

**Spring Valley Partnering Meeting
December 7, 2017
Spring Valley Project Federal Property Conference Room**

Name	Organization/Address	
Brenda Barber	USACE – Baltimore	X
Todd Beckwith	USACE – Baltimore	
Janelle Boncal	Parsons	
Bethany Bridgham	American University	X
Sean Buckley	Parsons	X
Paul Chrostowski	CPF Associates, American University Consultant	
Tom Colozza	USACE – Baltimore	
Jennifer Conklin	DOEE	
Kathy Davies	EPA – Region III	
Laura Williams for Dr. Peter deFur	Environmental Stewardship Concepts/RAB TAPP Consultant	X
Diane Douglas	DOEE	
Chris Gardner	USACE – Corporate Communications Office	X
Alma Gates	RAB Member – Horace Mann Representative	
John Gerhard	Weston Solutions	
Whitney Gross	ERT – Community Outreach Team	X
Steven Hirsh	EPA – Region III	X
Holly Hostetler	ERT	X
Dawn Iovan	EPA – Region III	
Carrie Johnston	ERT – Community Outreach Team	X
Carlos Lazo	USACE – Government Affairs Liaison	
Lowell (J.R.) Martin	USACE – Site Operations Officer	X
Chris Moran	Weston Solutions	
Bobby Nelms	Parsons – Safety Officer	X

Steve Norman	ECBC	
Dan Noble	USACE – Baltimore	X
Cliff Opdyke	USACE – Baltimore	
Randall Patrick	Parsons	X
Amy Rosenstein	ERT – Risk Assessor, Independent Consultant	
Tom Rosso	ECBC	
Gary Schilling	USACE – Baltimore	X
Jim Sweeney	DOEE	
Kellie Williams	USACE – Huntsville	
Bruce Whisenant	USACE – Huntsville	X
Scott Wunschel	Parsons – Site Manager	X
Rebecca Yahiel	ERT – Community Outreach Team	X
Alex Zahl	USACE – Baltimore	X

Summary of 7 December 2017 Spring Valley Partnering Meeting

Consensus Decisions

- None

7 December 2017 Action Items

- Discuss limitations to AU grounds-keeping and other staff from making visits to 4835 Glenbrook Road during the sampling phase.
- USACE Baltimore needs concurrence letters from the EPA Region III and District Department of Energy and Environment (DOEE).

Thursday 7 December 2017

A. 4825 Glenbrook Road Remedial Action

The goal of this segment of the meeting was to review the status of the remedial action at 4825 Glenbrook Road.

Parsons provided a brief update on the status of the remedial action at 4825 Glenbrook Road.

1. Recent Activities

On October 5, Parsons began to break up the former concrete retaining wall footer that was positioned parallel between 4825 Glenbrook Road and 4835 Glenbrook Road. The process of breaking down the concrete into 6x6x6 inch pieces and rebar into smaller pieces was completed on November 13. This was followed by the deconstruction of the sump area and safety barriers, which were constructed to contain the dust and water mitigation from the concrete as it was being rubbleized. The deconstruction of the sump

and decontamination of the tools were completed on November 21. Crews filled 247 30-gallon drums with concrete and rebar rubble for incineration. The site was shut down November 22 and 23 for the Thanksgiving holiday.

2. Summary of 4835 Glenbrook Road

On November 27, crews began setting up for the basement sampling operation. The PDS (Personnel Decontamination Station), cascade system, and the compressor to fill the bottles were set up in the driveway. On December 4, crews began coring in the basement. A sump air sample and the first Geoprobe sample was collected on December 5, followed by the second sample which was collected on December 6. All the coring and Geoprobe samples in the kitchen were completed on December 6.

The core sample included: ~ 5 inches of concrete, a vapor barrier, and then ~5-6 inches of gravel. These findings are consistent with what was found at 4825 Glenbrook Road. The sampling interval is approximately 1 foot in depth.

The crew is using a Bosch Hammer Drill to pound in the Geoprobe, and the crew is reaching refusal at ~2 to 3 feet in depth at competent saprolite, rather than continuing to sample further into the competent saprolite. The sampling method includes boring holes in the concrete to prepare for the Geoprobe sample, and then a geologist logs the hole by going in with the Geoprobe team to collect the sample. Additionally, the relative time taken to advance the Geoprobe is measured to gauge for refusal and track changes in the lithography based on the density of material.

In response to a question from U. S. Army Corps of Engineers (USACE) Baltimore, Parsons explained that the sample is only going down ~2 to 3 feet, since the foundation was poured on top of competent saprolite. The zero mark of the sampling measurement begins at the top of the floor, not the bottom of the bore hole. Samples only contain about a foot of soil. So far, Parsons has only collected the minimum amount of soil to fill all the bottles. There have not been any photoionization detector (PID) hits or visual sightings of chemical agent contaminated media (CACM). Four boring holes have been completed so far.

In response to a question from USACE Huntsville, Parsons confirmed that the samples collected are closest to the area of interest and all four samples that have been collected are from the former kitchen area.

USACE Baltimore noted that some cores will be capped for future sub-surface soil vapor samples that may be taken at a later date.

The Depot Area Air Monitoring System (DAAMS) tubes were run for 1 hour in the sump area and came back negative for mustard (HD), lewisite (L).

In response to a question from USACE Huntsville, Parsons explained that the saprolite follows the contour of the hill, and the saprolite is shallower going uphill. Areas that have been excavated are flat and at the same level. In between the two houses the saprolite is at the same level, confirmed by the Geoprobe encountering refusal at 2-3 feet in the saprolite, as was expected.

The sampling plan is to set each of the holes (circled in red on slide 9) with 1-inch slotted polyvinyl chloride (PVC) for a future vapor point, in order to sample passive soil gas. The slotted PVCs will be set to only monitor the sub slab, not set into the soil at this point, unless the Project Delivery Team (PDT) requests otherwise. However, the vapor points will be in communication with the soil. The sample will be placed above the soil testing for soil gas. Since refusal is encountered at 2-3 feet, the house is sitting on competent saprolite. Soil gas is not expected to be an issue in that zone. The greatest likelihood for soil gas would be in the gravel layer between the vapor barrier and the top of the soil.

USACE Baltimore and Parsons discussed that after the initial sampling results come back they can reassess and adjust the sample points. Each hole will have a manhole cover in order to preform passive soil gas monitoring. This practice is typical for a finished basement sewer clean out.

3. Future activities

- Complete the collection of the basement foundation samples along the 4825 Glenbrook Road/4835 Glenbrook Road boundary.
 - The sampling progress is going well. A time frame will be determined based on progress made in the next study area.
- Both interior sampling and outside sampling is tentatively scheduled to be completed by December 21/the beginning of the holiday break. However, the outside sampling may cause a delay in the schedule.
- After Christmas Break:
 - Determine the path forward for the shared property line based on the Board of Investigation (BOI) findings.
 - Over-excavate areas of elevated arsenic in the former high probability areas.
 - Possibly install cement lagging in the soldier piles along the property line with 4801 Glenbrook Road. The team aims to complete the lagging in a timely schedule to avoid complications in contracting. Parsons plans to order the cement lagging and, if necessary, adjust the lagging to the topography. The lagging can only be adjusted down because there is only a limited amount of soldier pile in which to put the lagging. To adjust the height of the soldier pile and lagging, the cement lagging will be removed and the pile cut.

Parsons confirmed the sampling sequence of locations in the house; which started in the kitchen, into the office, and followed by the wine cellar. The hope is to continue sampling without going through the landing.

American University (AU) removed art and other property from the house and crews prepped the sampling area in the basement by thoroughly covering the interior with cardboard, including door jams, floors and walls.

USACE Baltimore commented that an agreement needs to be made to limit AU grounds-keeping and other staff from making visits to the house for the time being. AU confirmed this.

4. Schedule

Completion of the schedule and the path forward for the shared property line is dependent on the basement sampling results and the resolution of the BOI findings.

In response to a question from Community Outreach Team, USACE Baltimore explained that there are no plans for the Korean Ambassador's property at this time due to the open issues and present work load at 4825 Glenbrook Road and 4835 Glenbrook Road.

USACE Site Operations Officer noted that the schedule could be impacted due to the upcoming low temperature forecast, as the PDS may not be able to operate in those conditions.

In response to a question from USACE Baltimore, Parsons explained that during the ~1 to 1.5 months it takes for the pre-cast concrete lagging to be ordered and arrive, the focus will turn to the arsenic removal, which only requires one crew. Work on the soldier pile lagging installation will not begin until February.

In response to a question from Community Outreach Team, Parsons explained that at this time there is no timeline for installation of the lagging.

USACE Baltimore suggested that the timeline needs to be discussed in full detail by the PDT.

B. Board of Investigation

A brief update on the Spring Valley Board of Investigation (BOI) was provided by the BOI's president.

The BOI was appointed on August 18 and conducted investigations and interviews at the site for two weeks. The BOI is of the opinion that the on-site leadership and work crews are of the highest quality and should continue at this work site.

The BOI does have findings, but aims to not be prescriptive in its recommendations by leaving the technical decisions to the technical expertise of the site leadership and crew on how to comply and resolve the findings.

The BOI reports to the acting general officer, who appointed the BOI. The acting general officer will need to be briefed before the report or findings go to anyone else. Once the acting general officer reviews the report, then the technical applications will be applied and work on the site may begin again. The general officer has not yet been briefed, but an out-brief has been provided to Colonel Chamberlayne, USACE Baltimore, and Colonel Hurley, USACE Huntsville.

The BOI found eight Present and Contributing findings that contributed to the potential exposure incident, including one Environmental finding; and six Present but Not Contributing findings. All of the findings are based on the opinions of the BOI.

1. Findings

a. Present and Contributing Findings

- Workers from Excavation Teams 1 and 3 were likely exposed to chemical compounds due to lack of respiratory and dermal protection from contamination.
- Workers encountered odors that the workers assumed to be benign and continued to work without addressing the odors. Through interviews, the BOI discovered that the workers all reported strong odors, and working around odors attributed to CACM. Based on the workers' familiarity with the odors, awareness of what had been found in the soil, the air monitoring system and process, the lack of detections in air monitoring, and the conservative modelling, the conclusion of the BOI is that the workers made an experienced decision, but that upgraded personal protective equipment (PPE) would have been more prudent. The BOI's suggestion of upgraded PPE or engineering controls is for site expertise to evaluate the PPE and make a recommendation to go back to work.
- The activity hazard analysis (AHA) did not address the odors that workers began to detect in February 2017. The BOI recommends an AHA for the detection of odors. However, the workers reported to the BOI that odors are common at excavations and are part of the job.
- The Excavation Teams failed to recognize the presence of exposure symptoms. In interviews, workers reported that they were unsure what the symptoms may have indicated. Members of Team 1 reported that they experienced exposure symptoms and smelled a peppermint odor. Team 1 reported that there was some communication between Team Leads on Teams 1 and 3. One worker reported retching when exiting the PDS, but that symptom was not communicated. The Team 3 Lead exited the PDS and vomited, and said he had experienced that before (at another site, not Spring Valley). The Team 3 Lead notified the Parsons Safety Officer, work was stopped, and emergency measures were implemented. The BOI recommends better communication between crews, especially concerning exposure odors and symptoms.
- The communication of the detection of odors and mild exposure symptoms was inconsistent or unreported. The BOI recommends training concerning the detection of odors and mild exposure symptoms, and the development of a standard operating procedure (SOP). In interviews, crews talked about odor and symptoms recognition for agents. Odor and recognition of agents is in the work plan and the Interim Guidance. The BOI recognizes the experience of the crew, however the BOI believes

the communication of the detection of odors and mild exposure symptoms is a finding and requires attention.

- Training and response to odors was insufficient given the presence and types of odors present at the excavation. The BOI believes this was due to site specific training. The BOI is aware that the work crews are trained to recognize odors and exposure symptoms through HAZWOPER and other certifications. The BOI found that the site specific training does not address response to odors at a site where odors are expected.
- (Environmental) - American University Experiment Station (AUES) compounds and CACM were present at the excavation; leading to possible exposure of the workers to contamination. In addition, the configuration of the excavation area, with high soil levels on two sides and a retaining wall approximately waist high on the third side, caused limited air flow and low ventilation. The crews were working in close proximity to the soil, using short handled excavation tools on a hot day. All of these environmental variables may have contributed to a concentration of the AUES compounds.
- The configuration of the air monitoring instrumentation failed to monitor the breathing zone, as required in the work plan. There is no clear definition of what the breathing zone is in the work plan. The BOI recommends upgrading PPE.

b. Present but Not Contributing Findings

- Workers from Teams 1 and 3 were not exposed to HD, L, chloropicrin (PS), phosgene (CG), cyanogen chloride (CK), or arsenical compounds. Dr. Roger Macintosh, occupational physician and a member of the BOI, and was able to supervise the handling, preservation, and analysis of the blood and urine samples. The samples were analyzed for HD, L, and similar compounds. The BOI reviewed analytical samples from soil and air, symptoms, and interviews, and believes there are no latent or long term effects of the exposure to the workers. Though the BOI does not know what workers were exposed to and will not know; the BOI believes with a high degree of confidence that the workers were not exposed to HD, L, PS, CG, CK or arsenical compounds. The workers will receive an official letter informing the workers that they were not exposed to HD, L, PS, CG, CK or arsenical compounds.
- The site mitigation was conducted in level C PPE, which the BOI believes was not adequate because Level C PPE left the workers' skin and hair exposed.
- The BOI believes there were an inadequate number of air tanks on-site to support mitigation in Level B, as cited in the work plan. The BOI noted there were four air tanks present on the day of the BOI site visit.
- There were inadequate provisions for skin decontamination; showering, reactive skin decontamination lotion (RSDL), and quadrant monitoring prior to offsite transport. The BOI was informed that the site could have performed quadrant monitoring, but opted not to do so in an effort to save time. The BOI recommends adding showers and RSDL on site during work in an environment with known CACM, HD, or L.
- The last two findings are related to the absence of emergency medical service (EMS) on site and a memorandum of agreement (MOA) with George Washington (GW) Hospital. The BOI is aware that the Interim Guidance does not require the site to have EMS and MOA in place in a low probability scenario. It is the opinion of the BOI that EMS and MOA requirements should be revisited. Based on the possibility of encountering agent, EMS on standby at the site and an MOA or contractual agreement with GW Hospital is absolutely necessary. The BOI recognizes this is a loophole in the 2009 Interim Guidance, and is a Department of Army level recommendation. The BOI will brief the Department of the Army.

In response to a question from USACE Site Operations Officer, the BOI president explained that the recommendation for having EMS onsite is Army-wide and includes **anywhere there is a reasonable probability that CACM, HD, or L is present**, including Glenbrook Road sites and any sites in Spring Valley with similar risks.

USACE Huntsville noted that the CACM was at residual levels when encountered at 4825 Glenbrook Road along the retaining wall going into 4835 Glenbrook Road. The PDT believed it was not a situation where very much agent was seen and safety should be reassessed. The level was residual and the results that came out were on the low-level laboratory analytical side, not through air monitoring. There were no alarms and the CACM was difficult to visually identify; even the test pits did not result with any alarms during that operation. It may be difficult to accurately assess the risks when on these properties and on future properties.

Parsons and the BOI president agreed that CACM is not considered chemical agent, it is not containerized. The Interim Guidance states that when chemical agent is containerized, there must be EMS support; but if there is CACM that is not containerized, the guidance does not require EMS support. The Interim Guidance does not prohibit the site from employing EMS.

The BOI president reiterated that is the opinion of the BOI that it is a mistake to not have EMS onsite. If crews are onsite **with CACM that is not containerized**, the crews should have EMS support and have a contract in place with GW Hospital if something happens.

In response to a question from the BOI president, Parsons explained that outside of the Glenbrook Road area, CACM is not usually encountered; agent is usually found containerized.

Parsons added that for the 4835 Glenbrook Road basement sampling operation, the Interim Guidance MOA language was incorporated into the Statement of Work (SOW).

The BOI president explained that these BOI's recommendations are to help Parsons start preparing to get back to work. The report is close-hold; do not print the report out or email the report, because the acting general officer must be briefed before this information is released. The intent is that as soon as Colonel Parrott or Colonel Graham are briefed, the report will be released. There is a Freedom of Information Act (FOIA) request at USACE Office of Council for this report right now.

USACE Baltimore added that Colonel Chamberlayne, USACE Baltimore authorized just the findings and recommendations section of the report to be released to Parsons and Edgewood Chemical Biological Center (ECBC). ECBC has a full copy and Parsons can get a copy.

In response to a question from USACE Huntsville, the BOI president and USACE Baltimore explained that the configuration of the miniature chemical agent monitoring system (MINICAMS), DAAMS, and A-point monitoring at the excavation did not adequately monitor the breathing zone. Parsons noted that an example of a corrective action might be to have each worker clip a hydrogen cyanide (HCN) monitor on their person.

In response to a question from USACE Baltimore, the BOI president explained that the brief for the acting general officer may be at any time. The brief may happen via phone and the BOI president expects to brief the acting general officer soon.

The BOI president noted that there are a few revisions that need to be completed. Once the BOI members approve the final report, the time line for completion of those revisions, printing, and shipping is a few days.

In response to a question from USACE Baltimore, the BOI president explained that there is nothing in the report that speaks to specific risks for the public, nor was there mention that the perimeter air monitors did not indicate anything. The recommendations for upgraded PPE and engineering controls are written to be

protective of the workers and the public. When workers are mentioned in the report, the public is mentioned as well. That being said, this was a localized event at the excavation site.

In response to a question from Parsons, the BOI president confirmed that Parsons may verbally tell the Excavation Teams that they were not exposed to HD, L, PS, CG, CK or arsenical compounds. Based on the testing, the BOI cannot attribute the exposure to anything. The blood and urine samples were handled and analyzed correctly by the Center for Disease Control (CDC) under the supervision of an occupational physician, who is an expert in HD and L.

In response to a question from Parsons, the BOI president confirmed that he would look into the Health Insurance Portability and Accountability Act of 1996 (HIPAA) process of releasing the medical records to the workers.

C. PRP Investigation

USACE Baltimore provided a brief update on the Potentially Responsible Party (PRP) Investigation.

The PRP Investigation report is almost final and will be completed within the next 30-60 days. There is some financial information concerning the costing portion of the report that is still being gathered. Once the report is complete, there will be a statement from the USACE lawyer that USACE may share with the public.

D. Site-Wide Decision Document (DD)

The goal of this segment of the meeting was to review the status of the Site-Wide Decision Document.

USACE Baltimore provided a brief update on the Site-Wide Decision Document (DD).

USACE Baltimore needs concurrence letters from the EPA Region III and District Department of Energy and Environment (DOEE).

F. Site-Wide Remedial Action (RA)

The goal of this segment of the meeting was to review the status of the Site-Wide Remedial Action.

USACE Baltimore provided a brief update on the Site-Wide Remedial Action (RA). USACE is still in the planning stage for all of the efforts.

1. Public Safety Building

USACE has not yet seen a draft of the workplan for the Public Safety Building (PSB), which is expected later in December. At that time, USACE will begin to review the workplan and then submit the workplan to the Partners after the holidays.

In response to a question from AU, USACE Baltimore explained that there is concern that the PSB work plan has not yet been finalized. The original mobilization date was February. USACE Baltimore will discuss the PSB work plan with Weston Solutions and the USACE Baltimore project manager. The mobilization should go fairly quickly after the draft finalization is complete.

USACE is preparing the probability assessment now, and the project is being characterized as low probability. The probability assessment addresses chemical warfare materiel (CWM) and munitions and explosives of concern (MEC). All of the work on the PSB site from 2009-2011 was conducted in low probability.

USACE Huntsville noted that certain sections of Lot 18 were excavated in high probability, but all the areas around the PSB were conducted in low probability.

2. The neighborhood

A draft of the Advance Geo-Classification Quality Assurance Project Plan (AGC-QAPP) should be sent out to EPA Region III and DOEE for review before the holidays.

In response to a request from EPA Region III, USACE Baltimore confirmed that EPA Region III will be notified who has reviewed the AGC-QAPP when the document is sent to EPA Region III. The review time period for EPA Region III may be reduced depending on who has already reviewed the document.

Some of the first group of homeowners were briefed on the project at the federal property last week.

E. Groundwater Feasibility Study

The goal of this segment of the meeting was to review the status of the Groundwater Feasibility Study.

USACE Baltimore provided a brief update on the Groundwater Feasibility Study (FS).

1. Policy Issue

There is still a differing of positions between the EPA and the Department of Defense (DoD) concerning restoration of aquifer versus mitigation of risk. USACE Baltimore has been instructed by USACE Headquarters (HQ) to redraft the Groundwater FS to include 'Monitored Natural Attenuation' as an alternative. Once the change is completed, the Draft Groundwater FS will be submitted to USACE HQ along with the Draft Site-Wide Proposed Plan. After the two documents have been submitted, USACE Baltimore will discuss with USACE HQ how to complete the Draft Site-Wide Proposed Plan and then release the Draft Site-Wide Proposed Plan to everyone else. At this time the timeline is TBD, however USACE Baltimore expects to submit the documents to USACE HQ before the end of January 2018.

In response to a question from AU, USACE Baltimore explained that 'Monitored Natural Attenuation' is collecting enough data to indicate that something is occurring to actively reduce the concentration of a contaminant. The attenuation is monitored until the contaminant is at a level that no action is necessary and remedial goals are met. Estimating a timeline for the attenuation requires a great deal of information.

Some of the data needed was not collected during the Site-Wide Remedial Investigation (RI), so that data will need to be collected now or during the Site-Wide Remedial Design (RD).

The Restoration Advisory Board (RAB) was interested in knowing more about the policy issue and USACE Baltimore suggested that a presenter come to the RAB meeting and speak on the issue in March or May 2018.

G. Open Issues and New Data

EPA Region III RPM has accepted a promotion and may be leaving the project, but anticipated staying on and training a replacement.

AU noted that since it has been 5 years since USACE was active on AU campus, there is a new generation of students and employees that are not familiar with the Spring Valley project. AU is expanding their educational outreach.

Community Outreach added that at the last RAB meeting there were AU students in attendance asking questions about USACE Spring Valley activity.

H. Future Agenda Items

1. BOI report
2. Groundwater FS
3. 4825 Glenbrook Road/4835 Glenbrook Road
4. Site-Wide DD
5. Site-Wide RA

I. Agenda Building

The next meeting was scheduled for Thursday, February 22, 2017.

J. Adjourn

The meeting was adjourned at 11:36.