is a potential pathway to evaluate site buildings.

Worksheet #11, Project Quality Objectives/Systematic Planning Process Statements. The team concluded that data would be used for comparison to background and for the evaluation of risk. Only occupied buildings would be investigated; land use controls will be implemented for the unoccupied buildings. The data will be screened against the values in the EPA guidance; therefore, an analytical method that can achieve the required reporting limits for SUMMA canister samples must be identified. The team decided that background data should be collected, and discussed the methodology for determining background (e.g., locations to collect data, number of samples). The team considered collecting background samples at the building air intakes, within the site boundary, or outside of the site boundary upwind of the site. The team decided that samples within the site boundary (e.g., near the air intakes) would actually provide reference concentrations (ambient concentrations on site) instead of background. The team decided that collection of representative samples would be valuable in determining what is entering the buildings from outside air as opposed to what is entering the buildings through the foundations via vapor intrusion. If indoor air concentrations are less than in reference outdoor samples, then the concentrations in air are not a result of vapor intrusion, but instead of outdoor air.

The team decided to collect three data sets:

Data Set	Analysis	Evaluation	Approach
Background (upwind)	COCs	Statistical comparison	Team will allow statistician to develop.
Reference (ambient)	COCs	Statistical comparison; will only be used for risk management	Team will allow statistician to develop.
Indoor	COCs	Point-to-point comparison	Team decided on number (see below); locations will be field determined.

The team developed a decision tree for evaluating the data (see attached).

Worksheet #17, Sampling Design and Rationale. The team reviewed the worksheet and concluded the following:

- Building 54: 1 sample will be collected at a field-determined location, unless it is determined that SUMMA canister sample collection has a high failure rate and 2 co-located samples will be collected.
- Building 1556: A minimum of 6 samples will be collected (2 in offices/break room and 4 throughout the large bay area).
- Building 47: 2 samples will be collected (1 in an office and 1 in the open area).
- Samples will be collected at locations showing the highest potential for intrusion, such as sumps or cracks.
- Samples will be collected over an 8-hr duration, representative of industrial use. A LUC to prevent residential use will be implemented.
- Two rounds of samples will be collected at a 4-month interval, potentially August and December. The locations of the samples will have to be recorded (e.g., GPS outdoors and measurement from building features indoors) to ensure the locations can be the same at each event.

The team decided to have a risk assessor review the sampling plan to confirm that sufficient data is being collected to perform a risk assessment, if required.

The team discussed QC data, and concluded that sufficient QC data should be collected to validate the data, as directed by the data validator. The team considered duplicate samples and was uncertain on what they would be used for. John's concern is having a check for the lab (e.g., blind duplicate). The team concluded that a performance sample may be better, if they are available for SUMMA, and will look into their availability.

Worksheet #8, Special Personnel Training Requirements Table. The team concluded that the field team should have experience with air sampling.

Worksheet #14, Summary of Project Tasks. The team identified the project tasks, which will include conducting a building survey to determine any potential sources of VOCs and collection of 2 rounds of air samples.

Path forward: Worksheets #10 and #11 and the CSM will be completed and sent to EPA and VDEQ for review. Upon EPA and VDEQ concurrence, the complete UFP-SAP will be prepared and submitted to the NAVFAC chemists for review.

VIII. Schedule and FY 2008 Team Goals Update

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

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

X. Agenda Building – June Meeting Agenda

Topic	Goal	Lead	Time
Site 21 Vapor Intrusion Investigation	Address team comments on UFP SAP Worksheets 9 & 10	Janna	1 hr
Site 21 RI Report	Finalize the RI.	Team	2 hr
Site 2 ERI Comments	Discuss team comments.	Kim	2 hr
Site 2 RAOs and Remedial Alternatives	Agree on RAOs and Remedial Alternatives for evaluation in FS ***(Consider inviting technical guests.)***	Janna	1.5 hr
Site 4 Data Update	Present the latest results from groundwater monitoring	Kim	0.5 hr
Partnering Deliverables	Review & update deliverables	Janna	0.5 hr
Site 21 FS Alternatives Comparison	Review preliminary comparison of alternatives.	Guest/Janna?	1 hr
Site 2 Triad Poster	Present the poster to the team.	Adrienne Jones	0.5 hr
Partnering Activity (MBTI)	Improve team working ability	Team	0.5 hr
Roundtable	Introduce new topics	Team	0.5 hr

Next meeting: June 18 - 19, 2008

Location: CH2M HILL, Virginia Beach, Virginia
Lodging: TBD, Virginia Beach, Virginia (ocean or Town Center)
Start time: 9 AM
Finish time: 2 PM

Chair: Karen Doran
Host: Janna Staszak
Timekeeper: Walt Bell
Goal Keeper: Walt Bell

Recorder: Janna Staszak
Facilitator: Kim Henderson
Tier II: Tim Reisch
Guests: TBD

Pre-Meeting Agenda Conference Call: 10:00 AM on June 9, 2008

XI. RAB Agenda Building

Topic	Lead
Site 21 Vapor Intrusion Investigation	Glen
Site 2 Triad Poster	Adrienne
Site 5 Removal Action	Walt or Tim or Janna
UXO Site 0001	Walt or Kim

XII. Future Meetings Schedule

June 10 – 13, 2008 — Triad Conference & Site 2 Meeting, Amherst, MA (not team)

June 17, 2008 — Sites 5 and 21 visit @ 1:00 PM

June 17, 2008	Tidewater, Virginia RAB (5:30 PM)
June 18-19, 2008	Partnering, Virginia Beach
July 31 – August 1, 2008	Williamsburg, VA (Fife and Drum)
September 17 – 18, 2008	Philadelphia, PA
November 19 – 20, 2008	Tidewater, Virginia RAB (5:00 PM November 18)

XIII. Meeting Evaluation

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

XIV. Parking Lot

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

- Site 4 groundwater monitoring during the 5-year review
- ~~Phone numbers on IR site signs~~

Action Janna - Add Walt's phone number and CNRMA to the IR signs.

- SROD for Site 21
- FY09 CNO Award Package
- Guest for DNAPL
- NIRIS Migration Training
- ~~Site 21 deep groundwater monitoring well abandonment~~

VDEQ is OK with abandoning the deep well.

- ~~February Meeting Minutes~~

Action Tim/Karen – Review February meeting minutes.

- Site 5 Tech Memo Work Plan

EPA requests Site 6 label on figures.
VDEQ will provide comment by 5/5/2008.