

Inter-Agency Partners Meeting

Tuesday, October 21, 2014				[Upcoming Meetings: December 9th]
TIME	TOPIC	DISCUSSION LEADER	PREPARATION	OBJECTIVE
9:15 - 9:30	Check-in / Review Ground Rules	A. Allison		Introductions of new attendees / Personal check-in / Lunch plans / Review Ground Rules
9:30 – 10:30	Groundwater	T. Beckwith		Groundwater RI / Risk Assessment
10:30 – 10:45	BREAK			[Give Lunch \$ to Rebecca]
10:45 – 12:15	Groundwater	T. Beckwith		Groundwater Monitoring Results / Future Scope
12:15 – 12:45	Munitions Response Site Prioritization Protocol (MRSPP) <i>[Working Lunch]</i>	J. Kaiser		MRS scores
12:45 – 1:30	4825 Glenbrook Road	B. Barber/Parsons		Tent move progress
1:30 – 1:40	Fordham Road	D. Noble		Update
1:40 – 1:50	Open Issues and New Data	A. Allison		Reissued sampling results letters
1:50 – 2:00	Document Tracking Matrix for MMRP/HTW	L. Reeser/ Parsons	Partners Review	Review pending documents
2:00 – 2:10	Partners' Parking Lot	A. Allison	Partners Review	
2:10 – 2:20	Agenda Building	A. Allison		
2:20	Adjourn	A. Allison		

**Spring Valley Partnering Meeting
October 21, 2014
Spring Valley Project Trailers Conference Room**

Name	Organization/Address	
Allyn Allison	USACE - Huntsville	X
Sherri Anderson-Hudgins	USACE - Huntsville	
Thomas Bachovchin	ERT	X
Brenda Barber	USACE - Baltimore	X
Todd Beckwith	USACE - Baltimore	X
Janelle Boncal	Parsons	
Bethany Bridgham	American University	X
Sean Buckley	Parsons	X
Paul Chrostowski	CPF Associates, AU Consultant	X
Tom Colozza	USACE - Baltimore	
Jennifer Conklin	DDOE	
Kathy Davies	EPA – Region III	X
Peter deFur	Environmental Stewardship Concepts/RAB TAPP Consultant	X
Diane Douglas	DDOE	X
Bill Eaton	URS	X
Alma Gates	RAB Member – Horace Mann Representative	
Steven Hirsh	EPA –Region III	X
Dawn Iovan	EPA – Region III	X (via phone)
Leigh Isaac	Environmental Stewardship Concepts	
Carrie Johnston	ERT – Community Outreach Team	
Julie Kaiser	USACE - Baltimore	X
Dan Noble	USACE - Baltimore	X
Cliff Opdyke	USACE - Baltimore	X
Jon Owens	USACE - Baltimore	

Randall Patrick	Parsons	X
Lan Reeser	USACE - Baltimore	X
Amy Rosenstein	ERT (Risk Assessor, Independent Consultant)	
Don Silkkenbaken	Parsons	
Lattie Smart	ERT – Community Outreach Team	X
Jim Sweeney	DDOE	X
Andrea Takash	USACE – Corporate Communications Office	X
Tenkasi Viswanathan	USACE – Washington Aqueduct	X
Cheryl Webster	USACE - Baltimore	X
Ethan Weikel	USACE - Baltimore	
Nan Wells	ANC Commissioner	X
Gretchen Welshofer	URS	X
Maya Werner	ERT	
Kellie Williams	USACE - Huntsville	
Rebecca Yahiel	ERT – Community Outreach Team	X

Summary of 21 October 2014 Spring Valley Partnering Meeting

Consensus Decisions

- No consensus decisions were made.

21 October 2014 Action Items

- No action items were developed.

Tuesday 21 October 2014

Check-in

The Partners conducted their normal check-in procedure.

A. 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, the recent groundwater monitoring results, the Groundwater Remedial Investigation (RI), and the Groundwater Risk Assessment.

1. Groundwater Remedial Investigation

URS presented a summary of the preliminary groundwater RI activities performed to date.

The groundwater study monitoring network has involved a total of 53 wells screened to the water table, two (2) wells with nested screens in shallow and deep bedrock, five (5) piezometers (two with nested shallow and deep screens), three (3) bedrock multiport wells with a total of 25 discrete monitored intervals, one (1) pending multiport well with an additional five (5) intervals, one (1) sump, and one (1) vault.

Piezometers provided preliminary information to define the presence of water and elevations. Next, wells were installed near the Dalecarlia Reservoir to assess whether there were impacts to the reservoir. The study expanded to the Sibley Sump and Hydroelectric Vault where elevated perchlorate levels were identified. The study expanded to include sampling upgradient of the Spring Valley Formerly Used Defense Site (SV FUDS) to establish background. As the groundwater study progressed efforts focused on known source areas including the Glenbrook Road and Rockwood Area near American University (AU), the former pit area at 52nd Court, and bedrock wells to determine the vertical extent of the plume.

The initial analytical scope included 55 volatile organic compounds (VOCs), 79 semi-volatile organic compounds, 72 VOC and SVOC target tentatively identified compounds, 24 inorganics, sixteen (16) explosives compounds, eleven (11) other compounds including perchlorate, and four (4) chemical agents (ricin, mustard and two lewisite breakdown products). In 2008, the detected concentrations to date underwent a comprehensive review. The review included a comparison to risk-based screening criteria to identify chemicals of concern (COCs) as well as an evaluation of the persistency and proximity of detections below screening criteria throughout the SV FUDS. The Partners determined through consensus that the SV FUDS COCs were arsenic and perchlorate. The analytical scope of the investigation was thus focused during future sampling events to match the identified COCs.

URS reviewed the detections to date which include nine (9) VOCs, six (6) SVOCs, 23 inorganics, one (1) explosive compound, and seven (7) other compounds including perchlorate. As part of the preliminary RI development this year, URS revisited the detections to compare them against updated derived screening values including health-based, esthetic, and vapor intrusion.

Paul Chrostowski, CPF Associates, AU Consultant, requested clarification on the use of maximum contaminant levels (MCLs) as health-based screening values instead of regional screening levels (RSLs), as it does not consistently appear to be used for every contaminant. URS clarified that both MCLs and RSLs were included in the evaluation. EPA recommended that the RLS should be used for initial screening, and this needs to be clearly stated in the documents. URS agreed to make appropriate revisions including showing specific numbers and values within evaluation tables.

Based on the updated evaluation looking at the updated derived screening values, additional chemicals may be included in the risk assessment (e.g., cobalt and manganese). URS noted that this is potentially contrary from community expectations on what the COCs are (arsenic and perchlorate). EPA Region III and P. Chrostowski noted that based on the available data, cobalt and manganese may be included as part of the risk assessment, but it is unlikely that the result of the risk assessment would identify them as risk drivers. Arsenic and perchlorate are still expected as the primary COCs and risk drivers; however, all chemicals with exceedances need to be included in the evaluation process.

USACE requested clarification regarding what point in the process compounds should be excluded from the risk assessment. URS noted that all chemicals with some type of derived screening value exceedance are evaluated and rationale is provided for whether each should or should not be considered as a contaminant of potential concern (COPC) and included in the risk assessment. USACE questioned whether a contaminant could be excluded as a COPC if it is determined to not be site-related. EPA Region III responded that a chemical could be excluded for such reasons. The Partners noted that they will review the evaluation process outlined in the preliminary RI report and provide comments.

The Partners discussed the inclusion of vapor intrusion screening and the approach to use for the SV FUDS. EPA Region III requested clarification on why a vapor intrusion comparison would be performed if the only VOCs with detections were determined to be 'blank' contamination, not present in the groundwater. URS responded that the process was conservative as vapor intrusion was not evaluated in 2008. URS also confirmed that the vapor intrusion screening may not be determined to be appropriate for further inclusion and analysis in the RI. USACE noted that some of the compounds included in the vapor intrusion screening are also present in tap water, and their presence in groundwater may be from finished drinking water. The partners agreed that the risk assessment process will ultimately determine whether vapor intrusion is a concern in the SV FUDS. The preliminary evaluation appears to indicate that vapor intrusion will not be a concern in the SVFUDS.

2. Fiscal Year (FY) 2014 Groundwater Monitoring

USACE reviewed the December 2013 and June 2014 semi-annual sampling, and the March and September 2014 quarterly sampling efforts. The September 2014 monitoring efforts included the newly installed wells MW-46S and MW-46D. Exceedances of the interim drinking water health advisory level (IDWHA) for perchlorate were observed in all four rounds of monitoring. MW-44 located near Kreeger Hall was the only well where perchlorate exceeded the IDWHA all four times. Perchlorate exceedances were observed in three out of four rounds in PZ-4D and MW-22, and once at the Sibley Sump. While no arsenic exceedances of the MCL were observed during the March 2014 monitoring effort, the MCL was exceeded in MP2-2, MP2-3, MP2-6, MP2-7, and MP2-8 in December and June 2014. Arsenic results are pending for the September 2014 quarterly sampling effort.

USACE summarized the perchlorate data gathered, focusing on the last three years of data, in the Kreeger Hall area and Sibley Hospital.

The Partners discussed the Kreeger Hall data. USACE also noted that during the May 2013 sampling event, the PZ-4S and 4D samples may have been misidentified as MW-45S and MW-45D, and visa versa. DDOE recommended that both scenarios be evaluated and that this potential issue should be clearly presented in tables and data results. USACE questioned how valuable the data is if the well location is unclear. The Partners discussed that the two sets of nested wells were less than 20 feet apart at approximately the same topography, both with two one inch nested wells within the borehole. URS also noted that for the purpose of calculating exposure point concentrations (EPCs), all data within the Kreeger Hall area would be used. P. Chrostowski and DDOE (D. Douglas) noted that perhaps conductivity and pH could be evaluated based on the other results for the wells. If the results appear to be flipped, it could confirm that the well locations were switched on the samples for those wells during the May 2013 sampling.

USACE reviewed the proposed FY 2015 groundwater monitoring scope. An annual sampling effort is proposed to focus on specific wells where MCL and IDWHA exceedances were observed in arsenic and perchlorate, respectively. For example, if a well had a perchlorate exceedance, it will continue to be sampled for perchlorate to continue to evaluate trends in groundwater concentrations. The partners requested confirmation regarding the approach to newly installed wells. USACE clarified that their proposed approach is to evaluate whether arsenic and perchlorate are detected in the wells. The new wells would be sampled twice, and if there are no significant detections, USACE would not continue to sample the well. If there are significant detections, the wells would continue to be sampled to evaluate trends in groundwater concentrations. DDOE recommended that the newly installed well be tested more than twice, as this is a significant well since it is a deep bedrock well. To ensure consistency of information in this well and other wells, DDOE requested a minimum of five sampling events, regardless of whether the first two sampling events result in non-detects for COCs.

The Partners discussed the appropriate timeframe for spacing out sampling events and the number of planned sampling events for MP-5. USACE recommended that two MP-5 samples will be collected within the next year. Based on the results, USACE together with the Partners could then evaluate the next

steps. This well is the third bedrock well which was installed down-gradient of MP-2 to further understand if there is a connection between the perchlorate detected near AU and at Sibley Hospital. MP-5 may not need to be sampled for as long a period of time. EPA Region III and DDOE agreed with the recommended approach to collect data from the two sampling events in FY 2015 and evaluate next steps for possible further sampling based on the collected data.

USACE provided a summary of slug tests results conducted at specific wells to provide an estimate of how fast groundwater may be moving at these well locations. The results may be used as part of the Groundwater RI and Feasibility Study (FS) process.

3. Preliminary Groundwater Feasibility Study Alternatives

USACE has begun a preliminary review of possible alternatives which could be presented in the Groundwater FS for Partner discussion. Possible alternatives reviewed could include no action, long term monitoring (LTM), pump and treat or in situ bioremediation.

EPA Region III noted that LTM would not be an action in itself; rather it would need to have an objective such as monitoring the effectiveness of source removal.

P. Chrostowski and EPA Region III recommended that land use controls (LUCs) should be a part of the list.

EPA Region III also recommended other remediation techniques be alternatives, or bioremediation be generalized to remediation which could cover a few types of actions.

The partners discussed whether or not monitored natural attenuation (MNA) should be an alternative. EPA Region III suggested it could be a part of the list of alternatives for evaluation in the FS. USACE pointed out that they would go through a more detailed screening of alternatives that may identify additional alternatives to be considered in the FS.

4. Groundwater Risk Assessment

URS presented the proposed approach for defining the exposure point concentrations (EPCs). For a large site like SV FUDS, more than one set of EPCs may need to be established to accurately reflect the contaminant levels distributed throughout the site. Because the SV FUDS is so large, site-wide EPCs calculated may underestimate EPC corresponding to localized areas of elevated groundwater contamination.

For groundwater, two sets of EPCs are recommended and risks/hazards will be quantified for each set.

- EPC Set 1: This is based on the results for wells proximate to Sibley Hospital to include the Sibley Sump, MW-21 and MW-22 where the highest concentrations of perchlorate have been identified in this area. This is a conservative approach, which does not include any wells in a wider geographic area around Sibley, and ensures the calculated EPCs are not diluted by the data from wells where exceedances were not observed.
- EPC Set 2: This is based on the results of the wells proximate to AU and Glenbrook Road/Rockwood Parkway to include MP-2, MW-24, MW-25, MW-44, MW-45, and PZ-4 where contaminant source removals have been conducted.

A third EPC set was considered but may not be used. It was initially considered internally by USACE but recommended by URS for removal as an EPC Set:

- EPC Set 3: This set would consider all monitoring wells within the SV FUDS. For each location the data corresponding to the most recent monitoring round would be used to calculate the EPC. However, because the SV FUDS is so large, site-wide EPCs calculated by this method would dilute the high concentrations of COCs identified in the Sibley Hospital area and the

AU/Glenbrook Road and Rockwood Parkway area and possibly lead to a conclusion that no risks are present in the groundwater. Therefore, calculating EPC Set 3 is not recommended.

Discussion – Groundwater EPC Set 3

P. Chrostowski recommended that EPC Set 3 could be calculated, minus the wells covered by EPC Set 1 and EPC Set 2. This data could address the hypothesis of what would be the risk for installing a groundwater well in a non-source area, since DDOE has no restrictions on installing groundwater wells in the District.

URS added that by using this EPC 3 calculation, the risk assessment would include all the wells in the SV FUDS which may be something the community would want to see. DDOE affirmed the community would want to know their risk. It was agreed that EPC Set 3 would be calculated, so long as it excluded the monitoring locations assigned to EPC Sets 1 and 2.

USACE noted that the areas outside of AU and Sibley Hospital, have no detections above drinking water criteria.

DDOE expressed concern that since groundwater migrates over time, there is no guarantee that the areas outside EPC 1 and EPC 2 would continue to have no detections above drinking water criteria.

URS emphasized the importance of using the most recent set of data for use in calculating the EPC to best estimate what we might expect to see in the future. DDOE noted that due to the data fluctuations present in the wells, calculating the EPC should include more than the most recent available data.

P. Chrostowski noted that EPA Region III groundwater risk assessment requires trend analysis. A trend analysis may help to address the concerns raised by DDOE. He further clarified the trend analysis would be done only for chemicals taken beyond the risk screening.

5. Surface Water EPC Sets 1& 2

URS reviewed the approach to calculating EPCs with respect to surface water. Surface water is not a source in itself; rather surface water is being impacted through groundwater discharge into the creeks. Therefore, in reviewing surface water, the EPC for the COCs identified in the groundwater through the RI should be transferred and calculated for surface water. One surface water EPC Set is recommended which includes Lot 18 Drain, SW-1, SW-11, and SW-21. Surface water EPC Set 2 will address all other relevant surface water locations, consistent with the concept of having groundwater EPC Set 3.

Discussion – Groundwater Criteria

DDOE explained that if surface water criteria were more stringent than groundwater criteria, the RI recommendations might miss something. DDOE recommended not use an evaluation based on the groundwater value, but to look at it as a surface water value and not screen it out because of the groundwater screening values.

USACE asked if this referred to ecological-based surface water criteria.

DDOE answered that the surface water values are based on the current and the designated use, just like how groundwater is valued for future use. If the water body has the potential to have a particular type of receptor that includes ecological, then ecological criteria could be used. Typically DDOE uses the most stringent criteria applicable for designated uses.

USACE pointed out that the surface water evaluation for ecological reasons is already covered in the Site-Wide RI report. What has not been formally evaluated yet is whether or not surface water is a human health risk. USACE requested clarification regarding whether the groundwater RI would be the appropriate place to perform the human health risk assessment for surface water.

The Partners discussed how the ecological risk assessment was performed and whether it used the most stringent surface water criteria. The ecological risk assessment was completed in 2008. It was a full

screening level ecological risk assessment which had been reviewed, approved, and analyzed through the Partner's review process. The report concluded there were no ecological risks. DDOE said that their Water Quality Division had not reviewed the document and requested an opportunity to review. USACE noted that the report finalized in 2008 is publically available and can be reviewed any time by DDOE.

6. Risk Assessment Exposure Assessment Scenarios

URS reviewed the current land use scenarios for two media of concern: surface water and groundwater. For surface water, receptor activities are likely recreation activities. For groundwater the receptor activities are defined as gardening. Also, if any VOCs pass through the screening process, an additional receptor activity may be indoor activities exposing receptors due to possible vapor intrusion. Potable use of groundwater is not a current use since the community is connected to a public drinking water supply, but the future land use scenario assumes that groundwater may be used as a drinking water source in the future.

The assumed exposure routes for surface water recreational activities include ingestion and dermal absorption. The current surface water receptor is expected as an adolescent resident. For the groundwater receptor activity of gardening, incidental ingestion and dermal absorption are identified exposure routes. Possible receptors include adolescent resident, adult resident, outdoor worker, and construction worker. For the possible residential indoor air activity, inhalation of intruding vapors is identified as a possible exposure route for child residents, adolescent residents, adult residents and indoor workers.

The future land use scenario is the same as the current land use scenario, with the addition of potable water usage for groundwater. Exposure routes include ingestion, dermal absorption, and inhalation (showering/bathing) for child residents, pre-teen residents, adult residents and indoor workers.

Discussion – Potential Receptors

DDOE questioned URS's and USACE's assumption that children from 0-6 years would be excluded from gardening and wading activities in Spring Valley. URS agreed to add child residents as possible receptors for surface water recreation and gardening, and also agreed with USACE to add AU students as possible receptors to these activities.

P. Chrostowski noted that while sprinkler water on AU is municipal, groundwater could be used as a source at some point in the future. The suggestion was made that groundwater would be classified as a future use for sprinklers.

Discussion – Potable Water Use

DDOE could not confirm for P. deFur that all historic wells in Spring Valley have been shut off, and agreed it should be considered in the assessment since their office was, years ago, made aware of a possible working well in the area.

In response to DDOE's inquiry about whether Spring Valley residents drink groundwater, URS explained the need to avoid making current land use assumptions that fall under extremely unrealistic categories and then calculating risks. In doing so, the real current risks could be misinterpreted. URS instead proposes to include the risk of drinking the groundwater only for a hypothetical future land use scenario. This is separate and distinct from the current land use scenario risks which are going to be of great interest to the residents in the area.

Discussion – Groundwater Ingestion

In response to ANC Commissioner Nan Wells question about ingesting vegetables sprayed with groundwater, USACE noted that dermal and incidental ingestion during gardening is covered on the current land scenario; however, the ingestion of gardened vegetables (as opposed to the ingestion of the water) during gardening is not evaluated in the groundwater RI.

The Partners discussed how this would be addressed. The concern of ingesting vegetables watered by groundwater appears to be more applicable for the soils risk assessment. Soil uptake of contaminants is contained in the Site-Wide RI; however, this hypothetical scenario can be qualitatively considered in the Uncertainty Section of the groundwater risk assessment. The only study which qualitatively evaluated a direct link between perchlorate contaminated groundwater and vegetable impacts, excluding the typical soil uptake of nutrients for plants, was for a hydroponic vegetable production scenario. It was performed by the Environmental Working Group. There is no approved quantitative method for determining uptake of contaminants from watering of vegetables.

Discussion – Construction Worker Groundwater Exposure

The partners discussed the possible scenarios for worker exposure to groundwater. DDOE asked why 'open water usage' was not included in the current land use scenario. For instance, if a worker took a drink from a hose. DDOE also requested clarification regarding the scenario of a construction worker actively working below the water table to put in a dewatering system.

USACE replied that the assumption is that a construction worker is going to use best work practices, using dewatering in trenches that have groundwater infiltration for safety reasons. Due to their safe work practices, we do not assume construction workers are wading knee deep in groundwater. Any splashing is only dealing with acute, not chronic, exposures. The risk for the COCs (perchlorate and arsenic) is chronic exposure risk only: the chemicals do not have any associated acute exposure risks.

USACE added that none of their monitoring wells showed groundwater present at depths closer than eleven feet below ground surface.

URS noted that in the current land use scenario, the construction worker is associated with dermal absorption.

Nan Wells (ANC Commissioner) noted that AU is undergoing a significant construction effort and the ANC has expressed concern regarding this particular issue.

P. Chrostowski emphasized that the workers work under significant safety protocols regulated by the Occupational Health and Safety Administration (OSHA) and noted that any potential exposure to groundwater is acute in nature.

DDOE concurred that workers fall under OSHA requirements; however, any potential risk should be identified and evaluated for them to take the appropriate safety precautions.

USACE acknowledged this but noted that there are other inherent safety and health risks that workers need to take precautions against including slips, trips and falls. USACE noted that because the COCs being evaluated do not have associated acute risks, an acute groundwater exposure assessment for construction works is not feasible to perform. P. Chrostowski agreed.

The Partners discussed that while the exposure scenario includes a construction worker which would not encounter chronic exposure to the COCs, it should be left in the scenario to be addressed and transparently ruled out during the assessment.

7. Projected Schedule of Upcoming Groundwater Study Efforts

USACE provides an overview of upcoming efforts. The FLUTE liner has been installed in MP-5 and is scheduled to be sampled in December.

USACE and the groundwater contractor URS have begun writing the site-wide groundwater RI report. The Partners discussed the RI report preparation details. Receipt of the risk assessment draft work plan from URS for Partner review is anticipated in January. The draft final Groundwater RI report is expected to be submitted to the Partners in spring 2015.

Discussion – Final RI Report Schedule

EPA asked if the Groundwater RI report will be provided separately from the Site-Wide RI, noting the requirement for double the CERCLA public involvement requirements, for example public meetings and comment periods.

The Partners discussed that, for now, the two RI's and FS's will be kept separate, but there could be flexibility for a combined Proposed Plan or Decision Document. The path forward will depend on timing and progress through the review process for each document.

B. 4825 Glenbrook Road Remedial Action

Parsons presented an update on the 4825 Glenbrook Road Remedial Action effort.

1. High Probability Excavation Preparations

Parsons completed the excavation of the trench for the I-Beam placement in low probability Area A located behind the former retaining wall in the back yard of the property. This effort was performed as part of preparations for the move to the second high probability excavation location. The I-Beam to be placed in the excavated trench in Area A will serve as the foundation for the engineering control structure (ECS). The excavation included removing and stockpiling soil which was surrounded with silt fence and completely covered with plastic and geo-textile for later loading into roll-offs under the 2nd tent location. A total of 10.25 lbs of scrap glass was encountered during the excavation. This was consistent with other finds in the area. No intact containers were recovered. All cleared headspace analysis.

In response to P. Chrostowski's question regarding whether chemical analysis was performed in the vicinity of the scrap glass, Parsons responded that only headspace analysis was conducted. Confirmation sampling in the area is planned. A full excavation of Area A will be completed following all high probability excavations.

Parsons mobilized the 550-ton crane on Saturday 20 September. Parsons disassembled the truck door section, separated and moved two sections of the ECS and reassembled the truck door section with the crane. The crane was demobilized from the site on Saturday 18 October.

In response to EPA's question, Parsons noted that the main section of the tent structure weighed 17,000 lbs. A 550-ton crane was necessary to perform the task due to the reach requirements. The crane was staged in the AU parking lot: a crane arm needed to extend to the front yard (Glenbrook Road side) of the property.

Preparations have continued including tightening the tent fabric around the tent structure and grading the areas where the remaining site infrastructure will be placed in the front yard. Clean fill has been placed in the front yard area along with geotextile. This is being topped with larger aggregate. The personnel decontamination station (PDS), redress tent, and access vestibules will be assembled in the front yard as well as the MINICAMS sheds, and the medical monitoring tent.

Once set-up is complete, the site team will undergo pre-operations training. The same team involved in the first high probability tent excavation will be conducting the high probability excavation in the 2nd tent location. Training is expected to go smoothly as personnel are already very familiar with site protocols. A smoke test will be conducted to ensure the negative pressure is achieved in the reassembled ECS. All site preparation activities are expected to be complete prior to the Thanksgiving holiday break.

Discussion – Pre-Operations Training

In response to EPA's question regarding who oversees the pre-operations training, USACE noted that Huntsville ordnance and explosives (OE) safety specialist will be the first evaluator of the Parsons team readiness to return to high probability operations.

Parsons noted that the training includes running through a variety of site scenarios to ensure the team approach to address the scenarios is in accordance with all applicable plans and measures, and follow all established site procedures.

Discussion – Shelter in Place

In response to P. Chrostowski's question regarding the timing of the restart of the Shelter in Place (SIP) system, USACE noted that the high probability start date and SIP start date is contingent upon successful pre-operations activities. USACE will issue a notice to the community when the SIP system will be reinitiated: the SIP start date will mirror the high probability start date.

USACE further clarified that notices to the SIP community will be issued in early November to establish SIP system test dates. The SIP system will be tested as other high probability preparations are completed. USACE noted that an additional notice would likely be issued in mid-November to confirm the start date for high probability operations and the SIP program.

Discussion – Property Layout

P. Chrostowski requested information about the 2nd tent location and whether there would be any significant difference from the perspective of the AU President's residence.

USACE responded that there are no significant operational differences. The locations of the tent and support equipment are different. All the support equipment, originally located in the backyard of the property during the first tent excavation, will be located in the front yard area in the footprint of the first tent location. The ECS tent will be located further back on the property and is at a much higher elevation due to the significant slope of the property.

Discussion – CAFS System Capability

USACE provided confirmation that the ECS tent, which will be elevated off the ground on one side due to the significant change in grade in the area, will be covered with the same fabric as the rest of the tent. USACE noted that the chemical agent filtration system (CAFS) is capable of creating negative pressure in the tent, even with the extra volume of air in the tent.

Parsons also noted that the CAFS was successful at continuing to create negative pressure even as the volume of air grew as the depth of the excavations increased and soil was removed from under the tent. Parsons also confirmed the CAFS will be tested during pre-operations activities.

2. Low Probability and High Probability Excavation Sampling Results

Parsons received data back from the low probability excavation performed in the right-of-way/sidewalk area along Glenbrook Road. Confirmation samples were taken from the base of the excavation grids and at the edge of the property directly adjacent to the road bed. Aluminum, cobalt and vanadium exceed comparison values in some of the confirmation sample locations in the low probability area.

Confirmation samples taken from the floor of the high probability excavation in the first tent location also had some exceedances of comparison values for aluminum, arsenic and cobalt.

Parsons noted, in response to a question from P. Chrostowski, that the areas of exceedances will be addressed following completion of all high probability work. Dependent on concurrence from the project delivery team, Parsons will plan, if necessary, to excavate the areas of exceedances under low probability or no probability protocols. This approach would ensure that all confirmation sampling data collected from the high probability and low probability excavation areas could be reviewed and addressed comprehensively. If additional exceedances in confirmation samples are identified in other excavation areas, the plan would address the exceedances as a whole. Parsons would seek Partner concurrence the regarding planned next steps.

Discussion – Comparison Value Exceedances

P. Chrostowski questioned whether the activity to address the exceedances is included in the current project schedule for the property.

Parsons noted that the work is included within the current timeline as long as significantly deep excavations are not required.

In response to P. Chrostowski's request for clarification regarding the location of the confirmation samples, Parsons noted that they are in competent saprolite which, if necessary, could be excavated further in most locations before hitting bedrock.

USACE clarified that the chemicals that had comparison value exceedances were compounds that did not have clean up values stipulated in the decision document for the property. Therefore, the exceedances for the compounds would not automatically translate to over-excavation. The arsenic exceedance in one location would require over-excavation; however, a risk evaluation would need to be conducted for the other chemicals to determine if additional excavation is warranted.

C. Munitions Response Site Prioritization Protocols (MRSPPs)

USACE presented the Munitions Response Site Prioritization Protocols (MRSPPs) developed for the three Munitions Response Sites (MRS) associated with the SV FUDS. USACE noted during the meeting that the MRSP is required for all sites, in accordance with the rulemaking. It is a ranking and funding prioritization tool, but for SV FUDS, the MRSP will not affect funding because there are so many other factors going on. However, it is still a Department of Defense (DOD) requirement. The MRSP for the MRSs associated with the SV FUDS is being provided to the Partners as part of the stakeholder involvement requirement for the process.

Protocol History: The protocol is a stringent requirement that came out of the National Defense Authorization Act of 2002 asking the Department of Defense (DOD) to prioritize all of its munitions cleanup sites. It was developed in consultation with states and tribes over a two year period to handle the funding for the thousands of properties in the inventory, covering all military service branches and FUDS. The Army led in establishing the protocol which was made available for public comment and finalized in 2005.

Objective: The objective is to prioritize future response actions, including investigations. This is done by assigning a single number, from 1 through 8, to each MRS, with 1 being the highest priority and 8 being lowest.

Structure: The structure is based on specific conditions including environmental and safety hazards evaluated in three (3) modules. A score is developed for each of the three modules. There are a total of 29 standardized score sheets that are used to develop the score. The highest rating from the three module evaluations (conducted through completing the score sheets) is selected as the score for the MRS.

- Explosive Hazard Evaluation (EHE): This evaluation is for unexploded ordnance (UXO)/discarded military munitions (DMM)/munitions constituents (MC) in high enough concentrations to be explosive.
- Chemical Warfare Evaluation (CHE): This evaluation is for chemical warfare materiel (CWM).
- Health Hazard Evaluation (HHE): This evaluation is focused on the potential for MC contamination.

MRS Delineation: The MRS is delineated based on the specific geographical footprint where known or suspected munitions and explosives of concern (MEC) or MC are to be located. Three MRSs were

delineated in association with the SV FUDS: MRS 01 (Burial Pits/Field Test Areas), MRS 08 (Battery Vermont), and MRS 09 (4825 Glenbrook Road). (*Note: The designation of MRS is the same as "Project" in MRSPP terminology*). Any time a project is created in the FUDS data base, it gets reported upward and ends up in the annual report to Congress, and an MRSPP is required for it.

MRS 01 Burial Pits/Field Test Areas: USACE worked to delineate a boundary around all previously identified areas within the SV FUDS with known or suspected MEC/CWM/MC hazards. This included the mortar range fan, burial pits and static test fire areas. It may be broken down further as part of the RI/FS process into smaller areas after progress is made and potential hazards are addressed. The idea is to get the 120 acres of MRS 01 down to zero acres with known or suspected MEC/CWM/MC hazards. DOD measures hazard reduction progress by the number of acres.

Explosive Hazard Evaluation (EHE)

USACE reviewed the 29 score sheet evaluations for MRS 01.

- Table 1. Munitions Type: The types associated with MRS 01 include pyrotechnic, used or damaged, which is UXO containing pyrotechnic filler, and DMM, which is pyrotechnic not used or damaged. Primarily, the classification was performed by referencing the Operation Safe Removal RI report (1995) which included a summary of everything that was found.
- Table 2. Source of Hazard: As MRS 01 includes a former range, and therefore, received the highest score for the sheet.
- Table 3. Location of Hazard: This evaluates whether the MEC was found on the surface or the subsurface, or whether it was confirmed or just suspected. MRS 01 contains confirmed subsurface hazards.
- Table 4. Ease of Access: This looks at site accessibility factors, and whether there are barriers or not, and whether it is complete. It is a matter whether the receptors are coming to the item rather than the item moving. Security fencing around the Dalecarlia Woods, is included as a partial barrier.
- Table 5. Status of Property: This is whether the property is within DOD control or not since the MRSPP is used for sites located on active military installations as well as FUDS. The SV FUDS is not within DOD control.
- Table 6. Population Density: This evaluation is defined by the population density surrounding within a two mile radius. The SV FUDS is located in and surrounded by a densely populated suburban area.
- Table 7. Population Near Hazard: This is how many inhabited structures exist, looking at likely encounters of munitions.
- Table 8. Types of Activities/Structures: MRS 01 includes residential, educational, and commercial, as well as park and recreational areas.
- Table 9. Ecological and/or Cultural Resources: The ecological receptors focus on critical habitat for endangered species and designated costal flood plans. An area would need to be recognized as having State or Federal ecological or cultural significance to be considered a resource. MRS 01 does not contain ecological or cultural resources.
- Table 10. Determining the EHE Module Rating: The final sheet of each module calculates the score for the module. In the case of the EHE module, the total is 78 with a letter designation of "C". Based on the calculated total for the EHE module, the module score is given a priority score of "4" on a scale of 1 to 8.

Chemical Warfare Materiel Hazard Evaluation (CHE)

Table 11. CWM Configuration: The CWM hazard has to do with how the CWM is configured, whether it is comingled, whether it is damaged, and explosively configured or not explosively configured.

In response to EPA's question as to whether non-munitions containers, such as the glass bottles, are included in the chart, USACE replied that they are like the Chemical Agent Identification Sets (CAIS) kits, which are a lower risk and non-explosively configured, but are addressed.

Table 12. Source of CWM: This is whether the CWM was live fired, damaged or undamaged, surface or subsurface, and type of facility.

Discussion – Scoring Approach

The Partners discussed the rationales for not having smaller elements, like the range fan, scored differently from other areas within MRS 01. For the purpose of the MRSPP, the approach is to view MRS 01 encompassing multiple smaller areas of interest (AOIs) and points of interest (POIs). After the RI/FS, the MRSs can be re-delineated and MRSPP scores recalculated.

In response to N. Wells (ANC Commissioner) question regarding why the range fan in MRS 01 was not considered a firing range, USACE clarified that it was a function test range where the range was controlled and items were collected for testing and evaluation purposes. Also, CWM was not ballistically fired; the function test range was for conventional items.

EPA asked if 52nd Court was excluded from the evaluation. USACE noted that it is excluded as all items were removed during an emergency removal action.

N. Wells (ANC Commissioner) requested clarification on whether there was still a cache of munitions at 52nd Court that had not been excavated.

EPA responded that no suspected caches of munitions are at 52nd Court requiring excavation.

Tables 13 through 19 including Location of CWM, Ease of Access, Status of Property, Population Density, Population Near Hazard, Types of Activities/Structures, Ecological and/or Cultural Resources received the same evaluations as in the preceding EHE module.

Table 20. Determining the CHE Module Rating: The score and letter rating is also the same total evaluation as EHE (78); however due to the nature of CWM, the "C" grade correlates to a CHE module priority score of "3" on a scale of 1 to 8.

Health Hazard Evaluation (HHE)

USACE provided information for the HHE module. The HHE evaluated four pathways: groundwater, surface water, sediment, and surface soil. Each pathway has three components: contaminant hazard, migratory pathway, and receptors.

Table 21. Groundwater Data Element Table: Respective EPA comparison values are automatically generated in the database for each identified contaminant. Professional judgment is used to rate the migratory pathway and the receptors. USACE gave a rating of "Medium" for all three components (contaminant hazard, migratory pathway, and receptors).

Table 22 and 23. Surface Water for Human Endpoint and Sediment for Human Endpoint: While these sheets were initially left blank due to a misunderstanding that surface water/sediment was being monitored for ecological receptors (as opposed to human receptors). This can be revised to reflect that surface water is being evaluated from the human health standpoint. Even with this change, it will not lead to a significantly different outcome for the module.

Table 24 and 25. Surface Water and Sediment for Ecological Endpoints: While these sheets were initially scored, a recent review of the guidance revealed that the same criteria for evaluating ecological/cultural resources in the EHE and CHE modules also applies to the ecological

receptors being evaluated in these sheets. No endangered or threatened species, marine sanctuary, national park, designated federal wilderness area, coastal zone management, and national estuary program, critical habitat for any endangered species is located within MRS-01, and therefore, this sheet can be revised to show no ecological receptors.

Table 26. Surface Soil Data: A significant amount of data has been collected in MRS – 01 to characterize surface soil contamination. MRS-01 received a rating of “High” for the contaminant hazard and a rating of “Medium” for the migratory pathway and receptor components.

Table 27. Supplemental Contaminant Hazard: This sheet contains the supplemental contaminants data that did not fit on the previous sections of the HHE module.

Table 28. Determining the HHE Module Rating: The summary for the human health evaluation Shows a letter designation of “C”, which correlates to a HHE module priority score of “4” on a scale of 1 to 8.

Table 29. Overall MRS-01 Priority: The overall MRS-01 rating is a “3” based on the most conservative module rating of “3” for CHE. The EHE and HHE modules received module ratings of “4”.

Discussion - Health Hazard Evaluation (HHE)

USACE noted during introductions to the HHE, that the HHE could be interpreted in different ways, depending on how the data is used in the module.

ERT noted that while this may be true, it is important to emphasize that the end result of the MRSPP process shows that CWM hazards drive the MRSPP score for MRS 01. Minor revisions or interpretations in looking at the HHE module would not change this end result (i.e., the CHE module driving the overall MRSPP score).

USACE confirmed this and stated that the overall MRSPP score for MRS-01 is a “3”, driven by the CHE module. It is not a “1” or “2” primarily because no MEC of CWM was recovered or identified during investigations on the surface, which would present the highest hazard.

MRS-08 (Battery Vermont): This MRS was part of the Circle of Forts built during the Civil War. This battery was specifically built to protect Chain Bridge with a range extending over Palisades and to the Potomac River. USACE noted that archive search reports developed for all the forts built around Washington, D.C. during the Civil War showed no documented evidence that anything was fired from the battery during the Civil War for defense purposes.

The score for MRS-08 was developed to meet DOD requirements and complete the process to formally close out the MRS, with the caveat that if MEC is found in association with MRS-08, the MRS would be re-opened. USACE noted that MRS-08 is only associated with the SV FUDS because the firing point for the battery is located geographically within the SV FUDS boundary. It was never logged into the DOD database as a separate property to separately be evaluated and closed out. Therefore, as the SV FUDS moved through the RI process, MRS-08 is included.

Discussion – Cannonball Findings

In response to EPA’s observation that cannon balls have been found, USACE clarified that the cannonballs found during Dalecarlia Woods investigations were not located within the battery range for MRS-08.

The Partners discussed whether cannonballs could be in the Potomac River. No investigations, such as underwater geophysics have been performed to determine whether cannonballs are present. While it may be challenging to believe that no practice shots were fired and that personnel staffing the battery would not have practiced firing, no documentation exists to support the speculation. USACE also noted that perhaps the reason why cannonballs were found in Dalecarlia Woods was because that area was a

government controlled area. Soldiers from Battery Vermont may have gone to this nearby area to freely practice firing instead of practice firing over Palisades which was all private property.

MRS-09 (4825 Glenbrook Road)

USACE briefly reviewed the results of the MRSPP for MRS-09, 4825 Glenbrook Road. The overall score is the same as for MRS-01, a “3”. The score was driven by the CHE module as well.

Discussion – MRSPP Review and Comments

In response to EPA requesting what constitutes a “1” rating, USACE said it would likely need CWM that is explosively configured, or damaged, located on the surface, and accessible to a dense population.

USACE noted that all these scores, except for Battery Vermont, are still under review, and stakeholder comments are invited.

ERT also noted that the data will be on the Site Wide RI for review as well.

In response to N. Wells (ANC Commissioner) question regarding whether MRSPPs are published for all of DOD projects, USACE stated that MRSPPs are published once they are finalized. They have to go through a two-tiered review that includes the USACE Huntsville Center of Expertise, and then a three-person Army quality assurance panel.

In response to EPA’s inquiry regarding the decision to evaluate approximately 120 acres in the MRSPP out of the total SV FUDS acreage, USACE replied based on the investigation findings at the SV FUDS a significant portion of the acreage was ruled as not warranting an MRSPP evaluation as no MEC or CWM were found in those areas. The SV FUDS inventory project report was revised while looking at the whole history, with credit given for marking off acreage. While additional areas can always be added, any subtracted acreage must be accounted for to the DOD.

USACE confirmed to ANC Commissioner Nan Wells that the new building site at the AU East Campus was not designated as part of the FUDS.

D. Fordham Road Update

USACE presented an update on the Fordham Road properties. USACE has been working with two property owners on the 3700 block of Fordham Road regarding arsenic soil sampling performed in summer 2014. One property owner requested a Comfort Letter which is under review by the Partners. The other property owner has requested removal of a small area of arsenic contaminated soil. USACE is planning to complete the removal action at this property prior to the end of calendar year 2014. USACE will be self-performing the work and plans to hand dig the area (i.e., no heavy excavation equipment will be used). The Work Plan and SSHP (Site-specific Safety and Health Plan) have been completed (October 2014). The designation of Site Safety and Health Officer and signatures on the SSHP is still pending. A copy of the work plan will be provided to the Partners for review when it is completed.

E. 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.

EPA Region III noted that they have received a Freedom of Information Act (FOIA) request regarding documentation provided to USACE’s contractor leading the potentially responsible party (PRP) investigation.

USACE discussed reissued sampling results letters. USACE routinely receives requests from property owners who have misplaced or lost their original sampling results letters. USACE noted that the majority of the original results letters were issued in 2002; USACE has the text of the original letters but does not have original signed copies of the letters. As a result, USACE cannot just provide a copy of the original letter; rather provides a reissuance of the letter. USACE provides a new signature and date with reference to the date of the original issuance, if known. For some properties, specialty sampling was performed and the results were compared to clean up values at the time of the original issuance; however, many of those values have since changed in the guidance. When this situation occurs, USACE has updated the comparison values and notated the source of the new values. In so doing, USACE is essentially re-evaluating the sampling results for the property. In some instances in the letters, chemical detection limits were higher in 2002 than the updated current comparison value leading to some level of uncertainty associated with the presence or absence of the chemical at a given property.

ERT noted that in 2002, if the chemical was present but below the detection limit, the concentration may have been given a “J” flag in the analysis and assigned an estimated value below the detection limit. This would potentially give some assurance as to the presence or absence of a chemical. Re-running samples would likely not be useful in clarifying this.

USACE solicited feedback from the Partners regarding the current approach of updating the comparison values during letter reissuances and questioned whether it would be more appropriate to leave the comparison values as they were when the letter was originally issued.

In response to N. Wells’s inquiry, USACE noted that the sampling performed is not in question and there are no plans to resample properties.

F. 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.

USACE noted that no documents are currently with the Partners for review. USACE is awaiting comments from internal Army on the Draft-Final Site-Wide Remedial Investigation Report before it can be sent to the Partners. The Draft-Final is anticipated to be made available to the Partners before the next Partnering Meeting.

G. Partner’s Parking Lot

The goal of this segment of the meeting was to review and update the Parking Lot list.

No updates to the Parking Lot were provided.

H. Agenda Building

The next meeting is scheduled for 9 December 2014.

I. Adjourn

The meeting was adjourned at 2:27 p.m.