Spring Valley Partnering Meeting
May 30, 2013
Spring Valley Trailer Conference Room

Name	**Organization/Address**	**X**
Sherri Anderson-Hudgins	CEHNC	
Thomas Bachovchin	ERT	**X**
Brenda Barber	CENAB	**X**
Todd Beckwith	CENAB	
Bethany Bridgham	American University	**X**
Jessica Bruland	ERT	**X**
Sean Buckley	Parsons	**X**
Paul Chrostowski	CPF Associates, AU Consultant	**X**
Tom Colozza	CENAB	
Jennifer Conklin	DDOE	
Kathy Davies	US EPA Region 3	
Dr. Peter deFur	Environmental Stewardship Concepts/RAB TAPP Consultant	
Diane Douglas	DDOE	
Bill Eaton	URS	
Brandon Fleming	USGS	
Clem Gaines	CENAB, Public Affairs	**X**
Alma Gates	RAB Member - Horace Mann Rep.	
Steve Hirsh	US EPA Region 3	**X**
Leigh Isaac	Environmental Stewardship Concepts	
David King	CENAB	
Carrie Johnston	RCAI - Community Outreach Team	**X**
Dan Noble	CENAB	**X**
John Owens	CENAB	

Randall Patrick	Parsons	**X**
Lan Reeser	CENAB	**X**
Mike Rehmert	CENAB	
Paul Rich	Parsons	
Amy Rosenstein	Risk Assessor (Independent Consultant)	**X (by telephone)**
Allen Shapiro	USGS	
Don Silbacher	Parsons	
Jim Sweeney	DDOE	**X**
Andrea Takash	CENAB, Public Affairs	
Tenkasi Viswanathan	CENAB-WA	
Ethan Weikel	CENAB	
Nan Wells	ANC3D Commissioner	**X**
Cheryl Webster	CENAB	
Laura Williams	Environmental Stewardship Concepts	**X (by phone)**
Bruce Whisenant	CEHNC	**X**
Rebecca Yahiel	ERT - Community Outreach Team	**X**
Doug Yeskis	USGS	

Summary of May 30 Spring Valley Partnering Meeting

Consensus Decisions

- No consensus decisions were made.

May 30, 2013 Action Items

- ERT will revise figures in the Pre-2005 HHRA Review Report to include additional details such as street names and the AU campus boundary, as requested.
- The Partners will share any major issues with the draft final pre-2005 HHRA review document prior to the follow-on meeting, to further expedite the document review and finalization process, as requested.
- A follow-on meeting is tentatively scheduled for Tuesday, July 9, 2013 (2:00 PM to 4:00 PM, just prior to the July 9, 2013 RAB meeting) to discuss any comments and resolve concerns with respect to the draft final pre-2005 HHRA review document.
- DDOE will speak with their Water Quality Division to obtain feedback on the tentative permitting process for the upcoming deep well installations, as requested.

- AU will provide feedback on preferred backfill grading at the 4825 Glenbrook Road site, as requested.

Thursday, May 30, 2013

Check-in

The Partners conducted their normal check-in procedure.

Laura Williams of Environmental Stewardship Concepts represented Dr. Peter deFur, RAB TAPP Consultant, at the meeting via telephone.

Preliminary Topics

USACE noted that schedule impacts due to sequestration furloughs are anticipated in late summer 2013 for upcoming site activities. Partner discussion will be necessary to reach potential solutions. (Details on sequestration furloughs were briefly discussed under two agenda topics below: the Site-Wide Evaluation Document Pre-2005 HHRA Review and the 4825 Glenbrook Road Remedial Action Update.)

USACE provided hard copies of the May 2013 version of the Spring Valley Project Timeline, which summarizes project activities from prior to the initial efforts in 1993 to the current FY2013 efforts. The timeline is a 'living document' and will frequently be updated. The initial version was presented and distributed at the May 2013 RAB meeting in honor of the Spring Valley project's recent 20th Anniversary. Some revisions have been made to incorporate RAB feedback and to address other suggestions. Changes include higher-quality photographs for better clarity and visualization, a couple of revised dates., and the time bar representing site-wide arsenic sampling and remediation was revised to differentiate between the number of residential properties that were sampled versus remediated. USACE noted that this site-wide project timeline provides a good introduction to the draft final pre-2005 human health risk assessments (HHRA) review document, discussed below.

A. Site-Wide Evaluation Document (Pre-2005 HHRA Review)

USACE-Baltimore and ERT provided an update on the Site-Wide Evaluation Document.

[Details of the finalized site-wide evaluation document, Evaluation of Remaining Sampling Requirements, were described at previous Partnering meetings. Additional details of this topic will be shared at upcoming Partnering meetings, pending further Partner discussion of the pre-2005 HHRA review.]

Site-Wide Evaluation Document: The site-wide evaluation document, *Evaluation of Remaining Sampling Requirements*, was finalized in July 2012.

- Key issues in this document include **work plan details** for proposed follow-on sampling in areas known to require supplemental sampling, as described at previous Partnering meetings. Supplemental soil sampling and data validation are completed, as described at the January 2013 Partnering meeting.
- Additional key issues in the evaluation document include **review of pre-2005 human health risk assessments (HHRAs)**, as described at previous Partnering meetings. The associated revised draft final document was recently distributed to the Partners for review.

Presentation Objectives: The structure, contents, and associated maps of the Draft Final Pre-2005 HHRA Review document were described, with the goal of determining how the Partners would like to approach the document review process.

Overview: A total of 5 previously-completed HHRAs and subsequent AUES parameter sampling results were re-evaluated to determine whether the associated conclusions remain protective of human health, based on updated screening criteria. These HHRAs were completed by USACE and/or USEPA between 1993 and 2000, followed by AUES parameter sampling. [Details of these HHRAs were described at previous Partnering meetings.]

Summary: This complex document primarily consists of numerous data tables with some explanatory text. The elaborate step-by-step screening assessment process was outlined at the March 2013 Partnering meeting, and the resulting tables summarize all of the pertinent information from each of the pre-2005 HHRAs.

Draft final figures provided a simplistic representation of how the pre-2005 HHRA areas are spatially distributed and how the different sampling investigations overlap. AOI footprints did not play a role in the screening process to date, but were included on figures because they will be useful for completing the next screening process steps. These figures also featured potential identified AOCs and potential Exposure Units (EUs) based on geography. These maps provide a preliminary overview of potential exposure areas that may require further evaluation and will be reviewed to further identify potential EUs.

Screening of Results: The evaluation process was shown in a table and is outlined below. Appendix C of the draft final document includes a memo which explains the details of the screening process. [This information was previously presented at the January/March 2013 Partnering meetings and is briefly summarized below for reference along with updated information.]

- **Initial Screening (Completed)** – Numerous parameter exceedances were identified during review of pre-2005 HHRA maximum detected parameter concentrations against the new current USEPA RSLs or background levels. The conservative nature of the initial screening process resulted in identification of all parameters as potential COPCs, which was not informative. These parameters were tentatively identified as 'provisional' chemicals of potential concern (COPCs), and were further evaluated using a more detailed screening process (outlined below).
- **Step 1 (Completed)** – A new exposure point concentration (a risk ratio) was calculated to determine whether each identified chemical drops out of the evaluation or remains a provisional COPC. This step relies on basic statistical procedures using ProUCL. A chemical will drop out of the evaluation if the associated risk ratio is below 1; the chemical remains a provisional COPC if the associated risk ratio exceeds 1.
- **Step 2 (Completed)** – Provisional COPCs (identified during Step 1) were further screened using EPA's ProUCL to determine whether the site is greater or less than 'background.' This statistical analysis was completed for a large volume of sample data from numerous investigation reports. A chemical will drop out of the evaluation if the associated concentration is below the background value; the chemical remains a provisional COPC if the associated concentration exceeds the background value.
- **Step 3 (Completed)** – The current soil in each Area of Concern (AOC) is under review to determine whether the pre-2005 sampled soil containing the COPC(s) is still present, or whether the soil containing the COPC(s) has been removed and replaced since the pre-2005 time frame. AOCs under evaluation include POIs, which are geographically-based, and AOIs which are not always geographically-based. Discrete geographic AOCs will be further defined. This step is both important and challenging because the presence of clean backfill could dilute the potential risk presented at a given area, and this step was divided into three sub-analyses.
    - **Step 3A (Completed)** – If the soil has been removed, an iterative process will commence wherein the next highest remaining samples are screened and steps 1 & 2 are re-run, to determine whether an area still contains COPCs.

- **Step 3B (Completed)** – This sub-analysis focuses on the influence and weighted percentages of clean backfill locations. If the area still presents a potential risk despite clean backfill, then each removed sample data point is replaced with an averaged clean backfill concentration for that area. Steps 1 & 2 are re-run to determine whether an area still contains COPCs.
- **Step 3C (Completed)** – This sub-analysis accounts for the effects of remaining COPCs on specific target organs. The risk ratio calculated in Step 1 conservatively estimates cumulative effects on overall human health by using an adjusted RSL (reduced by a factor of 10) for each COPC. If the target organs for each COPC are known, then the adjusted cumulative effects are no longer necessary, and in many cases the COPC drops out of the evaluation by using the larger unadjusted true RSL. Variations on Step 3C are provided in the Appendix A tables.

- **Step 4** – The project team will evaluate whether additional supplemental soil samples will provide significantly better risk evaluation results. This is important because obtaining rights-of-entry for soil sampling at additional properties may be difficult.
- **Step 5** – After undergoing the process outlined above, if a sampled parameter (such as cobalt) is still identified as a COPC, a formal full quantitative HHRA will be performed to determine whether the area of concern presents health risks.
- **Step 6** – Any COPCs and areas that are identified as presenting human health risks will potentially be addressed in the Feasibility Study (FS) process. The purpose of this step is to make formal recommendations for remediating the COPC contamination to protect human health.
  - **Example**: An area identified as presenting human health risks will be defined as an Exposure Unit (EU). Potential recommendations to be addressed in the formal CERCLA process include further soil sampling if warranted, followed by a standalone quantitative HHRA for that particular geographical area.
  - **Tentative Schedule:** The draft final version of the pre-2005 HHRA review will be reviewed by the Partners. This document summarizes the provisional COPCs remaining at each AOC and the next steps that are required to define discrete exposure areas (EUs) and determine the path forward. Further integration of geographical areas into the larger picture is necessary, so that remaining COPCs in each area can be evaluated regardless of the time frame in which they were detected (e.g., pre-2005 or during the recent supplemental soil sampling effort).

Conclusions: Sections 6 and 7 of the text present conclusions of the pre-2005 HHRA review. The ultimate goal of the draft final report is to make a case for the identified exposure units and lead the reviewer to conclusions about additional sampling efforts that should be conducted.

Section 6 summarizes the remaining COPCs by geographical area and the associated pre-2005 HHRA. These conclusions also refer back to the specific Appendix A table containing the associated data. For example, cobalt was identified as a COPC in several discrete areas.

Section 7 describes the remaining COPCs by geographical area without regard to the time frame in which the samples were originally collected. A total of 5 potential EUs were identified, as follows:

- 4710 Woodway Lane – This was identified as a discrete area of concern based on the AUES-related property history, instead of merging this area with nearby properties.
- AOI 13 – This area will incorporate sampling results from properties such as 4710 Quebec Street.
- POI 53 (western portion) – Although no COPCs were identified, this area was called out as a separate EU because supplemental sampling was recently completed for evaluation.

- POI 53 (southern portion) – This area contains the majority of the COPCs identified on the AU campus.
- AOI 9 – This area contains POI 7 as the primary focus of interest with respect to COPCs.

Next Steps: Each EU will be re-screened using all sampling data within the EU boundary, regardless of the time frame in which the data were collected. AOIs 8 and 11 will also be screened using this process. The goal is to determine whether any COPCs remain in these EUs. For each EU that still contains one or more COPCs, a full HHRA will be recommended. The work plan for each full HHRA will include a broader list of sampling parameters.

Appendix A Data Tables (A1 through A9): The objective was to guide the reviewers through the specific screening process outlined in these tables. Each successive table column, reading left to right, represents the next step or sub-analysis of the screening process, along with columns for generic notes. The text explains details such as which statistical test was used for evaluating background exceedances and why; the minimum number of samples used for statistical analyses and why; and how backfill sampling data were averaged.

Examples of COPCs were presented to show how these tables are the basis for defining EUs that warrant further evaluation.

- **Table A1** – This table summarizes all of the COPCs that were identified during the screening process for future evaluation in each EU.
- **Table A2** – Cobalt was identified as a COPC in POI 25 (originally sampled and evaluated during the 1995 OSR FUDS HHRA). [This example was presented in greater detail at the March 2013 Partnering meeting.] The maximum detection of cobalt in the 1995 OSR FUDS HHRA exceeded the 1994 RBC of 470 ppm, and still exceeds the highest current screening criteria (the newest adjusted RSL of 2.3 ppm). Cobalt remains a provisional COPC because the risk ratio exceeds 1. The concentration also exceeds the 2008 background value (17.8 ppm) and the unadjusted RSL (23 ppm). The unadjusted RSL was used because cobalt is the only potential COPC in this area that primarily targets the thyroid.
- **Table A4** – Antimony was identified as a COPC in POI AU (originally sampled and evaluated during the 1999 USEPA HHRA). The current screening level of 3.1 ppm antimony matches the original 1999 RBC of 3.1 ppm antimony. The background value for antimony has changed since 1999. Although soil was removed in a few areas followed by clean backfill, antimony concentrations remain high relative to the current screening level and the current background level. Effects on antimony on human health are targeted toward blood (hematology), and the highest antimony detection exceeds the unadjusted value of 31 ppm.
- **Table A4** – Four potential COPCs were eliminated as current COPCs in POI 22 (originally sampled and evaluated during the 1999 USEPA HHRA). These parameters include arsenic, lead, manganese, and thallium. This conclusion is based on weight of evidence, and applies to the central AUES-related bunker in the backyard of a 4700 block of Woodway Lane property, which is used by the homeowner as a utility room in the house. A total of 4 soil samples were collected from below the concrete floor in 1999, and the original sub slab still remains in place as part of the utility room. This small area does not pose any human health risks, as there is no direct exposure pathway for human receptors and the property owner has no plans to alter the property usage or the existing sub slab.
    - ERT noted that although arsenic was not identified as a COPC in the 1999 USEPA HHRA, the maximum arsenic detection exceeds the current criteria and thus would be considered a COPC if not for the weight of evidence argument presented above.
    - ERT mentioned the difficulty of conducting statistical analyses with a limited number of samples (in this case, a total of 4 samples). As part of the screening process, a minimum

of 5 samples was selected as the cutoff point for conducting statistical analyses in ProUCL, because better results are obtained with more values.

- USACE clarified that the other two bunkers in the backyard were fully remediated via surface debris removal, excavation, clean backfill, and a new concrete sub slab poured over top of the original soil sampling locations.

Tentative Schedule: The draft final version of the pre-2005 HHRA review was distributed to the Partners for review in May 2013. A follow-on meeting will be tentatively scheduled to resolve any comments or major concerns with respect to the draft final pre-2005 HHRA review document.

Discussion – Site-Wide Evaluation Document (Pre-2005 HHRA Review)

Nan Wells, ANC3D Commissioner, inquired about the rationale for and importance of reviewing risk assessments that were performed prior to 2005.

USACE explained that the Partners want to incorporate these previously-completed high-quality risk assessments into the upcoming site-wide HHRA. Some of the comparison standards used prior to 2005 have changed during the past several years, and it is important to determine whether the pre-2005 conclusions remain protective of human health. The pre-2005 HHRA review report, currently in preparation, will identify whether pre-2005 risk assessment conclusions need to be updated based on current screening values.

In response to N. Wells' inquiry, EPA further clarified that the pre-2005 risk assessments relied on toxicological values that were current at that time. The results indicated that no unacceptable risks were present. If these conclusions had been presented in a Decision Document, then their validity would not need to be re-evaluated, but significant time has passed since those risk assessments were completed. The purpose of this pre-2005 HHRA review document is to evaluate whether the conclusions of those previous risk assessments are still valid and remain protective, to support development of the upcoming site-wide HHRA and decision-making process. ERT added that specific examples are provided in today's presentation.

Discussion – Pre-2005 HHRAs

ERT noted that the 54 Points of Interest (POIs) were defined by the 1995 USACE Remedial Investigation, which was conducted following the initial 1993 52nd Court burial pit findings. The RI included a risk assessment that concluded no further action (NFA) for all areas with the exception of the Spaulding and Captain Rankin Areas. Subsequently, an EE/CA containing a streamlined RA was conducted and subsequent to that, a 1996 USACE Spaulding and Captain Rankin Area RI was conducted. These investigations addressed the three AUES bunkers identified as POIs (21, 22, 23) in the backyard of a 4700 block of Woodway Lane property.

ERT noted that the 1999 USEPA HHRA relied on split samples collected for the 1995 USACE HHRA, and that the 1995 and 1999 documents essentially represented the same areas (or POIs). With respect to sampling scope, USACE focused on a smaller list of parameters, while EPA analyzed their samples for a much broader parameter list.

ERT clarified that updated site-specific HHRAs have been completed for 4825 and 4835 Glenbrook Road, which supersede the 2000 USACE HHRA site-specific conclusions for these properties. These OU-3 properties were therefore excluded from re-evaluation in the pre-2005 HHRA review document.

ERT noted that the additional AUES Comprehensive List sampling was associated with the larger EE/CA that established site-wide arsenic sampling and removal. These parameters were originally referred to as the "AUES List" and are now called the SVFUDS Comprehensive List of parameters. Specific areas sampled included the AU Child Development Center (CDC), POI 1 (Sedgwick Trenches), and a total of 4 residential properties within OU-4 (two on Rockwood Parkway and two other non-contiguous properties).

Discussion – Draft Final Pre-2005 HHRA Review Document

In describing the screening process, ERT noted that the master Excel database contains almost 3,000 rows of sampling data representing the pre-2005 HHRA efforts. All sampling detections, not just those identified as COPCs within the pre-2005 HHRAs, were evaluated using the screening process outlined above.

ERT noted that current screening values for some metals are significantly lower than the original screening values used in the pre-2005 HHRAs. For example, the newest RSL for cobalt (2.3 ppm) is much more stringent than the original 1994 RBC for cobalt (470 ppm). This shows the value of conducting this pre-2005 HHRA review, because, in this example, cobalt may have been at acceptable levels previously, but may no longer be, and that is what is being assessed.

ERT mentioned that in a couple of cases, a smaller area was identified as containing COPCs based on current screening criteria, but a much larger encompassing area was identified for further evaluation. For example, AOI 9 was identified as an AOC even though the much smaller POI 7 is the focus of this area.

ERT mentioned that if warranted, a brief addendum to the pre-2005 HHRA review report may be produced to show how the next level of screening, including the specific samples, would be conducted on the newly derived EUs.

AU requested that the figures include details such as street names and the AU campus boundary, for the benefit of individuals who are less familiar with the site. Otherwise, it will be more difficult for people to visualize the geographical context of the areas sampled during pre-2005 HHRAs. ERT agreed.

AU asked whether a flow chart of the entire screening and decision-making process could be produced, to further clarify the information described in the report text and appendices. USACE noted that each table that was subjected to the screening process serves as a flow chart. AU clarified that they would like a flow chart of the basic steps in this process. For example, if a given contaminant is below the RSL then it is excluded from the rest of the process, and if the contaminant exceeds the RCL then it remains a COPC and moves forward to the next step of the process. ERT replied that if AU still feels that it would be useful after completing the walk-through of the report tables, then the flow chart should not be difficult to produce. AU added that they are aware of budget limitations for document preparation, but the flow chart would be particularly useful for future readers of the report.

AU inquired about the possibility of producing figures for the areas addressed in each pre-2005 HHRA, to show sampling locations along with the extent of completed excavations containing clean backfill. ERT explained that this information is shown in previously-completed reports. All of the complex sampling, excavation, and backfill information was meticulously reviewed and incorporated into the Appendix A tables of the draft final document. USACE and ERT noted that significant effort would be required to recreate old existing figures and develop new figures that show which pre-2005 HHRA samples were subsequently remediated. Although this can certainly be done, it may be unnecessary, as the excel tables can show which samples were deleted or excavated as part of the pre-2005 HHRAs.

N. Wells commented that it would be almost impossible for the Spring Valley community to understand the contents of this report. She added that she personally has no idea whether new, old, or re-tested samples were used. ERT clarified that the exact sampling data and screening process used in this report will be further explained during today's presentation and they are all encompassed within the resulting data tables. EPA added that of all the documents produced for Superfund projects, this type of document is the most difficult for non-toxicologists to understand. It will be necessary for agency toxicologists to participate in the follow-on meeting and further explain the details of the pre-2005 HHRA review report.

N. Wells emphasized that it would be preferable to focus on current sampling with specific goals as opposed to going back through old sampling efforts. EPA clarified that the entire draft final pre-2005 HHRA review report is focused on reviewing older documents to determine if their conclusions are still valid. ERT added that new supplemental sampling data was incorporated into the screening process and discussed in this document.

EPA further clarified that the conclusions of documents over time and the current risks at each EU will be described in the site-wide RI report. The pre-2005 HHRA review report is a preliminary secondary document that will lead to production of one or more primary HHRA documents. ERT added that this serves as a screening document to review old sampling data and to assess whether full HHRAs are needed for one or more discrete areas, and if so, how many full HHRAs are warranted.

N. Wells expressed an interest in having maps show excavated areas in relation to sampling data. ERT clarified that this information is already presented in the source documents. EPA explained that this document is geared toward toxicologists who can assist with making decisions regarding the need for additional HHRAs. The request for excavation maps can be satisfied later, within the site-wide RI document that will be produced and provided to the community for public review and comment.

AU noted that reviewers will need to refer to the source documents in order to fully evaluate the details incorporated into the pre-2005 HHRA review report (such as completed soil excavations and remaining soil areas). In particular, they will need to refer to figures from the original source documents, the database of all chemicals included in sample analyses, and figures from any documents that supersede the original ones. ERT confirmed this. Incorporation of all information presented in multiple source documents would generate a huge review document, but the point of this review document is to screen and summarize these previous efforts. Additional figures, which may contain old sampling locations and other details, will be produced later during preparation of the site-wide RI report. The ultimate goal of this effort is to identify the remaining areas where COPCs may still be present, and eventually make decisions as to how these areas will be addressed.

In response to AU's inquiry, ERT explained that all of the metals concentrations in this report are expressed in ppm. Other parameters such as organic chemicals are typically expressed in ppb but do not play a role in this report. ERT clarified that although unit differences between various reports can be awkward, all assessments were properly conducted using the appropriate concentration units, whether ppb or ppm.

Discussion – Tentative Schedule

The Partners briefly discussed conducting an on-board review of the draft final document to accelerate the lengthy review process, now that the Partners have had the opportunity to read the document. This may be scheduled as a conference call or a more formal meeting, depending on Partner availability. The purpose of this meeting is to address and resolve all major Partner questions and concerns.

USACE emphasized that several complex topics within the document would be best addressed via real-time verbal discussion, rather than back-and-forth comment responses. As requested by USACE, the Partners will review the document beforehand in preparation for the follow-on meeting.

As requested by ERT, the Partners will share any major issues prior to the follow-on meeting to further expedite the document review and finalization process. AU and EPA replied that they will provide their comments as soon as they can, potentially by the third week of June. AU agreed that their questions primarily focus on document details rather than larger concepts, and they do not anticipate voicing major issues with the document's contents or structure.

In response to A. Rosenstein's inquiry, ERT confirmed that preliminary Partner comments will be compiled and distributed to the Partners at least a week prior to the July 9 follow-on meeting, for their reference.

USACE added that they will not be permitted to work overtime during their agency's sequestration furloughs, which are scheduled to begin in early July 2013. The Partners briefly discussed the potential impacts of sequestration on the follow-on meeting date and time.

A follow-on meeting is tentatively scheduled for Tuesday, July 9, 2013 to discuss comments and resolve concerns with respect to the draft final pre-2005 HHRA review document. Participants will include agency toxicologists. The meeting will tentatively be held from 2:00 PM to 4:00 PM, just prior to the July

2013 RAB meeting. This schedule provides approximately five weeks until the follow-on meeting, for further Partner review of the document.

Next Steps

ERT will revise figures in the Pre-2005 HHRA Review Report to include additional details such as street names and the AU campus boundary, as requested.

The Partners will share any major issues with the draft final pre-2005 HHRA review document prior to the follow-on meeting, to further expedite the document review and finalization process, as requested.

A follow-on meeting is tentatively scheduled for Tuesday, July 9, 2013 (2:00 PM to 4:00 PM, just prior to the July 2013 RAB meeting) to resolve concerns with respect to the draft final pre-2005 HHRA review document.

B. Groundwater Study Efforts

The goal of this segment of the meeting was to provide an update on ongoing and upcoming groundwater study efforts.

USACE provided a brief update on the status of upcoming groundwater study efforts.

Semi-Annual Sampling: Selected existing groundwater monitoring wells and surface water monitoring locations will be sampled twice annually for the next few years. These locations include a total of 20 shallow and deep wells and 10 surface water locations. The first semi-annual sampling event began in late April 2013, as part of the extended 2013 groundwater monitoring program, and all sampling was completed by mid-May 2013. Results will be shared with the Partners (and with the RAB) pending receipt of all laboratory analytical data, tentatively in late summer 2013. Some preliminary unvalidated results have already been received and data validation is underway.

Initially, the crews were unable to sample a few ports at two of the multi-port wells due to a mechanical issue affecting the sampling port check valves. USACE resolved this issue with a temporary remedy and the remaining ports were sampled on May 13, 2013. This temporary solution worked because only a few of the check valves failed to work properly. If additional check valves are lost due to mechanical breakdown, it will not be possible to collect future groundwater samples from every multi-port well elevation. USACE will continue to monitor these check valves with the goal of obtaining all desired samples during each sampling event. [Details of the multi-port well sampling issue and temporary solution were provided at the May 2013 RAB meeting.]

During this sampling effort, a strong hydrogen sulfide smell was detected at MP-2, along the Glenbrook Road curb across from the 4825 Glenbrook Road site. This suggests that biological activity may be occurring in groundwater at this particular location. USACE and URS will examine the redox potential data that were previously collected at MP-2, and future multi-port sampling protocols may be adjusted to determine why the smell is present.

Additional Deep Wells: Two additional wells are planned to provide additional vertical delineation of groundwater. Proposed locations include the area between MP-3 and MP-4 (in the vicinity of Indian Lane or further down Rockwood Parkway) and close to Sibley Hospital. Approval was obtained for using prior year funds to fund the existing task order and for using the previous well installation contractor (URS), as described during the April 2013 Partnering conference call. Modification of the existing contract is underway and will tentatively be in place by late summer 2013. Planning for the new wells will be completed in FY2013, followed by the deep well installations, tentatively in late FY2013 or in FY2014.

Discussion – Semi-Annual Sampling Results

USACE mentioned that the semi-annual sampling is conducted in-house, followed by independent laboratory analyses and then in-house quality control of the data. These data will be shared with the RAB once the complete package of validated sampling results is available, as early as September 2013.

Discussion – Additional Deep Wells

In response to EPA's inquiry, USACE replied that one of the two additional wells is planned as a multi-port well. This is not necessarily a bad idea depending on the future impacts of sampling port check valve mechanical breakdown. **Discussion – Hydrogen Sulfide Smell at MP-2**

The Partners briefly discussed potential explanations for the hydrogen sulfide smell. A nearby sewer line may be leaking into groundwater and leaching into the deep well, but this smell was not observed at other groundwater monitoring wells that are situated along residential street curbs in the DC right-of-way. AU added that this smell could indicate that natural remediation of perchlorate is occurring in groundwater. USACE made note of this possibility and will continue to monitor perchlorate levels at MP-2 as the groundwater monitoring program continues to move forward.

Discussion – Deep Well Installations

USACE mentioned that they hope to obtain a dig permit to install the new deep well in the vicinity of Indian Lane. The planned location is on a triangle-shaped grassy area owned by DC, and it may be feasible to install the well without impacting adjacent public space (road traffic and sidewalk access) or requiring a public space permit. The deep well would be drilled using a rig situated entirely on DC property.

N. Wells noted that it is her understanding that intrusions into public space need to be communicated to the ANC, as part of the existing process for public space impacts.

DDOE mentioned that new personnel in the DC water quality division may have different ideas regarding the necessary permits. DDOE will obtain feedback on the tentative permitting process for the upcoming deep well installations, as requested by USACE to ensure that only the necessary permit applications are submitted.

Next Steps

DDOE will speak with their agency's water quality division to obtain feedback on the tentative permitting process for the upcoming deep well installations, as requested.

C. 4825 Glenbrook Road Remedial Action Update

The goal of this segment of the meeting was to discuss the decision-making process and the ongoing remedial action for the 4825 Glenbrook Road site.

USACE-Baltimore and Parsons provided an update on the remedial activities completed to date at the 4825 Glenbrook Road site.

<u>Completed Efforts to Date</u>

Previously Completed Activities: House demolition was completed in late November 2012, followed by removal of associated debris from the site. Remaining structural elements include the basement walls and the basement slab, which will be removed during high-probability excavations. Low-probability site preparations began in December 2012 and were completed in January 2013. (Details of previously-completed efforts were presented at the December 2012 and January 2013 Partnering meetings.)

Previously Completed Low-Probability Efforts: Initial low-probability efforts began in early February 2013 and were completed in April 2013. These efforts included soil removal adjacent to Glenbrook Road in Area B, followed by excavation of the remaining backyard test pits. No AUES-related items were

found during these efforts. (Details of initial low-probability efforts were provided at the March/April 2013 Partnering meetings.)

Recently Completed Site Preparations: The sewer and water utility lines were successfully rerouted and are fully functional. Soil grading activities were completed to provide access for the soldier pile installation rig along the property boundaries.

Installation of soldier piles was completed to maintain slope and stability in areas where space is limited and thus the required slope cannot be obtained. A portion of the lagging was also installed for support and stability purposes, and the remainder will be installed once the necessary locations become available during high-probability excavations. The ECBC equipment support area was prepared by removing backyard soil and establishing the necessary grade, followed by construction of the equipment pad. All CAFS and miniCAMS equipment were installed yesterday (May 29, 2013), and the necessary lifts are present to move additional equipment onto the site. A notch was cut in the front window well, to place an I-beam for tent support.

(Details of site preparations were provided at the March/April 2013 Partnering meetings.)

Upcoming Activities: The remaining low-probability efforts include completion of site preparations for high-probability efforts.

All grading and excavation soil generated at the site, to date, were combined into stockpiles and all necessary waste characterization sampling and analyses were performed. These stockpiles are currently being loaded onto trucks for off-site transport an approved landfill.

Arrival of the high-probability tent structure is anticipated next week, to be followed by installation.

Next, ECS tent construction, personnel training, tabletop activities, and pre-operational surveys will be conducted by USACE-Huntsville and then inspected and reviewed by the Department of the Army (DA). High-probability excavation will begin once all of these preparations have been completed.

Recent AUES-Related Findings: [Details of recent AUES-related debris findings were presented at the May 2013 RAB meeting.]

One 75 mm munition debris (MD) item was found during soldier pile installations behind the backyard retaining wall. This item was recovered when the auger bit was brought up for cleaning, partway through drilling an auger hole. The project team implemented the low-probability emergency plan, mitigated potential risks, and notified the proper channels. X-rays revealed that the MD item was empty, and no explosives were present. As a result, excavation of Area A continued under low-probability protocols.

Several very small glassware pieces and ceramic fragments were found not far from the auger hole described above. These items were scattered along a 40-foot section just behind the retaining wall. All items headspaced clear, were cleared for agent, and were classified as AUES-related debris. Again, excavation of Area A continued under low-probability protocols.

A single test tube classified as AUES-related glassware was found while excavating just behind the retaining wall on May 21, 2013. This item was situated within the same 40-foot section, in the vicinity of the soldier pile installation auger hole described above, and contained approximately one inch of potential solid material. The project team implemented the low-probability emergency plan, and the item was immediately double-bagged for transport to ECBC the following day. The proper channels were notified in case the item presented chemical agent risks. Excavation of Area A is temporarily placed on hold, pending laboratory analytical results of the glassware contents, while site preparations continued. [This portion of the presentation reflects information presented prior to the ECBC status update, which was shared during the Open Issues and New Data section of the meeting.]

Tent Sequencing: Preparations are underway for establishing the first tent location. The current tent move sequence requires completion of Area A prior to placing the tent in the second planned location, due to the necessary flat level surface, soldier pile, and I-beam support for the tent foundation.

Waste Characterization Sampling: Soil samples were collected from excavated Area A soil to characterize the waste profile, with an arsenic concentration of 116 ppm. This sample was further analyzed via toxicity characteristic leaching procedure (TCLP) for arsenic. The waste profile was acceptable to the laboratory, and the soil excavated from Area A was combined with the existing excavated soil stockpile for off-site disposal at an approved landfill.

Tentative Remedial Action Schedule: Three phases of remedial action are planned: demolition (completed), initial low-probability efforts including the remaining low-probability test pits in the back yard including the utility trench (completed), and all planned high-probability and low-probability soil removal areas. Site preparations for high-probability efforts, including construction of the engineering control structure (ECS), are underway and are anticipated in May through mid-summer 2013. High-probability soil removal will tentatively begin in late summer (August) 2013, with completion anticipated in April 2014. The remaining low-probability soil removal actions (the remainder of excavation area A, along with excavation area B) will be conducted in April through May 2014, followed by site restoration in May 2014. The remediated property will be returned to AU, the property owner, as early as May 2014.

Discussion – Area A Glassware Item

[This portion of the discussion reflects information presented prior to the ECBC status update, which was shared during the Open Issues and New Data section of the meeting.]

In response to AU's inquiry, USACE confirmed that Area A will be fully excavated as planned. Progress in this area includes headspacing all encountered debris.

AU presented a worst-case scenario where the glassware contained agent, in which case it would only be necessary to carve out the immediate surrounding area for high-probability excavation. USACE replied that associated laboratory results are not available to date, and assumptions cannot be made. There are two potential options for the path forward, and in both cases the project delivery team (PDT) must meet and make a decision. If the glassware is cleared for agent, then the remainder of Area A will likely be completed under low-probability protocols with continued debris monitoring, after all high-probability excavations. If the glassware contents are identified as agent, then the potential impacts on the path forward will be assessed, with potential for excavating the remainder of Area A or just a limited portion of Area A under high-probability protocols and modified tent sequencing.

N. Wells mentioned that USACE previously estimated the glassware laboratory results would be available earlier in the week, and the finding is gaining press attention. USACE confirmed that receipt of laboratory results was delayed. They have been in regular contact with ECBC, who has not provided a detailed explanation for the delay.

In response to N. Wells' inquiry, USACE clarified that results from ECBC will not be obtained more quickly in response to pressure from ANC3D or the community. USACE has made it clear that receipt of these results is a very high priority, and the laboratory's concerns about the item are unclear.

AU noted that some items and their contents require more time and more effort to fully analyze. USACE replied that ECBC has provided some feedback on the analytical process. ECBC exercised significant caution and due diligence when properly opening and accessing the glassware contents to ensure they obtained a viable sample. Laboratory results are anticipated as early as this week but no other specific feedback is available at this time.

The Partners briefly discussed logistics of establishing tent locations in the event that a portion of Area A must be excavated under high-probability protocols. An interim solution would be needed in order to return to Area A. The I-beam installed in Area A would still remain in place to support the associated tent location. Parsons clarified that although the original planned tent move sequence could solve this challenge, the tent move sequence was rearranged so that the basement floor will be left in place for as long as possible. This provides a stable working environment and an access road, and is preferable from a sequencing and workability perspective.

AU emphasized the substantial complications that may occur if the glassware contents are identified as agent, and asked whether the resulting work plan changes would require approval from the entire chain of command. USACE explained that under this scenario, a work plan addendum would be prepared. Approval for high-probability tent operations has already been granted and would translate well to the addendum.

USACE explained that any necessary re-engineering planning can be completed by Parsons while the first high-probability tent location is being excavated, to minimize further schedule delays. Area A completion would be addressed following completion of planned high-probability efforts, toward the end of the remedial action.

DDOE noted that the Area A excavation would require backfill until the remaining portion of Area A can be fully addressed. USACE and Parsons replied that the excavated Area A soil was sampled and deemed acceptable for off-site transport and disposal at an approved landfill. If this area requires backfill, then the adjacent CAFS unit would need to be moved, along with impacts on the tent move sequence and schedule.

USACE mentioned that the glassware item was situated in backfill placed behind the retaining wall by the builder. USACE does not anticipate this backfill area will extend much further than directly behind the retaining wall, and probably ends within approximately 10 to 15 feet along the retaining wall as it begins to curve through the property. EPA replied that this may be true with respect to the soil elevations currently being excavated, and asked about deeper elevations. USACE confirmed that the sidewall behind the retaining wall will be excavated to ensure no other AUES-related debris is present. Currently, AUES-related debris in this area appears to be scattered haphazardly, and there is no indication of debris concentrated behind the retaining wall.

Parsons added that the slope in this area is currently 1:1 to support the adjacent CAFS unit. The team has not observed anything else of interest in the trench bottom, and the transition to saprolite is becoming evident.

In response to AU's inquiry, USACE and Parsons replied that the full height of the retaining wall is approximately 7 feet, but most of the wall has already been removed. The portion remaining below the ground is approximately two or three feet high.

Parsons pointed out that following the three tent moves, a large portion of the property would be clear and available for benching, sloping, and installing infrastructure such as another CAFS unit. This engineering solution would be relatively easy, and soldier piles would be unnecessary in this area. USACE explained that only a single CAFS unit is preferred with respect to noise abatement and tent structure size, to minimize impacts to the neighboring 4835 Glenbrook Road resident.

Discussion – Backfill and Grading

USACE and AU briefly discussed options for situating and grading clean backfill in the backyard. The steep backyard slope can be maintained with a relatively flat area closer to the house, or additional backfill can be brought in to create a steady slope as described in the site-specific final work plan. Soldier pile will be left in place along the property boundary between 4825 and 4801 Glenbrook Road, as previously agreed upon by the Partners and the property owners, and different grading contours in this area are possible. Parsons added that backfill grading must account for final sewer and water utility locations associated with future site use.

USACE emphasized the value of AU's feedback as backfill is transported to the site and temporary grading is established. AU agreed to provide feedback, and acknowledged that a decision from their landscaper is necessary in order to implement the backyard grading and eventual restoration.

Discussion – Tentative Schedule

USACE noted that the existing tentative schedule may still be valid even if the remaining portion of Area A must be completed shortly before site restoration. The schedule is subject to change depending on field work outcomes.

AU inquired about the anticipated impact of sequestration furloughs on the tentative schedule. USACE replied that the PDT will meet to discuss potential schedule impacts, pending official receipt of their furlough letters. Based on unofficial information, USACE personnel schedules will be restricted to a maximum of 4 days (32 hours) per week for a total of 12 weeks (the week of July 8 through the last week of September).

In response to EPA's inquiry, USACE explained that they requested an exemption for ECBC based on public safety. This exemption was denied and overtime hours are not permitted. ECBC furloughs mandate a maximum of 32 hours per week for a total of 11 weeks, similar to USACE furloughs, and personnel cannot work on Fridays during this time frame.

USACE noted that they are evaluating potential scheduling options for remedial action support. Restricted time frames (four work days per week) are likely to impact productivity and site progress. Details will be shared with AU as soon as they are available, along with the project impacts on the remedial action anticipated completion date.

D. Noble mentioned that a 4825 Glenbrook Road site visit is scheduled for the Partners immediately following today's meeting, during which the cleanup areas discussed today can be pointed out.

Next Steps

AU will provide feedback on preferred backfill grading at the 4825 Glenbrook Road site, as requested.

D. Open Issues and New Data

The goal of this segment of the meeting was to share issues not on the agenda for possible placement on a future agenda and to share new data that became available since the last Partnering meeting.

Two open issues were brought forward for discussion.

Discussion – Planned Efforts at the 3700 block of Fordham Road Property

[Details of the tentative schedule for soil sampling, soil removal, and anomaly removals at the 3700 block of Fordham Road property were provided at the January 2013 Partnering meeting, followed by brief discussion of property issues at the March/April 2013 Partnering meetings. Details of the signed Anomaly Review Board (ARB) memo for this property were provided at the December 2012 Partnering meeting.]

USACE mentioned that elevated arsenic grids at the 3700 block of Fordham Road property could possibly overlap with two of the three property boundaries. USACE hopes to delineate and confirm any arsenic soil extending onto neighboring properties. Due to the difficulty of obtaining right-of-entry, USACE would like to contact neighboring homeowners for the purpose of collecting arsenic soil samples along property boundaries that are adjacent to the Fordham Road property. Identification of property owners and available contact information is underway, focusing on two of the three adjacent residential properties.

USACE hopes to receive a timely response from the Fordham Road property owner. Progress with obtaining right-of-entry is necessary this summer in order to prepare for field efforts in the fall. A signed right-of-entry is needed in order to collect delineation soil samples and determine the extent of soil removal to be completed in the fall. USACE emphasized the need for cooperation and back-and-forth communication in order to make progress on this effort.

In response to EPA's inquiry, USACE replied that the property owner is receiving letters and is likely aware of other informal outreach approaches but is no longer responding. During the meeting with the

property owner at their home in February 2013, the property owner indicated their interest in completing the effort.

Community Outreach added that the property owner responded similarly via email earlier in May. At that time, they requested an electronic version of the right-of-entry, which was immediately provided. Despite follow-up prompts for a response, the property owner has not responded since.

USACE noted that in the fall of 2012, preparation of a regulatory agency letter was underway to explain the importance of completing work at the Fordham Road property. This letter was not sent because the property owner responded during this time frame.

In response to USACE's inquiry, EPA replied that they are willing to reactivate this letter, which would explain what the U.S. Army is asking for and the rationale for their request. This regulatory agency letter would be similar to the one previously sent to gain access for investigating the 52nd Court area.

The Partners briefly discussed homeowner concerns about receiving unwanted press and public attention. N. Wells shared the opinion that the homeowner will likely receive more attention because they have not authorized this work to be completed at their property.

EPA suggested that it might be beneficial for the homeowner to be contacted by someone unaffiliated with the U.S. Army. If property access had not been denied in the first place, these efforts would have been completed and considered history. DDOE mentioned that Mary Douglas, RAB Member, inquired about the status of property access at recent RAB meetings. N. Wells added that M. Douglas was formerly associated with USEPA, and DDOE added that she was previously a Superfund lawyer.

Discussion – Update on AUES-Related Glassware Item Recovered at 4825 Glenbrook Road

Regarding the AUES-related glassware item recovered at the 4825 Glenbrook Road site, USACE shared a status update from ECBC. No chemical agent or agent breakdown products were present in the test tube. This is very good news and current site preparations will likely resume under low-probability protocols, pending discussion of the path forward with the PDT. Any decisions made by the PDT will be shared with the Partners later today (May 30, 2013).

AU asked whether preparations for high-probability excavation will resume within 24 hours at the 4825 Glenbrook Road site. USACE replied that this will be determined later today. As part of the site protocol, the PDT must meet, make a formal decision, and inform the stakeholders that the project is moving forward again.

E. Document Tracking Matrix for Hazardous Toxic Waste (HTW) and Military Munitions Response Program (MMRP)

The goal of this segment of the meeting was to review the comment due dates on HTW and MMRP draft reports and the status of the documents.

The Partners briefly reviewed the status of several documents.

Discussion – Site-Specific Documents for Completed Investigations at 4835 Glenbrook Road and the AU Public Safety Building

USACE noted that documents associated with 4835 Glenbrook Road and the AU Public Safety Building will be finalized soon, pending submission and incorporation of comment responses as appropriate. Parsons confirmed that the engineering removal reports for both properties simply provide a summary of activities completed at the site.

USACE provided a brief update on the Agency for Toxic Substances and Disease Registry (ATSDR) Health Consultation for 4825 Glenbrook Road. Based on the most recent status update provided at the

May 2013 RAB meeting, receipt of the revised draft document is anticipated in late 2013, followed by release of the document for public review and comments by May 2014.

Discussion – Overview of Completed Efforts at 4835 Glenbrook Road

USACE suggested that they present an overview of the 4835 Glenbrook Road completed efforts at an upcoming RAB meeting, assuming approval is obtained from the property owner (AU). Completed and finalized investigations for individual residential properties are not typically presented at the RAB. This property would be an exception because it is situated in the Glenbrook Road area that has received significant project effort and public attention during the past several years. The purpose of this presentation would be to remind the RAB of investigation activities that were performed at the property directly adjacent to the 4825 Glenbrook Road site.

F. Agenda Building

The next meeting has yet to be scheduled, possibly for some time prior to the September RAB meeting.

Discussion – Upcoming Meetings

The Partners briefly discussed whether there would be a need for an upcoming Partnering meeting or conference call during the June or July time frame. Today's meeting serves as the June meeting, and many of the Partners will be present in the area on July 9 for the next RAB meeting. A follow-on meeting is tentatively scheduled for Tuesday, July 9, 2013 (2:00 PM to 4:00 PM, just prior to the July 2013 RAB meeting) for the few Partners needed to resolve concerns with respect to the draft final pre-2005 HHRA review document.

USACE pointed out that Spring Valley project efforts during the next month or two will primarily consist of site preparations and training activities for upcoming high-probability efforts at the 4825 Glenbrook Road site. EPA added that the only intrusive work during this time frame is limited to the small notch excavated for I-beam placement in Area A.

A short site tour for the Partners is tentatively scheduled for July 25, 2013 at 1 PM, just after completion of the pre-operational surveys (based on the current schedule). This tour is not associated with a formal Partnering meeting. USACE clarified that the on-site tour will include the interior of the ECS. All equipment will be fully operational during the tour, including monitoring equipment and weather stations.

The Partners briefly discussed the need for site personnel to be present and outfitted in planned personal protective equipment (PPE). EPA replied that ECBC's presence during the site tour is unnecessary, but the presence of site monitoring personnel would be nice. EPA will check whether any other personnel from their agency are interested in attending the site tour.

USACE mentioned that a separate tour is planned for AU President Kerwin.

In response to N. Wells' inquiry, USACE replied that public tours of the high-probability site setup will not be held.

Discussion – Noise Levels Anticipated During 4825 Glenbrook Road High-Probability Effort

In response to N. Wells' inquiries, USACE and Parsons replied that site noise generated from the CAFS will be minimized by noise abatement systems, similar to the standard operating process used during previous high-probability operations at the site. This includes the most robust sound suppression system that has been used at the site to date, and supported by a noise study conducted by an acoustic suppression specialist. CAFS noise will be further minimized by turning the equipment off at the end of each work day (approximately 5:00 or 5:30 PM) and turning it back on at the beginning of each work day (approximately 7:00 AM). No filtration equipment will generate noise outside of standard work hours.

The Partners shared additional details about noise to be generated at the site. Parsons mentioned that newer equipment, such as the brand new excavator, is quieter than the old bulldozer. Community Outreach added that noise generated by the CAFS has in the past typically been trapped between the steeply-sloped backyard hill and the ECS, and this noise is not very noticeable from the street (Glenbrook Road).

EPA commented that backup generators tend to create a lot of noise.

In response to EPA's inquiry, Parsons replied that the backup generator power will be supplied from the AU campus.

H. Adjourn

The conference call was adjourned at 12:34 PM.

Following the meeting, the Partners attended an on-site tour of the 4825 Glenbrook Road site.