

Inter-Agency Partners Meeting

TIME	TOPIC	DISCUSSION LEADER	PREPARATION	OBJECTIVE
Thursday, April 26, 2012		[Upcoming Meetings: May 31st, June 28th (?)]		
9:15 – 9:35	Check-in / Review Ground Rules	J. Sweeney		Introductions of new attendees/ Personal check-in / Review Ground Rules/Lunch planning
9:35-9:40	NTCRA/Arsenic Removal	L. Reeser		Review status of follow-on efforts and arsenic soil boring MFR
9:40-10:10	Groundwater	T. Beckwith		Discuss completed well installation on AU, 4 th quarterly sampling results, MP-2 and MP-3 sampling results, and isotopic analysis
10:10-10:25	Anomaly Investigations	T. Beckwith/ J. Choynowski		Discuss completed anomaly investigations at Kreeger Hall
10:25 – 10:35	BREAK		\$ to Betsey	
10:35-11:05	Anomaly Investigations (cont.)	L. Reeser/ C. Webster		Discuss Dalecarlia Woods Report and Army's Recommendation Memo
11:05-11:45	4825 Glenbrook Road	B. Barber/Parsons		Discuss Draft Remedial Design and Remedial Action Work Plan
11:45-12:00	Site-wide Evaluation Document	L. Reeser/T. Bachovchin		Review document progress
[12:00]	Working Lunch			
12:00- 12:20	Draft Timeline for Site-Wide CERCLA Documents/Process	T. Beckwith		Preliminary discussion
12:20-12:30	Document Tracking Matrix for MMRP/HTW	L. Reeser/ Parsons	Partners Review	Review pending documents
12:30-12:45	Open Issues and New Data	J. Sweeney		
12:45-12:55	Partners' Parking Lot	J. Sweeney	Partners Review	
12:55-1:05	Agenda Building	J. Sweeney		Discuss having upcoming meetings every 2 months
1:05	Adjourn	J. Sweeney		

**Spring Valley Partnering Meeting
April 26, 2012
Spring Valley Trailer Conference Room**

Name	Organization/Address	
Sherri Anderson-Hudgins	CEHNC	X
Thomas Bachovchin	ERT	X
Brenda Barber	CENAB	X
Todd Beckwith	CENAB	X
Patti Berry	Parsons	X
Frank Bochnowicz	CENAB	
Bethany Bridgham	American University	X
Sean Buckley	Parsons	X
Jessica Bruland	ERT	X
Jack Choynowski	Shaw	X
Paul Chrostowski	CPF Associates, AU Consultant	
Tom Colozza	CENAB	X
Kathy Davies	US EPA Region 3	
Dr. Peter deFur	Environmental Stewardship Concepts/RAB TAPP Consultant	X
Diane Douglas	DDOE	
Bill Eaton	URS	
Brandon Fleming	USGS	
Alma Gates	RAB Member - Horace Mann Rep.	X
Steve Hirsh	US EPA Region 3	X
Betsey Hutton	ERT- Community Outreach Team	X
Leigh Isaac	Environmental Stewardship Concepts	
David King	CENAB	
Carrie Johnston	RCAI - Community Outreach Team	X

Neil Jones	ERT	X
Dan Noble	CENAB	X
Jon Owens	CENAB	
Randall Patrick	Parsons	X
Lan Reeser	CENAB	X
Mike Rehmert	CENAB	
Paul Rich	Parsons	X
Corinne Shia	Parsons	
Allen Shapiro	USGS	
Tom Smith	ANC3D Commissioner	
Jim Sweeney	DDOE	X
Andrea Takash	CENAB	X
Fan Wang-Cahill	Parsons	X
Ethan Weikel	CENAB	
Nan Wells	ANC3D Commissioner	
Cheryl Webster	CENAB	
Maya Werner	ERT - Community Outreach Team	
Bruce Whisenant	CEHNC	
Doug Yeskis	USGS	

Summary of April 26 Spring Valley Partnering Meeting

Consensus Decisions

- No consensus decisions were made.

April Action Items

- AU will verify that the arsenic exceedance at depth within Lot 44 at the AU campus will be addressed via NFA.
- USACE will provide a general summary of the groundwater agenda and issues for discussion to the Partners prior to the May 2012 Groundwater Partnering meeting, as requested by Dr. Peter deFur.
- USACE will prepare the Dalecarlia Woods Data Gap ARB Memo for signatures.

- ERT will obtain photographs of the inaccessible slopes that could not be surveyed in the Dalecarlia Woods geophysical investigation area in the vicinity of, but outside of AOI 2 (Rick Woods Burial Pit), as requested by P. deFur and USACE.
- DDOE will check with the appropriate DC department to determine whether the city can remove piles of residential yard waste encroaching upon acreage of the Dalecarlia Woods geophysical investigation area.
- Partner concurrence and signatures will be obtained for four AOI Consensus Memos associated with the site-wide evaluation document.
- USACE will add a post-DD line item ('to be determined') to the draft CERCLA document schedule to indicate that follow-on remediation and/or monitoring efforts are a possibility.
- DDOE will check with their legal counsel one more time regarding the inaccessible Fordham Road property, representing their final attempt to assist with obtaining property access.

Thursday, April 26, 2012

Check-in

The Partners conducted their normal check-in procedure.

A. Arsenic Sampling and Soil Removal

USACE briefly reviewed the status of follow-on arsenic soil removal efforts and the arsenic soil boring memorandum for record (MFR).

Review of Arsenic Exceedances Associated with Soil Borings: The sampling results for all properties that were sampled as part of the Spring Valley arsenic sampling and removal program were recently reviewed to ensure that arsenic exceedances at depth (associated with soil borings) were not overlooked, similar to the recently completed sampling and soil removal effort at a property on the 3900 block of 52nd Street property.

Arsenic levels exceeded the 20 ppm cleanup level for a total of 18 arsenic soil borings collected to date.

Soil removal was completed for 14 of these exceedances during either time-critical removal actions (TCRA) or non-TCRA efforts.

The remaining 4 exceedances remain in place. (Surface screening samples were all below the 12.6 ppm arsenic screening level at these 4 properties.)

- Partner concurrence for No Further Action (NFA) was previously obtained at a 3300 block of Nebraska Avenue property (based on the depth of the exceedance) and at the AU campus (to minimize damage to landscaping without presenting a hazard to human health, as requested by the property owner). Details were provided at the January 2012 Partnering meeting.
- At the AU campus, an arsenic exceedance of 20.6 ppm was detected at 3 feet below ground surface (bgs) within Lot 44, near the Mary Graydon Center. This exceedance has not been addressed to date. AU (the property owner) will verify that they selected NFA for this soil boring to minimize damage to dense vegetation and landscaping without presenting a hazard to human health.
- At a 5100 block of Tilden Street property, an arsenic exceedance of 22.8 ppm was detected at 5 feet bgs in the front yard. This exceedance has not been addressed to date. Based on review of recent aerial imagery, this soil boring may lie within the root zone of a large ornamental tree and

qualify for NFA. The Community Outreach Team is currently coordinating with the property owner to discuss the options for addressing the boring, including NFA.

An MFR documenting these findings was prepared and sent to the Partners in late April 2012. USACE Baltimore will revise the MFR to reflect Partner feedback. (This MFR also documents the process used to review all soil sampling results and identify remaining arsenic exceedances associated with soil boring locations.)

USACE Recommendations: USACE recommended NFA for the two remaining arsenic exceedances where formal concurrence was not previously obtained (Lot 44 at the AU campus and a residential property on the 5100 block of Tilden Street).

Discussion – Review of Arsenic Exceedances

In response to DDOE's inquiry, USACE replied that Partner concurrence for no further action (NFA) at the two remaining arsenic exceedances was reached at the January 2012 Partnering meeting, pending concurrence from the property owners.

Next Steps

AU will verify that the arsenic exceedance at depth within Lot 44 at the AU campus will be addressed via NFA.

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-Baltimore provided an update on the status of recently completed, ongoing, and upcoming groundwater study efforts. (Details of these groundwater study efforts were provided at the November 8, 2011 groundwater meeting and recent RAB meetings.)

Completed Groundwater Study Efforts

The fourth (and final) quarterly sampling effort was completed in February 2012. Analytical results were generally consistent with previous sampling results, as described at the April 2012 RAB meeting.

Sampling of both new deep wells (MP-2 on the 4800 block of Glenbrook Road and MP-4 on the 4900 block of Rockwood Parkway) was completed in March 2012. Installation and sampling of a new groundwater monitoring well (MW-44) near Kreeger Hall on the AU campus was completed in mid-March 2012, during AU's spring break to minimize potential disruptions to campus life. The Partners originally planned for this well to be the fourth and final multi-port deep well, referred to as MP-1. Due to conditions encountered during the drilling, the well was drilled to approximately 95 feet (as opposed to 200 ft. for the other deep wells) and fitted with a well screen. Details were provided at the April 2012 RAB meeting. Sampling results for both new deep wells (MP-2 and MP-4) and the new shallow well (MW-44) will be shared with the Partners at the May 2012 Groundwater Partnering meeting.

Isotopic perchlorate sampling is completed, and analytical laboratory results are pending. One perchlorate sample was collected from PZ-4S/D near Kreeger Hall at AU's campus in March 2012, and a second perchlorate sample was collected near Sibley Hospital in April 2012. The purpose of the isotopic perchlorate sampling and analysis is to assess whether the perchlorate plumes (at AU and Sibley) could have originated from the same source.

Discussion – Isotopic Analysis of Perchlorate

USACE briefly provided details of the time frame required for collecting a sufficient mass of perchlorate to sample. At the AU campus, groundwater was continuously collected over approximately one week due

to a low groundwater yield. At Sibley Hospital, groundwater collection required a couple of days due to a higher groundwater flow volume.

USACE confirmed that a total of two perchlorate samples were collected.

Discussion – Groundwater Risks

In response to EPA's inquiry, USACE confirmed that the Groundwater Remedial Investigation (RI) report would be prepared by URS, the USACE groundwater contractor, as a separate document that will be incorporated into the Site-Wide Decision Document (DD). (Alternatively, it is feasible to produce a separate Groundwater DD for the site.) Groundwater risks will be evaluated as part of the risk assessment (RA), pending Partner discussion of risk assessment details (such as evaluating the hypothetical future drinking water use scenario).

Discussion – Groundwater Meeting

The Partners briefly discussed the scope of the upcoming groundwater meeting, which will be held as part of the May 2012 Partnering meeting. USACE stated that the primary goals of this meeting are to discuss recent groundwater monitoring results and to obtain Partner concurrence on the scope of future groundwater monitoring efforts, such as reducing the total number of groundwater sampling locations and the frequency of sampling. EPA and DDOE replied that this is a reasonable recommendation.

EPA mentioned that future quarterly sampling may be unnecessary, depending on the conclusions from previous quarterly sampling events. Overall, future groundwater sampling plans should be evaluated on the basis of individual monitoring wells and individual sampling parameters.

Dr. Peter deFur requested that USACE provide a general summary of the proposed groundwater meeting agenda prior to the meeting, to assist the Partners in preparing for the meeting. USACE agreed, and noted that they will meet with URS and Ethan Weikel (of USACE-Baltimore) to briefly discuss these proposed groundwater efforts prior to preparing the summary.

Next Steps

USACE will provide a general summary of the groundwater agenda prior to the May 2012 Partnering meeting, as requested by Dr. Peter deFur.

C. Upcoming Anomaly Investigations

The goal of this segment of the meeting was to present an update on recently completed and upcoming anomaly investigations.

Shaw presented a brief update on completed anomaly investigations on the AU campus in the vicinity of Kreeger Hall. ERT and USACE summarized the Dalecarlia Woods Geophysical Survey Data Gap Report.

Potential pit-and-trenches (PPTs) and single-point anomalies are investigated under standard low-probability investigation protocols.

Completed AU Kreeger Hall Area

Anomaly investigations were completed in March 2012 at the AU Kreeger Hall area. A total of 18 single-point anomalies were investigated in January 2012, and no AUES-related items were recovered. A total of 5 trenches in 4 anomalous areas were investigated in mid-March 2012, and no AUES-related items were recovered. These trenches were completed during AU's Spring break to minimize potential disruptions to the campus community.

Of these trenches, 4 were dug in the roadway, where asphalt and concrete surfaces extended to depths ranging from 8 inches to 2 feet bgs, overtop of fill soil. Native soil was encountered at depths ranging from 7 ft to 9 feet bgs. These trenches were dug to saprolite (ranging from 11 to 12 feet bgs) or to the maximum reach of the excavator (12 feet bgs without encountering saprolite).

The remaining shallow trench (AU-PPT-4-2) was excavated in a grassy landscaped area, approximately 4 feet south of and parallel to the original trench (AU-PPT-4-1).

At least 90% geophysical signal reduction was achieved in each trench prior to backfilling and restoring the areas.

AU-PPT-1: Geophysical responses were attributed to reinforced concrete consisting of 4-inch wire mesh. One cultural item (a 1954 Coca-cola bottle) was encountered at 5 feet bgs.

AU-PPT-2: Geophysical responses were attributed to a crushed speed limit sign and two abandoned pipes at 3 feet bgs. This trench was bisected by an active subsurface utility line, and two trench segments were excavated separately to provide adequate excavation access.

AU-PPT-3: Geophysical responses were attributed to cultural scrap metal items buried in the top two feet of the trench. Items included sheet metal, metal hardware, and a 6-inch pipe that was left in place.

AU-PPT-4-1: Geophysical responses were attributed to reinforced concrete consisting of 4-inch wire mesh.

AU-PPT-4-2: Geophysical responses were attributed to three inactive utility cables at 2 feet bgs. Based on the EM-61 geophysical data collected in this area, these cables appear to follow the trench direction and merge with the active subsurface utility line mentioned above. Strong geophysical responses were also attributed to metallic wire tree root baskets associated with two ornamental trees.

Discussion – AU Kreeger Hall Area

Shaw briefly summarized cultural items recovered during AU campus trench investigations, including items described above.

In response to EPA's inquiry, USACE confirmed that all investigations associated with the AU Kreeger Hall area are completed, aside from ongoing groundwater monitoring efforts. All scheduled residential and Dalecarlia Woods anomaly investigations are also completed as of December 2011.

USACE confirmed that trench excavations will be conducted nearby, at the hilltop between Kreeger Music Roadway and the 4825 Glenbrook Road property, as part of the 4825 Glenbrook Road remedial action. Geophysical surveys will not be conducted because the planned trenches will be fully excavated.

Dalecarlia Woods Data Gaps – Anomaly Review Board

USACE-Baltimore and ERT presented recommendations for addressing small areas where geophysical coverage within the Dalecarlia Woods geophysical survey area could not be obtained. Field teams were unable to survey a total of 1.37 acres out of the approximately 63-acre Dalecarlia Woods geophysical investigation area. Maps were provided to show the locations, types, and extent of these data gaps.

Objective: Obtain Partner consensus on the approach for addressing data gaps.

Preliminary Partner concurrence was provided for No Further Action. Final concurrence and signatures will be provided pending completion of the ARB memorandum.

Background: The entire Dalecarlia Woods geophysical survey area consists of approximately 63 acres. During the Dalecarlia Woods effort, a total of 61.63 acres were geophysically surveyed, and the remaining 1.37 acres were inaccessible. The causes of these data gaps were briefly discussed during previous Dalecarlia Woods ARB sessions. ERT prepared a Data Coverage Analysis memorandum in January 2012, followed by Partner review in February/March 2012. A recommendation memo was subsequently prepared by USACE to address the identified data gaps.

Data Gaps: Lack of geophysical coverage can be attributed to six causes.

- **Encroachment from private residences (0.15 acres)** – A total of three areas were inaccessible due to encroachment of residential property fences, walls, and accumulated yard waste (such as log piles and broken steel-reinforced concrete) on DC property. These areas are

situated east of the Dalecarlia Parkway, along the eastern edge of the Dalecarlia Woods geophysical survey area.

- **Bamboo stands (0.05 acres)** – Several narrow stands of bamboo (approximately 2 to 3 feet wide) were intentionally left in place to maintain a residential property privacy screen, as requested by homeowners, and could not be surveyed.
- **Stream (0.15 acres)** – One segment of a stream located in the northeastern interior portion of the Dalecarlia Woods was not surveyed. The stream depth varied between a couple of inches and one foot, and the stream width extended up to 10 feet. (Shallower portions of the stream to the northwest were surveyed.)
- **Washington Aqueduct construction activities (0.07 acres)** – A couple of grids between the edge of the Dalecarlia Reservoir and the gravel access road were not fully surveyed, due to staging of Washington Aqueduct construction activities during the data collection time frame.
- **Drainage ditch and rip rap (0.11 acres)** – A long narrow drainage ditch and adjacent rip rap, situated adjacent to the Dalecarlia Reservoir access road, were not surveyed.
- **Steep slope and/or vegetation (0.84 acres)** – Vegetation and steep terrain accounted for the largest percentage of the cumulative 1.37-acre data gap. Many locations were inaccessible due to the presence of **steep terrain** (where geophysical data acquisition was impractical or unsafe), **standing vegetation** (which exceeded the maximum 3-inch diameter allowed for cutting and clearing vegetation), and **deadfall timber** (which exceeded the approximate 25 square feet threshold criteria for substantial data gaps around the edge of a tree, because deadfall exceeding 8 inches in diameter could not be chipped during brush clearance activities).

USACE Recommendation: No Further Action was recommended for these data gaps. (Steep terrain and vegetation were categorized as two separate data gaps in the USACE recommendation memo, for a total of 7 data gaps.) Due to the small total acreage of data gaps, additional data collection is not warranted in these areas because it will not change the overall results obtained during the completed investigation; USACE believes the Dalecarlia Woods geophysical survey area has been adequately investigated and characterized.

Discussion – Data Coverage Analysis Memo

ERT mentioned that many of the munitions debris items recovered during the Dalecarlia Woods anomaly investigation effort were identified as non-AUES-related cannonball fragments from the Civil War time frame. AUES-related items were primarily found in the southeastern and south-central portions of the Dalecarlia Woods geophysical survey area. (These items were described at the January 2012 and various prior Partnering meetings.)

USACE noted that the Dalecarlia Parkway is also considered a data gap. ERT acknowledged this and clarified that the parkway was excluded from the approximate 63 acres that defines the Dalecarlia Woods geophysical survey area. Data collection was never intended to include the parkway.

ERT noted that in areas where residential properties encroached onto DC right-of-way property, geophysical surveys were not completed inside the property fence lines even though small portions of the backyards are legally considered DC property. In areas containing piles of yard waste, a small bobcat loader was used to remove some of the larger material but it was impractical to remove the entire pile.

USACE confirmed that the completed Dalecarlia Woods anomaly investigation, including AUES-related and non-AUES-related munition debris findings, was shared at a recent RAB meeting. One non-AUES-related cannonball from the Civil War era was brought to the RAB meeting for interested members to see.

Discussion – Recommendations for Addressing Data Gaps

Encroachment: The Partners briefly discussed concerns regarding the inaccessible areas caused by residential property encroachment onto the DC right-of-way. EPA noted that a number of AUES-related items were found in the vicinity of these data gaps. ERT mentioned that heavier mechanical equipment would be required to remove large logs and other substantial yard waste, and a right-of-entry would be required to gain access to each residential property. DDOE and ERT agreed that another DC permit may be required to obtain access to DC property that has been encroached upon.

EPA suggested that further action be considered for this data gap. If the city can remove the piles of yard waste, remove the encroaching fences, and reclaim the acreage of encroached property, then access to these encroachment areas for follow-on geophysical surveys would simply require a DC permit without the need for heavy equipment. DDOE agreed to check with the appropriate DC department to determine whether this is feasible. However, the associated regulatory agency may not be concerned about the encroachment issue or they may force the homeowners to remove the yard waste and fencing.

USACE explained that their NFA recommendation is based on the very small total data gap acreage (1.37 acres). The recommendation memo summary states that the site-wide RI/FS will evaluate the need for any further actions within the range fan on residential properties just east of the Dalecarlia Parkway.

The Partners briefly discussed if potential follow-on data is collected in these residential encroachment areas whether it will be incorporated into the site-wide Remedial Investigation/Feasibility Study (RI/FS), or whether any potential further actions can wait until the site-wide Decision Document (DD) is finalized. One important consideration is whether sufficient RI data is available for making decisions regarding any further remedial action in the Dalecarlia Woods geophysical survey area, or whether the proposed follow-on data collection in residential encroachment areas is necessary to adequately characterize the area. USACE suggested that another option is to evaluate any geophysical data generated from potential follow-on surveys in the residential encroachment areas with the associated residential property during the RI/FS process. EPA noted that this is fine if the data gaps will be discussed during the RI/FS process and potentially investigated later. USACE stated that the bottom line of this issue is that the RI/FS process will include a complete evaluation of the range fan investigation results and any further actions that are required.

Steep Terrain: Peter deFur inquired about data gaps caused by steep slopes west of the Rick Woods Burial Pit (AOI 2) area, and whether they are potentially associated with previous AUES-related munition debris items (75 mm projectiles) found by Rick Woods. During an interview, Rick Woods stated that he had to lie on the ground and reach into the ground to pull items out, which potentially indicates a hole in sloped terrain. Additionally, as part of an AOI 2 search during one of the first AOITF meetings in December 2002, three AOITF members (Terry Slonecker, Ken Schuster, and Rich Albright) identified a potential location of the former small-gauge railroad track and detected strong geophysical signals near steep slopes using Schondstats. P. deFur clarified that although this was not a formal geophysical survey, these individuals were official AOITF members that were representing their agencies.

ERT replied that significant geophysical responses in that general area are not surprising. Cultural features that would generate a geophysical response were documented in field notes and mapped by hand, such as a possible old road, perfectly matched the geophysical data.

The Partners briefly discussed a very steep exposed slope and a drainage ditch adjacent to the Dalecarlia Reservoir access road, along the southern boundary of the geophysical survey area. This slope appears to be manmade and maintained by the Washington Aqueduct and is easy to visually inspect, with an eroded area and light vegetation on the slope underneath the dense tree canopy.

USACE and ERT confirmed that this slope is very steep. Although the associated ARB memo requested that Shaw conduct additional Schondstat or magnetometer surveys where possible, this particular slope was determined to be too steep for workers to navigate safely. This terrain could potentially be surveyed using a Schondstat, but it would be extremely difficult to investigate any anomalies detected on the slope, and the use of a Schondstat would not be worthwhile based on the exposed terrain conditions.

Additionally, any AUES-related contamination that was potentially present would have migrated down the slope into the drainage stream.

The Partners noted that the three AOITF members collected their geophysical data informally using a Schondstat, without formal work plans and documentation. ERT mentioned that if even the AOITF members had used GPS to record the locations of these slopes, they would have obtained an accuracy of no better than 20 or more feet. USACE added that the recently completed Dalecarlia Woods geophysical survey covered the same areas that were surveyed by the AOITF members. USACE did not recall detecting notable geophysical responses that were specifically associated with steep slopes, as were reported by the AOITF members. It is very likely that the steep slopes traversed by the AOITF members were fully covered during the recent geophysical survey, as the data gap slopes were deemed too steep to survey safely.

P. deFur emphasized the importance of addressing these areas to the greatest extent possible, as questions regarding data gaps and sufficient geophysical coverage will likely come up in the future. AUES-related findings within the range fan and at burial pits can be easily explained, but historical AUES-related munition debris items found within AOI 2 (Rick Woods Burial Pit) are not as easily understood. Documentation of the steep inaccessible slope is important to distinguish it from the other steep slope described by the three AOITF members.

P. deFur and USACE requested that photographs of these inaccessible slopes be obtained to provide documentation of these areas, in addition to the existing maps and digital geophysical survey results. ERT agreed to take additional photographs.

EPA and DDOE requested that the ARB memo reflect the two further actions that were discussed.

Next Steps

USACE will prepare the Data Gap ARB Memo for signatures.

DDOE will check with the appropriate DC department to determine whether the city can move piles of residential yard waste and reclaim the acreage of encroached property, as suggested by EPA.

ERT will obtain photographs of the inaccessible slopes that could not be surveyed in the vicinity of but outside of AOI 2 (Rick Woods Burial Pit), as requested by P. deFur and USACE.

D. 4825 Glenbrook Road Work Plan

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

Parsons provided an update on the contents of the draft site-specific 4825 Glenbrook Road Draft Remedial Design and Remedial Action Work Plan.

Remediation Goals: Remaining arsenic contamination will be remediated to the Spring Valley cleanup level of 20 mg/kg. Excavation areas across the property will be remediated to achieve a munitions and explosives of concern hazard assessment (MEC HA) ranking of Hazard Level 4, which is defined as low potential explosive hazard conditions.

Specific Remedial Action Objectives: These include preventing direct contact with soil characterized by a non-carcinogenic Hazard Index (HI) exceeding 1 or a cancer risk exceeding 1×10^{-4} , both of which were derived from the 4825 Glenbrook Road site-specific RI/FS and DD. Additional objectives include reducing MEC hazards to a low potential for explosive hazard conditions (Hazard Level 4), and reducing the potential to encounter containerized chemical warfare materiel (CWM) and AUES-related items.

Purpose: The 4825 Glenbrook Road remedial design and remedial action work plan provides details of planned intrusive activities designed to achieve the remedial objectives.

Scope: The work plan defines the high-probability and low-probability protocols to remove, assess, and dispose of soil and any potential RCWM, laboratory waste, and other suspect AUES-related debris remaining at the site. The work plan also described the removal and disposal of the property residence and appurtenances, and presents the site restoration approach once all remedial activities are completed. Restoration activities include but are not limited to clean soil backfill, seeding the property, and stabilizing or reinstalling property boundary fences.

Demolition Plan Scope (prepared by a contractor) and Guidelines: The three-story structure will be demolished systematically from the top of the structure to the basement slab, where possible, using a track excavator. No demolition will be performed below the slab, and several features that come into contact with soils will not be disturbed: the basement floor, the exterior basement walls, the backyard patio, and the front porch. (These structural features will be removed during the high-probability phase of the remedial effort.) Removal of all structures above the first floor, along with extraneous non-structural basement walls, will be conducted according to guidelines established in the USACE Safety Manual dated 15 September 2008.

These guidelines include building and public space permit applications, and engineering and environmental surveys to document hazards such as asbestos and lead. (The survey results will be submitted to the Partners for review prior to demolition.) Prior to demolition, all utility lines at the property boundary will be disconnected, universal waste streams such as light bulbs will be removed, and all air conditioning units will be removed and the Freon will be collected from a licensed company. Site access will be restricted to authorized personnel and patrolled by a contracted security guard after hours.

Dust will be controlled using wet demo methods, and noise will be within DC regulations. The approved work hours will be Monday through Friday, from 8:00 AM to 5:00 PM. Construction debris will be shipped offsite to an appropriate landfill using roll-offs or demo trailers, and materials including metals, concrete, and brick will be taken offsite to a recycler when there are no associated hazards.

Excavation Areas: The site was divided into five excavation areas, reflecting two low-probability areas (A/B) and three high-probability areas (D/E/F) that will be addressed via different intrusive approaches. Area C encompasses the burial pit 3 area where No Further Action (NFA) was approved as this area was previously excavated to bedrock.

Maximum Credible Event (MCE) Definitions: The Department of Energy (DOE) defines two concentrations (**AEGL-2** and **TEEL-2**) that were evaluated as the MCE for each potential airborne contaminant at the site. The definitions and toxicological end points of both values are the same, but the Temporary Emergency Exposure Limits (TEEL) represents the DOE's temporary value until the chemical is reviewed and approved during the Acute Exposure Guideline Level (AEGL) process. The **AEGL-2** and **TEEL-2** are defined as the airborne concentration (ppm or mg/m³) of a substance, above which it is predicted that the general population (including susceptible individuals) could experience irreversible or other serious, long-lasting, adverse health effects or an impaired ability to escape in the unlikely event of an unplanned, accidental chemical release.

The TEEL-2 is proposed as the MCE.

Engineering Control Structure (ECS) Alternatives: Three alternatives were evaluated as possible engineering control structures to be used during high probability excavations. These include evacuation, a tent with a chemical agent filtration system (CAFS) (Option 1), and a vapor containment structure (VCS) with a CAFS (Option 2). **ECS Option 1** was recommended because it controls the MCE, does not require site evacuation during the MCE, and accommodates site constraints. The tent with CAFS was successfully used during the 2009-2010 high-probability test pit excavations at the site, during which closed laboratory glassware containers containing chemical agent and agent breakdown products were recovered. In contrast, the evacuation alternative only meets the MCE control criteria, and Option 2 (which was used during high-probability burial pit 3 investigations) does not accommodate site constraints.

The CAFS configuration was designed by ECBC, using a series of filters (pre-filter, HEPA filter, and specialized carbon filter). The efficiency of this carbon filter was tested and presented by Dr. Mahle of ECBC at a previous Partnering meeting.

Noise Analysis Objectives, Methodology, Results, and Recommendations: Noise levels from the CAFS and the emergency generator were evaluated to ensure that they will not exceed the District of Columbia's regulatory limit of 55 dBA at the property line during high-probability operations. Noise control measures were identified to address any noise volume exceedances.

Baseline noise measurements were completed at the 4825 Glenbrook Road, and the CAFS and generator operations were tested at ECBC for comparison purposes. Computer modeling analyzed possible noise impacts and control measures.

Based on the proposed CAFS and generator configuration, noise levels were below the regulatory limit at the adjacent 4835 Glenbrook Road property boundary. Noise level exceedances at the adjacent 4801 Glenbrook Road property boundary requires the use of enclosure panels, door supports, and fan silencers to reduce noise levels to acceptable levels at this property boundary. Noise levels will be within DC limits at all property boundaries during the cleanup process.

Proposed Technical Approach: Overall activities include constructing and repositioning the protective engineering control structure, excavation of large areas of soil, excavation of remaining small areas of arsenic-contaminated soil, and excavation of AUES-related items remaining in the front yard adjacent to the porch. The basement slab will be removed under high probability protocols followed by soil excavation as necessary to address any potential AUES-related items or contamination present underneath the house footprint.

Site preparations will include abandoning the existing water utility line and rerouting the sewer line via an L-shaped trench. Low-probability test pits in the backyard will be excavated concurrently, including five additional test pits between the property boundary and the Kreeger Music Roadway to ensure any potential AUES-related items in the backyard have been identified and removed. Other site preparations will include removal of the wooden fence along the 4801 Glenbrook Road property boundary and installation of a temporary green screen fence that allows access along the property line. Slopes and retaining walls along the 4801/4825 Glenbrook Road property boundary will be supported and stabilized using speed shoring or another approved system.

Conformation sampling is proposed in all excavated areas. Sidewall samples will include surface samples (6 inches bgs or below previous backfill materials) and subsurface samples (6 inches above the excavation floor), along with mid-point samples for all excavations that exceed a depth of 5 feet. Floor samples will be taken once undisturbed saprolite or bedrock is encountered where possible (if there is no refusal from the equipment).

Tentative Document Schedule: An accelerated document review schedule is underway for the following work plan documents. (Details of planned review time frames were provided at the January 2012 Partnering meeting.)

- The Demolition Plan was finalized in February 2012. This document was incorporated into the Site-Specific Work Plan so that both documents can be reviewed concurrently.
- The draft final Chemical Safety Submission (CSS) Annex for Remedial Action is currently under review, with finalization anticipated in May 2012. Comments are currently being addressed.
- The draft Site-Specific Work Plan for Remedial Design and Remedial Action is currently under revision by USACE to incorporate Partner comments, with the draft final anticipated in June 2012 and finalization anticipated in June/July 2012.

Tentative Remedial Action Schedule: Preliminary site mobilization activities, such as public space and building permit applications, are underway. House demolition is anticipated to begin in July/August 2012, followed by initial low-probability efforts in Summer 2012 (including test pits and trenches, utility rerouting, and site preparations for high-probability efforts). High-probability soil removal will tentatively begin in late Fall 2012, with completion anticipated in 2013, barring additional delays. The remaining low-probability soil removal actions will be conducted in late 2013, followed by site restoration. The remediated property will be returned to AU as early as December 2013.

Discussion – Remedial Objectives

In response to EPA's inquiry, Parsons replied that low-level agent in soil is addressed by the first remedial objective, which intends to prevent direct contact with soil that has a non-carcinogenic HI exceeding 1.

EPA asked what volume of lewisite is required to result in an HI of 1. Parsons explained that these remedial objectives are basic hazardous and toxic waste (HTW) goals, and containerized lewisite would be a part of the fourth remedial objective, which intends to reduce the potential to encounter containerized CWM and AUES-related items.

Alma Gates, RAB Member, asked why CWM must be containerized as part of the remedial objective. Parsons replied that previous recoveries of AUES-related laboratory glassware present the highest risk of encountering CWM. However, all CWM-contaminated soil and other AUES-related waste and debris will also be addressed as part of the overall remediation scope.

The Partners briefly discussed the lack of specific cleanup goals for lewisite and mustard in soil, which contrasts with the well-defined arsenic cleanup goal of 20 ppm. EPA requested that low-level agent cleanup goals in soil be clearly stated (for example, a goal to remove all soil with detectable lewisite and mustard). If these goals are unclear in the work plan, then questions will arise as to whether low concentrations (e.g., 2 ppb) of agent-contaminated soil must be removed. P. deFur agreed with this request. Parsons acknowledged that this is a good point, and added that low-level clearance is always conducted first.

EPA asked why the TEEL-2 for lewisite will be used in lieu of the AEGL-1 or TEEL-1. Parsons replied that the TEEL-2 was the previously proposed and approved value for Spring Valley. EPA clarified that this decision was made for arsine because this chemical does not have an AEGL-1 or TEEL-1, but these more protective values should be used for chemical agents when possible to ensure that the general public receives more protection.

The Partners briefly discussed whether the AEGL-1/TEEL-1 distance for lewisite should be calculated and used, or whether the AEGL-2/TEEL-2 distance should be used while informing local officials of the AEGL-1 distance (similar to the protocol at stockpile program sites). The differences between TEEL-1 and TEEL-2 values are fairly small (approximately 150 feet versus 100 feet). Parsons and USACE mentioned that only a trace amount of arsenic trichloride has been found at the site to date, compared with a relatively large amount of lewisite, and the MCE of 1 L lewisite is based on an AEGL-2. EPA noted that while they understand the significance of the AEGL-2 for lewisite, they don't necessarily agree with this decision.

Community Outreach noted that only a small number of properties are impacted by the AEGL-2 distance. USACE added that as part of the Public Protection Plan previously used at the 4825 Glenbrook Road site, door-to-door outreach was only conducted for residential properties within the AEGL-2 distance, while the rest of the community was informed via project and public meetings. EPA emphasized and Community Outreach agreed that nearby properties beyond the AEGL-2 distance need to be informed of site plans throughout the remedial process.

In response to EPA's inquiry, Parsons replied that the modeled analyses of AEGL and TEEL values will be included in the work plan appendices.

P. deFur and EPA inquired about the chemical agents and other chemicals that were evaluated. Parsons explained that protective AEGL/TEEL values were modeled for a total of four contaminants: lewisite, arsenic trichloride, hydrogen chloride, and phosgene oxide. USACE clarified that mustard was not evaluated because the lewisite MCE is more conservative, and arsine was not evaluated because it would need to be present in a munition item and USACE does not anticipate recovering further intact munition items. Arsine has not been encountered in a munition item at the site since 2008, and AUES-related munition items recovered since 2008 have been classified as debris or have not contained chemical agent.

In response to EPA's inquiries, USACE explained that in the event that an intact AUES-related munition item is found in a low probability area, the remediation effort will be temporarily suspended until the contents of the item can be determined, followed by assessment of whether low probability excavation remains appropriate or whether high probability excavation is required to continue. If an item containing arsine is found, then the approved MCE (which is based on 1 L lewisite) will be re-evaluated to determine if an arsine MCE is more appropriate.

Discussion – Probability Assessment

USACE explained that all excavation areas are considered low probability for encountering munitions; the low and high probability designations refer to the probability of encountering CWM glassware. P. deFur asked whether it is safe to base estimates of future CWM occurrences on the most recent property findings, considering that the site cleanup has been on hold since 2010, and whether high probability and low probability areas are treated differently when assessing these probabilities.

In response to EPA's inquiry, USACE confirmed that a probability assessment was completed but needs to be revised.

USACE clarified that all historical and recent investigation data was assessed to evaluate the probability of future AUES-related findings. Historical data provided a snapshot indicating a disposal area is present. Investigation data collected at the site since 2001 provided the basis for forming reasonable expectations of what may be found at the site in the future, and for planning the path forward for remedial action. P. deFur added that the disturbed nature of this site presents a higher level of uncertainty as to where the original burial pit contents are located. USACE noted that although the distribution of AUES-related contamination was altered, the subsequent investigations (including test pits, arsenic removal, and high probability excavation) increase the likelihood that there is a low probability of finding additional munition items at the site. This is the rationale for excluding arsine from the AEGL and TEEL modeling analyses.

USACE confirmed that arsine has not been found outside of AUES-related munition items recovered at the site (75mm projectiles), and this chemical agent will break down or disperse over time if it is not fully sealed inside a munition. Due to vapor pressure of arsine, you would not expect it to be present in glassware.

P. deFur noted that in areas where all soil is removed to saprolite, the resulting probability of finding future AUES-related items will approach zero. USACE clarified that all soil at the site will be excavated to saprolite. Parsons added that debris clearance will be conducted behind the retaining wall and confirmed via 6-inch soil lifts, and the entire excavation footprint will be surveyed once excavation is completed.

Discussion – ECS Scenarios

Regarding the proposed ECS scenarios, EPA inquired about the differences in protecting the excavation area versus protecting the surrounding area. Parsons and USACE replied that the metal vapor containment structure (VCS) (Option 2) would provide blast and vapor protection, while the tent (Option 1) would be sealed with negative pressure to provide protection from chemicals but would not provide blast containment. These options differ from the structure used during the burial pit 3 excavation, where a

MACS structure with armored walls was built. Parsons added that the tent structure (Option 1) was proposed because additional MEC findings are not anticipated at the site.

Discussion – Proposed Confirmation Sampling

In response to inquiries from EPA and P. deFur, Parsons replied that a representative midpoint confirmation sample will be collected if the excavation extends deeper than 5 feet bgs. For shallower excavations, a surface sample (6 inches bgs) and a subsurface sample (6 inches above the floor) will be collected. In a 5-foot deep excavation with a surface and subsurface sample, it is likely that significant arsenic excavation will have addressed most of the unsampled soil. Floor samples are proposed, when possible, in each 20'x20' grid once undisturbed saprolite or bedrock is encountered. All samples will be cleared for headspace, analyzed by ECBC for low-level agent, and then analyzed at a commercial laboratory for the full AUES parameter suite as well as perchlorate and lewisite.

EPA and P. deFur expressed the opinion that a single midpoint confirmation sample for deep excavations may be insufficient to represent the excavation. USACE mentioned that horizontal samples are collected at 20 foot intervals, and EPA replied that those samples are collected at the same elevation.

Discussion – Noise Control

USACE confirmed that the CAFS will be turned off every night and this will be reflected in the work plan.

Parsons clarified that noise measurements at the site were modeled based on the DC regulatory noise limit of 55 dBA, even though the work plan stated a value of 60 dBA. USACE comments on this detail will be addressed followed by any necessary revisions by a sound specialist.

Discussion – Tentative Schedule

Parsons confirmed that the Chemical Safety Submission (CSS) was submitted to the USACE CX, whose comments are currently being addressed.

In response to EPA's inquiry, USACE replied that Area A will be one of the last low probability areas scheduled for excavation, with an anticipated time frame of late Summer 2013.

USACE confirmed that trench excavations on the AU campus, between the 4825 Glenbrook Road property line and Kreeger Music Roadway, will be the first completed low probability effort, which is tentatively scheduled for late Summer 2012.

USACE confirmed that house demolition will tentatively begin in July 2012, pending resolution of all remaining issues, with an anticipated completion time frame of approximately three weeks.

Discussion – Air Monitoring

In response to inquiries from EPA and P. deFur, USACE confirmed that air monitoring at the perimeter of the site and at the excavation locations will be conducted at all times, including during low probability efforts.

Air monitoring data will be shared with the Partners via weekly progress reports on site activities, and any significant air monitoring results will be shared via a press release by the USACE Public Affairs Office. Daily reporting is not anticipated, but real-time data will be collected and logged during excavations, similar to previous efforts at the site. USACE confirmed that weekly reports can provide the status of air monitoring regardless of the results (non-detect or detections).

USACE noted that the protective components of the work plan will be largely driven by the final CSS. The first step of the approval process for the CSS is underway, with final approval from DDESB anticipated in Summer 2012. Appropriate analytical parameters are currently being discussed internally, and it difficult to predict all possible parameters due to unknowns at the site.

Discussion – Public Notification

In response to EPA's inquiry, USACE clarified that an emergency siren system will not be used because very few residential properties will be directly impacted by remedial efforts at the site. In the event of an emergency, affected property owners will be notified on an individual basis. Very minor, if any, impacts to the AU campus are anticipated (depending on the final approved MCE), as the campus buildings and athletic fields are not encompassed within the preliminary MCE distance.

EPA inquired about the Public Protection Plan (PPP) status. Community Outreach explained that a new PPP will be prepared using the previous PPP document as a template, and can be completed quickly as soon as the MCE is finalized. Community Outreach confirmed that document finalization is anticipated prior to house demolition.

The Partners briefly discussed the scope of the informational community meeting that will be held prior to house demolition. This community-wide meeting will present the general approach for the demolition process and work plan details for the 4825 Glenbrook Road site cleanup process. This meeting will be scheduled pending resolution of remaining site issues, and will tentatively be held in June or July 2012.

In response to P. deFur's inquiry, USACE confirmed that house demolition will ideally be completed prior to the beginning of the AU fall semester. AU confirmed that students will return to campus as early as mid-August. P. deFur added that the informational community meeting should be held at least 2 to 4 weeks prior to this deadline, with the goal of holding the meeting prior to house demolition.

Discussion – Decision Document

In response to EPA's inquiry, USACE replied that the final signature for the 4825 Glenbrook Road Decision Document (DD) is still pending.

E. Follow-on Spring Valley Health Study

The goal of this segment of the meeting was to provide a progress update on the follow-on Spring Valley health study.

[This discussion was held during the 4825 Glenbrook Road segment of the meeting, and was moved here for clarification purposes.]

DDOE introduced Beth Resnick, Assistant Scientist within the Health Policy Management Department of the Johns Hopkins Bloomberg School of Public Health. As described at previous Partnering meetings, a contract was awarded to Johns Hopkins University for completing the follow-on Spring Valley health study. Johns Hopkins completed the original Spring Valley Public Health Scoping Study in 2007.

B. Resnick serves as the Outreach Coordinator for the follow-on health study. For the purposes of this presentation, she represented Mary Fox, Assistant Professor within the same department and Principal Investigator for the follow-up health study.

(A detailed overview of the follow-on health study was provided by M. Fox at the August 2011 Partnering meeting and the September 2011 RAB meeting, followed by a status update at the February 2012 RAB meeting. A summary of the original 2007 scoping study was provided by M. Fox at the September 2011 RAB meeting.)

Community Health Assessment: Potential site-related health effects and concerns are currently under evaluation, with the goal of providing an updated Spring Valley community health status and addressing health outcomes that were identified in the original 2007 scoping study as warranting additional attention.

- A community survey was developed to gather input from Spring Valley residents to further understand any ongoing site-related health concerns. The draft survey is currently under review

by the Johns Hopkins University Institutional Review Board (IRB) and the DC Department of Health IRB. A few revisions were requested, and IRB approvals are anticipated soon.

- Pilot testing of the approved draft survey will be conducted in Summer 2012 to ensure that interested residents have the opportunity to participate in the pilot-testing phase prior to the summer vacation season. Modifications to the draft survey questions will be fairly limited, however.
- The final survey will be available online, and individuals can respond to survey questions for household members as well as for themselves using the online version. The survey will also be available in hard copy format, which is designed to collect individual responses.
- Additional data on potential site-related health effects, such as arsenic-related cancers and mortality, were requested from the DC Department of Health. The request for data from the Vital Statistics Registry has been approved, while the Cancer Registry recently asked for additional details on the exact type of data that is needed. Receipt of all health data is pending.

Discussion – Community Health Assessment

In response to EPA's inquiries, B. Resnick replied that the community survey will be distributed to residents of the Spring Valley neighborhood, as well as residents of Chevy Chase, MD, for comparison purposes. Hard copies of the survey will not be mailed to residents. Instead, they will be distributed via community associations and other public venues, such as neighborhood libraries.

B. Resnick added that former Spring Valley residents will not be located and directly contacted by the health study team. Current residents will be encouraged to forward the community survey information to previous residents if possible.

In response to B. Resnick's request, the Partners briefly discussed potential locations where hard copies of the community survey can be made accessible to the public. P. deFur suggested that the AU campus library would be a good location because it is a central point for Spring Valley residents. B. Resnick added that local listserves may be helpful.

Discussion – Future Health Study Funding

DDOE mentioned that the DC Mayor's office requested an update on Congresswoman Norton's ongoing efforts to obtain federal funding to support future health study efforts in Spring Valley. The Mayor's office also inquired about the value of this requested funding. DDOE shared their perspective that a million dollars would support the production of health study reports, but a full epidemiological study would require several million dollars in funding.

DDOE clarified that the Mayor's office commonly receives inquiries from Congress. B. Resnick commented that Congresswoman Norton's interest in future Spring Valley health study efforts likely contributed to this particular inquiry.

E. Site-Wide Evaluation Document

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

Risk Assessment Status for the Site-Wide Remedial Investigation

Information on Risk Assessment coverage and risk issues at the Spring Valley Formerly Used Defense Site (FUDS) was originally discussed at the January/February 2010 Partnering meetings, with updates provided at various subsequent Partnering meetings including the November 2011 Partnering meeting. Partner discussion and comments on the draft final site-wide evaluation document were described at the January 2012 Partnering meeting.

Site-Wide Evaluation Document

The draft final site-wide evaluation document, called the Evaluation of Remaining Sampling Requirements document, was submitted to the Partners for review in late November 2011. Comment responses are in preparation and document finalization is anticipated in Summer 2012.

Key Issues: The evaluation document focuses on three key issues, as described at previous Partnering meetings. These include **review** of the previous (pre-2005) Human Health Risk Assessments (HHRAs) to assess whether their conclusions remain protective of human health, **work plan details** for proposed follow-on sampling in areas known to require supplemental sampling; and **justification** of sufficient existing and proposed supplemental sampling to characterize the Spring Valley FUDS.

The work plan details for proposed supplemental sampling are addressed in Section 3.0 of the evaluation document and are presented below.

Presentation Objectives: Revised sampling locations were reviewed (in response to Partner comments regarding the original surface soil sampling locations presented in the draft final evaluation document, which reflected the depth of primary current soil exposure). The overall sampling depth rationale was also reviewed (in response to initial Partner requests for additional information on the sampling depth rationale or justification).

Sampling Overview: The Area of Interest Task Force (AOITF) previously reviewed potential AOIs (derived from historical AUES impacts) not addressed during ongoing investigations, or possible data gaps, and made recommendations to the Partners on whether additional investigation was necessary.

Final USACE recommendations for further action at each AOI were presented during a series of Partnering meeting presentations, followed by Partner discussion and review. AOI Consensus Memoranda were prepared by USACE to formalize the path forward for each AOI.

Supplemental soil sampling is proposed for a total of 5 discrete AOIs, as described in the draft final evaluation document. (Some of these AOIs, such as AOIs 22/24, are designated by metals contamination rather than geographically and thus are divided into separate discrete areas for supplemental sampling.) The objective of supplemental sampling is to ensure enough data exists to make human health and ecological risk determinations about the AOI. Following the supplemental sampling, the analytical results for each area will undergo risk screening and a discrete HHRA will be completed for any AOI that presents potential health risks.

Tentative Schedule: Partner concurrence and signatures for AOI Consensus Memos for 4 of the AOIs requiring additional soil sampling are anticipated in late April 2012, followed by Partner concurrence on evaluation document comment responses. Supplemental soil sampling is planned for Summer 2012.

Completed Sampling:

- **AOI 8 (POI 12) and AOI 11 (POIs 13/14)** – Sampling was completed at both AOIs under an approved work plan that was finalized in 2009. These samples were analyzed for the full Spring Valley comprehensive parameter list. Evaluation of the validated sampling results is pending.
 - **AOI 8** – A total of 4 discrete surface soil samples were collected at the 1918 soil horizon at three of five properties that comprise AOI 8. Of these samples, 2 were situated within 1918 ground scars. (Details of soil sampling results at AOI 8 were provided at the January 2012 and previous Partnering meetings.)
 - **AOI 11** – A total of 6 surface and subsurface soil samples were collected. Of these samples, 4 were collected at the property containing the former burial pit (POI 14). (One surface sample was situated within overlapping 1922 and 1927 ground scars. Three subsurface samples were collected in the former burial pit to characterize the soil backfill at two depths and the underlying native soil at 1 foot below the burial pit bottom). The remaining 2 surface soil samples were collected at a different property at the 1918 soil

horizon, based on the 1918 ground scar location and anecdotal homeowner descriptions of two stressed trees on the property.

Proposed Sampling:

- **AOI 9 (POI 7/7R)** – A total of 10 surface soil samples are proposed at 4 properties to better characterize antimony risks at POI 7/7R (a small portion of the larger AOI 9 footprint), and to determine whether previous EPA risk conclusions remain valid. These 10 samples reflect the 1918 soil horizon, which lies at the surface in this area, and are situated within ground scars where possible.
 - Additional antimony sampling was recommended in the AOI memorandum based on the 1999 EPA HHRA conclusions, which included a Reasonable Maximum Exposure (RME) Hazard Index (HI) of 4.7 for child residents that was primarily associated with antimony. EPA's risk results were based on samples that were splits of the 1995 USACE surface soil samples collected at the 1918 soil horizon, which serves as the rationale for collecting additional surface samples.
- **AOI 13** – A total of 5 surface soil samples are proposed and will be analyzed for the full Spring Valley comprehensive parameter list, with the exception of arsenic which was already sampled for in this area. These 5 samples will be sampled at the 1918 soil horizon, which lies at the surface in this area, and are situated within 1918 ground scars. (These samples will supplement the previous 11 surface soil samples at AOI 13 that were collected since 2001, which were analyzed for the full or near-full Spring Valley parameter list.)
 - Additional Spring Valley comprehensive parameter sampling was recommended in the AOI 13 memorandum based on previous AUES-related MEC and MD findings in the area. Additionally several historical AUES buildings and multiple 1918 ground scars are located in AOI 13. (The memo also recommended that this supplemental sampling be conducted in coordination with the recommended antimony sampling at AOI 24.)
- **AOI 22/24 (POIs 21/22/23 and 4710 Woodway Lane)** – A total of 5 surface soil samples are proposed in the backyard of a property on the 4700 block of Woodway Lane to better characterize nickel and thallium concentrations in the soil in this area. These 5 samples reflect the 1918 soil horizon, which lies at the surface in this area, and are situated within overlapping ground scars. Additionally, a total of 7 co-located surface (0-6 inches bgs) and subsurface (5-7 ft. bgs) soil samples are proposed in the front yard and will be analyzed for the full Spring Valley comprehensive parameter list, with the exception of arsenic which was already extensively addressed in this area. These 7 samples are biased toward the 1995 RI side scan boring locations, and co-located surface samples are conservatively proposed to reflect the current soil exposure zone.
 - Additional nickel and thallium sampling in the backyard was recommended in the AOI memorandum based on the 1999 EPA HHRA conclusions, which included an RME Hazard Quotient (HQ) exceeding 1 for child residents that was associated with nickel and thallium. EPA's risk results were based on samples that were splits of the 1995 USACE surface soil samples collected at the 1918 soil horizon, which serves as the rationale for collecting additional surface samples.
 - Additional sampling to further establish metals concentrations in the front yard was recommended in the AOI memorandum. This recommendation was based on the 1995 RI sides can boring results (and the USACE and EPA conclusions), which included an RME exceeding 1 that was associated with thallium for construction workers. The average sides can sample depth (5 to 7 feet bgs) provides that rationale for collecting additional subsurface samples.

- **AOI 22/24 (POIs AU/24/53)** – A total of 15 soil samples (14 surface and 1 subsurface) are proposed to better characterize antimony concentrations in the soils at POIs AU/24/53. (This area includes the western portion of POI 53 along Glenbrook Road.) These 15 samples reflect the 1918 soil horizon, which primarily lies at the surface in this area, and are situated within ground scars where possible. (The single subsurface sample reflects the 1918 soil horizon that is located below the ground surface.)
 - Additional antimony sampling was recommended in the AOI memorandum based on the 1999 EPA HHRA conclusions, which included an RME HQ exceeding 1 for child residents that was primarily associated with antimony. EPA's risk results were based on samples that were splits of the 1995 USACE surface soil samples collected at the 1918 soil horizon, which serves as the rationale for collecting additional surface samples. Some of the 1995 RI samples were collected within the old POI 24 boundary on the AU campus.

Discussion – Site-Wide Evaluation Document

ERT noted that the above presentation reflects responses to comments from EPA and DDOE, while review of comments from Paul Chrostowski (AU's consultant) is pending. USACE added that EPA and DDOE also received copies of P. Chrostowski's comments.

ERT mentioned that proposed supplemental sampling locations were somewhat biased toward residential properties where homeowners are more likely to grant rights-of-entry for supplemental soil sampling.

Next Steps

Partner concurrence and signatures will be obtained for the 4 AOI Consensus Memos associated with the site-wide evaluation document.

F. Draft Timeline for Site-Wide CERCLA Documents/Process

USACE provided a draft timeline for the site-wide CERCLA document process and provided an opportunity for preliminary Regulatory Partner discussion and comments.

Tentative Schedule

Objective: The goal of the site-wide CERCLA process is to reach a final Decision Document (DD) for the entire Spring Valley FUDS and complete any required remedial actions identified in the DD.

Milestones: Finalization of the site-wide evaluation document will be followed by the proposed AOI supplemental soil sampling. A risk assessment (RA) work plan will be prepared, and all risk assessments for Spring Valley will be completed and incorporated into the site-wide RA. The MEC hazard assessment (HA) will also be prepared. Risk Assessment will be included in the site-wide RI report. The Feasibility Study (FS) will evaluate alternatives for addressing risks identified in the RI, with the DD identifying the selected final remedy for the site. DD finalization is tentatively scheduled for early 2015.

Discussion – Tentative Schedule

USACE mentioned that significant time frames have been built into the draft schedule, which is subject to change during the CERCLA document process.

The Partners briefly discussed whether the tentative document review time frames can be reduced or expedited. This depends on reviewer availability, the complexity of the review, and whether the review depends on the status of other documents. There are many unknowns in the draft CERCLA document timeline, including the total number of planned documents (such as the number of discrete soil sampling RAs that will be necessary) and a lengthy time frame for completing and reviewing risk assessment documents. DDOE noted that their agency does not currently have a risk assessor contract associated with

the Spring Valley project, due to ongoing internal organizational changes. USACE mentioned that their internal review time frames can potentially be shortened because there will be very few scheduling conflicts with other Spring Valley document reviews. EPA agreed that reducing internal review time frames will save the most time and money, compared to Regulatory Partner reviews.

In response to EPA's inquiry, USACE replied that the site-wide groundwater RI will be fully incorporated into future versions of this schedule.

EPA and P. deFur noted that post-DD activities, such as establishing potential land use controls and conducting any follow-up groundwater monitoring, are not included on this schedule. USACE agreed to add a post-DD line item ('to be determined') to the draft schedule to indicate that follow-on efforts are potentially anticipated, rather than giving the impression that the site-wide DD concludes all project efforts.

Next Steps

USACE will add a post-DD line item ('to be determined') to the draft CERCLA document schedule to indicate that follow-on remediation and/or monitoring efforts are anticipated.

G. 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

Parsons confirmed that the engineering report for a 4900 block of Quebec Street property was finalized. USACE added that two separate documents for this property addressed anomaly investigations and arsenic soil removal, respectively.

H. 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.

Inaccessible Fordham Road property

The Partners briefly discussed the status of the packet containing information about the property on the 3700 block of Fordham Road, including documentation of all attempts to contact the property owner to obtain right-of-entry for arsenic soil removal and anomaly investigations. (Details of this issue were recently discussed at the March and April 2012 RAB meetings.) This packet was initially reviewed by Ed Hughes, Former Spring Valley Project Manager, and was submitted to the USACE chain of command. USACE Headquarters (including legal counsel) reviewed the information and determined that it was appropriate to send the packet higher within the U.S. Army chain of command. The information is currently under review by the Deputy Assistant Secretary of the Army (DASA), who will determine whether it is reasonable to pursue property access via the Justice Department. Alternatively, the compiled property information will be shelved until right-of-entry is obtained for further investigation, as the Fordham Road property might be designated as a separate site from the site-wide Spring Valley project. In the mean time, USACE Headquarters requested Regulatory Partner assistance for obtaining right-of-entry to this property.

EPA asked why the Regulatory Partners would make a different decision than the DASA, if the property packet is shelved. USACE replied that the packet would be withdrawn and the anomaly removals would be completed if property access is successfully obtained.

EPA expressed concerns regarding the difficulty in obtaining property access on behalf of another federal agency, as a search warrant would be required and USACE would be conducting all of the investigation efforts. USACE noted that some states are willing to write a letter to homeowners, recommending that property access be granted to USACE because it is in the homeowner's best interest to have the investigation completed. Some court cases are initiated by the state in cooperation with USACE, with the goal of obtaining property access. Although the court case scenario is lengthy and difficult, there have been instances where property access was legally obtained in court and the property cleanup was completed.

USACE noted that CERCLA has a low bar for what constitutes substantial and imminent endangerment. EPA acknowledged that this is true for requesting property access, as right-of-entry requests can be sent without significant evidence of a threat to human health on the property, but this bar is significantly higher when evidence for substantial and imminent endangerment is required during a court case.

DDOE agreed to check with their legal counsel one more time on this issue, representing their final attempt to assist with obtaining property access.

USACE confirmed that no further attempts to gain property access are planned for the 10 remaining residential properties where right-of-entry was not obtained for arsenic soil sampling.

4825 Glenbrook Road Developer Response

The Partners briefly discussed the response from the developer who constructed 4825 Glenbrook Road. EPA confirmed that no useful information was obtained because the developer claimed business confidentiality for his official response, as described at the June 2011 Partnering meeting. Based on opinions expressed by USACE legal counsel, this official response is considered unresponsive. EPA noted that business confidentiality remains valid until it is fully reviewed and rejected by the legal counsel.

Next Steps

DDOE will check with their legal counsel one more time regarding the inaccessible Fordham Road property, representing their final attempt to assist with obtaining property access.

I. Partner's Parking Lot

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

The "Partners Parking Lot" is an informal list designed to assist the Partners in tracking ideas, collaborations, research and tasks. The list is not a formal document specifying actions that must be taken.

The list was reviewed and updated. Discussion of other Parking Lot topics is summarized below.

Parking Lot Topics

- In response to USACE's inquiry, EPA mentioned that all signed Memorandums for Record (MFRs) were previously organized and maintained in a single location by Ted Henry.
- USACE confirmed that they will submit comments on the April 2012 draft final health consultation on the 4825 Glenbrook Road site. This document was prepared by the Agency for Toxic Substances and Disease Registry (ATSDR), and details were provided at the January 2012 Partnering meeting.
- Community Outreach mentioned an inquiry from Tom Smith, ANC3D Commissioner, regarding the status of water utility replacement activities at Glenbrook Road and Rockwood

Parkway. Based on a meeting with USACE, DC Water concluded that the utility efforts would not be considered high probability, but they have not contacted USACE to further coordinate their efforts. USACE replied that this DC Water effort was delayed because they could not locate a qualified, available contractor with chemical munition expertise. Existing pipes will be pulled out and destroyed instead of removing them via major excavations. Although there is likely a low probability of encountering munitions during this effort, the risks have not been formally assessed to date. If DC Water conducts the Glenbrook Road portion of their effort in conjunction with the 4825 Glenbrook Road house demolition, then a separate standby ordnance contractor would be unnecessary.

J. Agenda Building

The next meeting is tentatively scheduled for Thursday, May 31, 2012 and will primarily focus on the groundwater investigation. Upcoming meetings are tentatively scheduled for the following Thursdays: June 21 and July 26, 2012.

K. Adjourn

The meeting was adjourned at 1:41 PM.