



SPRING VALLEY FORMERLY USED DEFENSE SITE PROJECT
RAB Meeting

January 9, 2018
7:00 – 8:00 p.m.

UNDERCROFT MEETING ROOM
ST. DAVID'S EPISCOPAL CHURCH
5150 MACOMB ST. NW, WASHINGTON, DC

Agenda

- 7:00 p.m. I. Administrative Items**
Co-Chair Updates
▪ Introductions, Announcements
Task Group Updates
▪ RAB Membership
- 7:05 p.m. II. USACE Program Updates**
Site-Wide Remedial Design/Remedial Action
Groundwater Study
4825 Glenbrook Road
Board of Investigation
- 7:30 p.m. III. Community Items**
- 7:40 p.m. IV. Open Discussion & Future RAB Agenda Development**
Upcoming Meeting Topics:
▪ (Suggestions?)
▪ Policy issues between USACE and EPA concerning
Groundwater restoration at CERCLA sites.
- *Next meeting: March 13, 2018**
- 7:50 p.m. V. Public Comments**
- 8:00 p.m. VI. Adjourn**

****Note: The RAB meets every odd month.***

SPRING VALLEY FORMERLY USED DEFENSE SITE

Restoration Advisory Board Meeting 9 January 2018

“The USACE Mission in Spring Valley is to identify, investigate and remove or remediate threats to human health, safety or to the environment resulting from past Department of Defense activities in the area.”

“The views, opinions and findings contained in this report are those of the authors(s) and should not be construed as an official Department of the Army position, policy or decision, unless so designated by other official documentation.”



AGENDA REVIEW

Co-Chair Updates

- Introduction, Announcements

Task Group Updates

- RAB Membership

USACE Updates

- Site-Wide Remedial Design/
Remedial Action
- Groundwater Study
- 4825 Glenbrook Road
- Board of Investigation

Community Items

Open Discussion & Future RAB Agenda Development

Public Comments





CO-CHAIR UPDATES

Introductions



CO-CHAIR UPDATES

Announcements

Website Updates:

- November and December Monthly Site-Wide Project Updates
- Weekly 4825 Glenbrook Rd Project Updates with photos
- November RAB meeting minutes
- October Partner meeting minutes
- Updated Public Safety Building Factsheet
- December 2017 Corps'pondent

The screenshot displays the US Army Corps of Engineers website for the Baltimore District. The header includes the Corps logo, the name "US Army Corps of Engineers", and the "BALTIMORE DISTRICT" label. A search bar and navigation menu (HOME, ABOUT, BUSINESS WITH US, MISSIONS, LOCATIONS, CAREERS, MEDIA, CONTACT) are visible. The main content area features several sections:

- Announcements:** A section titled "Next Restoration Advisory Board Meeting - January 9, 2017" with details about the meeting and a "Restoration Advisory Board Seeks New Member" notice.
- Final Site-Wide Decision Document Now Available:** A notice about the availability of the final decision document for download.
- Spring Valley Overview:** A section providing an overview of the Spring Valley Formerly Used Defense Site (FUDS).
- Project Efforts:** A list of project efforts including "Project Update", "4825 Glenbrook Road", "Site-Wide", and "Groundwater".
- Project Documents:** A section stating that project documents are available in the Information Repository at the Tenley-Friendship Branch Library.
- Associated Organizations:** A section for associated organizations.

On the right side of the screenshot, there are two prominent buttons: "Site-Wide" and "The Corps'pondent". Below these, there are images of a "SIGN IN" sign and a "PREV NEXT" navigation button.



TASK GROUP UPDATES

There is one opening for a community member to join the Spring Valley RAB.

If you live and/or work within the project area and are interested in serving on the RAB, please complete an application and mail it to the U.S. Army Corps of Engineers. Residents can obtain an application by calling the Community Outreach Team at 410-962-0157 or by visiting <http://www.nab.usace.army.mil/Home/Spring-Valley/Community-Participation/>.

To learn more about volunteering, please call or e-mail Malcom Pritzker, RAB membership chair, at 202-537-9595 or malpritz@aol.com.



SPRING VALLEY
RESTORATION
ADVISORY BOARD



U.S. ARMY CORPS OF ENGINEERS
BALTIMORE DISTRICT
BALTIMORE, MD 21201



US Army Corps
of Engineers.

TASK GROUP UPDATES



We've Moved



Beginning January 16, 2018

The U.S. Army Corps of Engineers,
Baltimore District Headquarters

will be located at

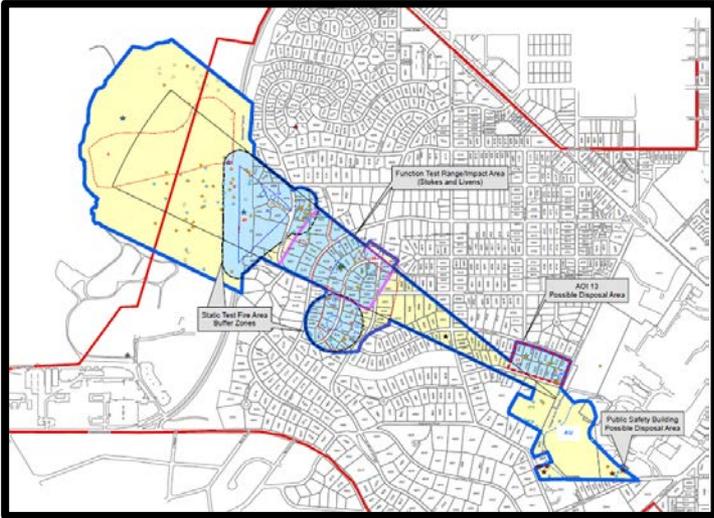
2 Hopkins Plaza
Baltimore, MD 21201



During the move, we will have limited access to our phone lines. Please contact the Community Outreach team at Rebecca.e.Yahiel@usace.army.mil or Carrie.r.Johnston@usace.army.mil if you need any assistance within the next couple weeks. Thank you for your patience!



US Army Corps
of Engineers.



SITE-WIDE REMEDIAL DESIGN / REMEDIAL ACTION (RD/RA)

USACE Updates



SITE-WIDE RD/RA

Our contractor team continues to draft the Site-Wide Remedial Design Work Plans.

These plans will develop the details of carrying out the selected remedial actions:

- **Removal of contaminated soil at small areas in the southern portion of AU campus and at one residential property;**
- **Clean under the foundation of AU's former Public Safety Building;**
- **And conduct the final survey effort at 91 residential properties.**



Foundation slab of AU's former Public Safety Building

The team held two small group meetings for the first group of Remedial Action residents (18 properties). Ten properties participated.

During these meetings, USACE began the meeting with an informal presentation, followed by a Question & Answer session. The team discussed the RA process, the next steps, and answered questions.

We will continue to host these meetings as we approach field work at these homeowners' properties.

SITE-WIDE RD/RA

Tentative Schedule

✓ June 15, 2017	Signed the Decision Document .
✓ June 30, 2017	Contract awarded.
✓ July 2017	Begin Remedial Design .
~ Winter 2018-2020	Conduct Remedial Action field work, including at the former Public Safety Building site at AU.



US Army Corps
of Engineers.

GROUNDWATER STUDY

USACE Updates



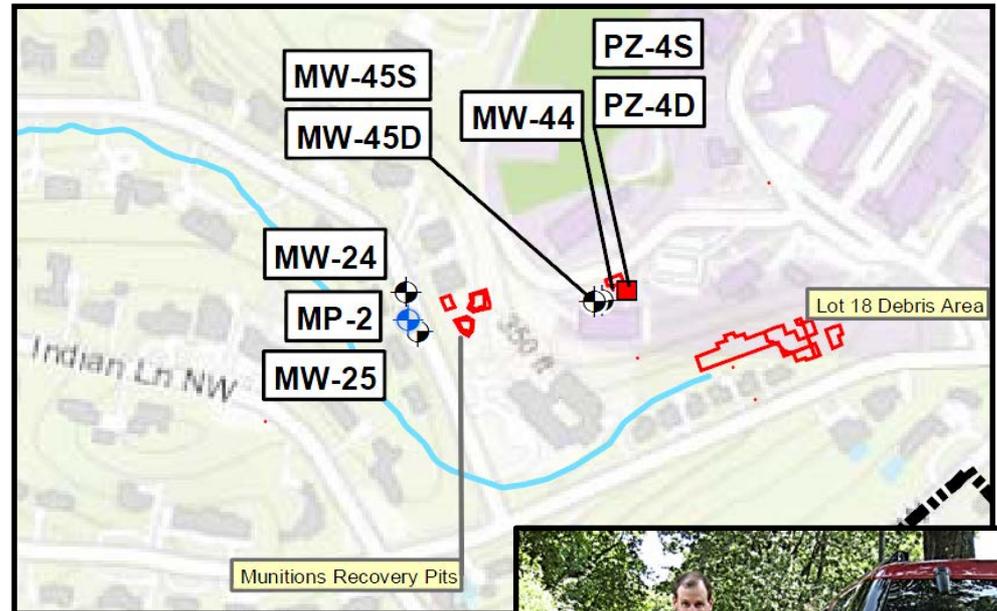
US Army Corps
of Engineers.

GROUNDWATER FEASIBILITY STUDY (FS)

The Army Corps and their regulatory Partners have unresolved comments regarding groundwater cleanup requirements.

The Army Corps is coordinating with Army HQ to determine how to proceed with the unresolved comments between the Partners.

In addition to working towards finalizing the FS, the team began drafting a Groundwater Proposed Plan and consulting with the Army on a preferred remedy.



4825 GLENBROOK ROAD

USACE Updates



SAMPLING EFFORTS AT 4835 GLENBROOK RD

Last November, the team finalized the work plans for a phased approach to collect soil borings at 4835 Glenbrook Rd. This sampling effort is part of our ongoing investigation of the contaminated soils along the 4825/4835 shared property line. The sampling teams wear Level B PPE, and use the same standard air monitoring procedures applied at 4825 Glenbrook Road.

The first phase involved:

- **Completing a single row of borings taken both inside and outside the house.**
- **Installing vapor sampling points and collecting subsurface air samples.**
- **Collecting an air sample from the basement sump.**
- **Sampling the exposed concrete foundation wall along the shared property line.**

The sample results will be used by the team to assist in evaluating our 'return to work' plan.



SAMPLING EFFORTS AT 4835 GLENBROOK RD

At the end of November, our team began setting up the necessary sampling equipment in the driveway alongside the 4835 Glenbrook Road basement, as well as moving the MINICAMS shed closer to the shared property line, installing stairs, and making improvements to the walkways to optimize safety and efficiency.



Moving MINICAMS shed.



SAMPLING EFFORTS AT 4835 GLENBROOK RD



On Monday, December 4th our site operations team began the concrete coring and soil sampling operations in the basement of the adjacent property, 4835 Glenbrook Road.

The Community Outreach Team went door-to-door and met with nearby neighbors to answer questions about the new effort.



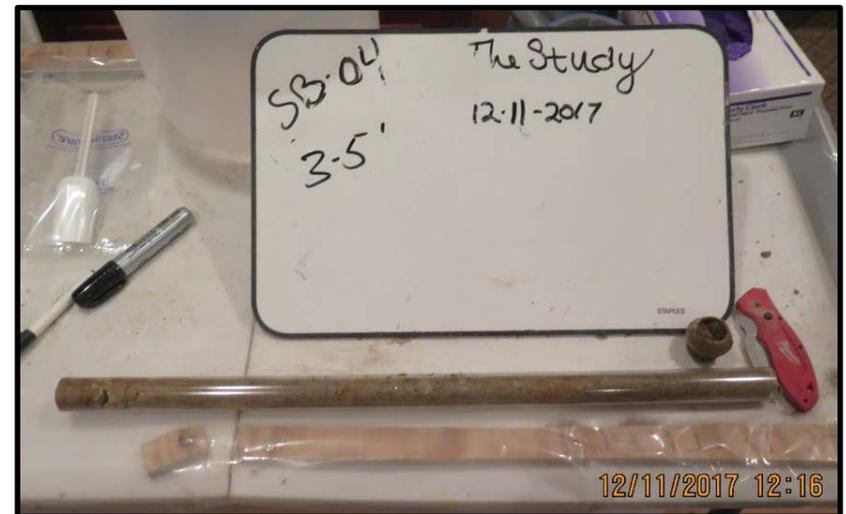
SOIL SAMPLING EFFORTS AT 4835 GLENBROOK RD

The crew collected 16 borings through the basement floor, that reached competent saprolite. Nothing unusual was visible upon initial visual assessment of all the soil samples except for Boring 7.

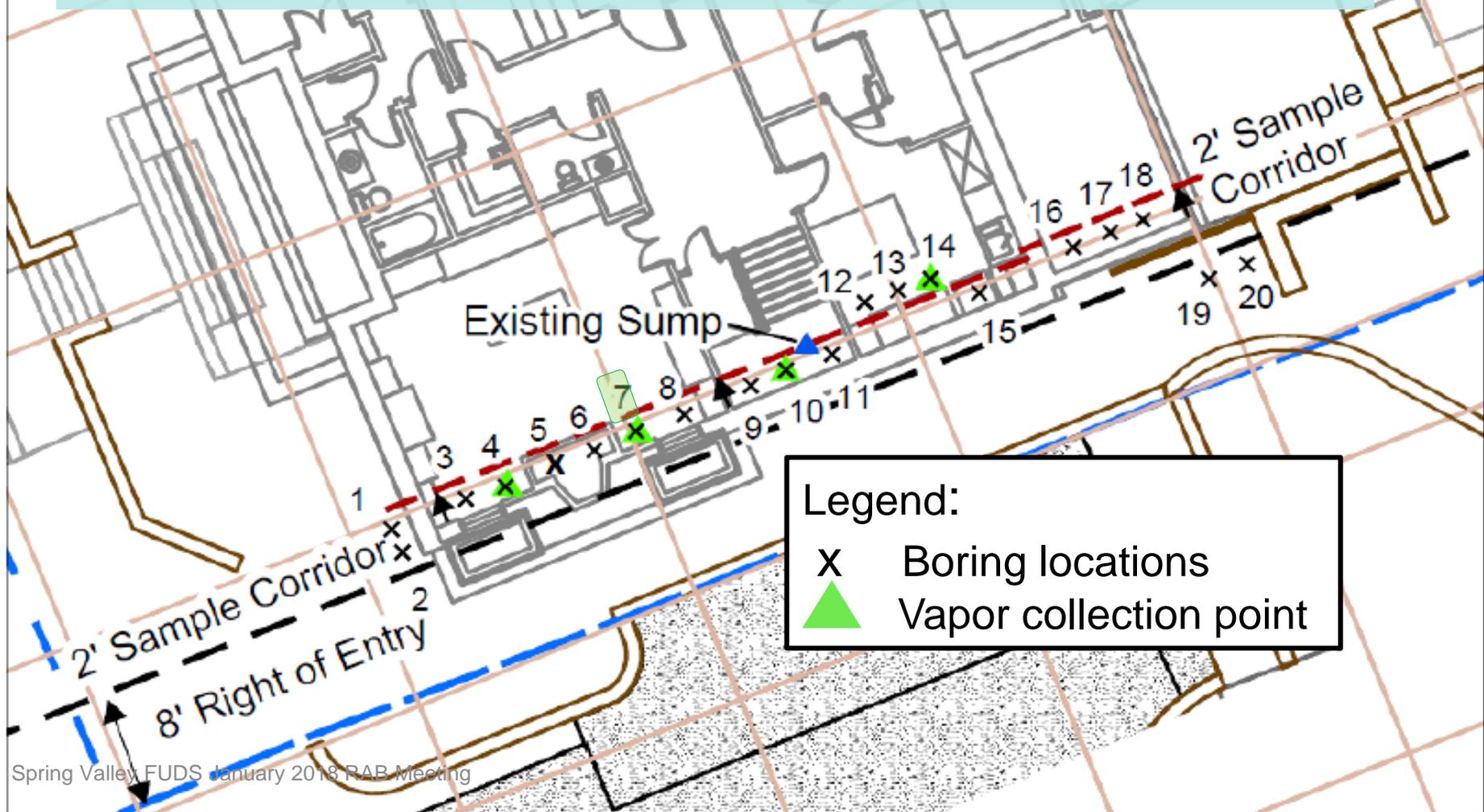
Subsurface vapor point (air sampling) units were installed at 4 of the boring locations. The crew also collected an air sample from the basement sump, testing for Mustard and Lewisite, which came back clear.



Sealed Boring and Installed Vapor point beside Manhole Cover



Last month, 24 samples at 16 locations were taken along the interior wall beside the shared property line. The outdoor boring locations were prepped before the holiday break and sampling began this week; two in the front corner of the home and two in the back patio area.



SOIL SAMPLING EFFORTS AT 4835 GLENBROOK RD

Barring any further unforeseen weather delays, we anticipate completing the outdoor sampling around the foundation of the house by mid-January.



4835 GLENBROOK RD SOIL SAMPLING RESULTS

Location	ECBC Results ?	Agent/ABPs	Date Recv'd
BH 03	Y	ND	12/13/2017
BH 04	Y	ND	12/15/2017
BH 05	Y	ND	12/15/2017
BH 06	Y	ND	12/15/2017
BH 07	Y	ND	12/20/2017
BH 08	Y	ND	12/20/2017
BH 09	Y	ND	12/20/2017
BH 10	Y	ND	12/20/2017
BH 11	Y	ND	12/21/2017
BH 12	Y	ND	12/8/2017
BH 13	Y	ND	12/13/2017
BH 14	Y	ND	12/13/2017
BH 15	Y	ND	12/13/2017



Boring 7

All indoor soil samples were cleared for agent (non-detect). The samples are now at a commercial lab being tested for the full suite of AUES chemical parameters as well as for pesticides.

Boring 7 had some slightly discolored soil, and small pieces of suspected AUES glassware were recovered.



NEXT STEPS AT 4835 GLENBROOK RD

- Conduct additional sampling along the exterior foundation walls along the front of the house, and the side by the driveway/garage.
- Complete sampling of the basement floor into the subgrade below the house.
- Complete front and backyard sampling.

*Advancing the Geoprobe with a
Hammer Drill.*



Preparing to bore through the patio floor.



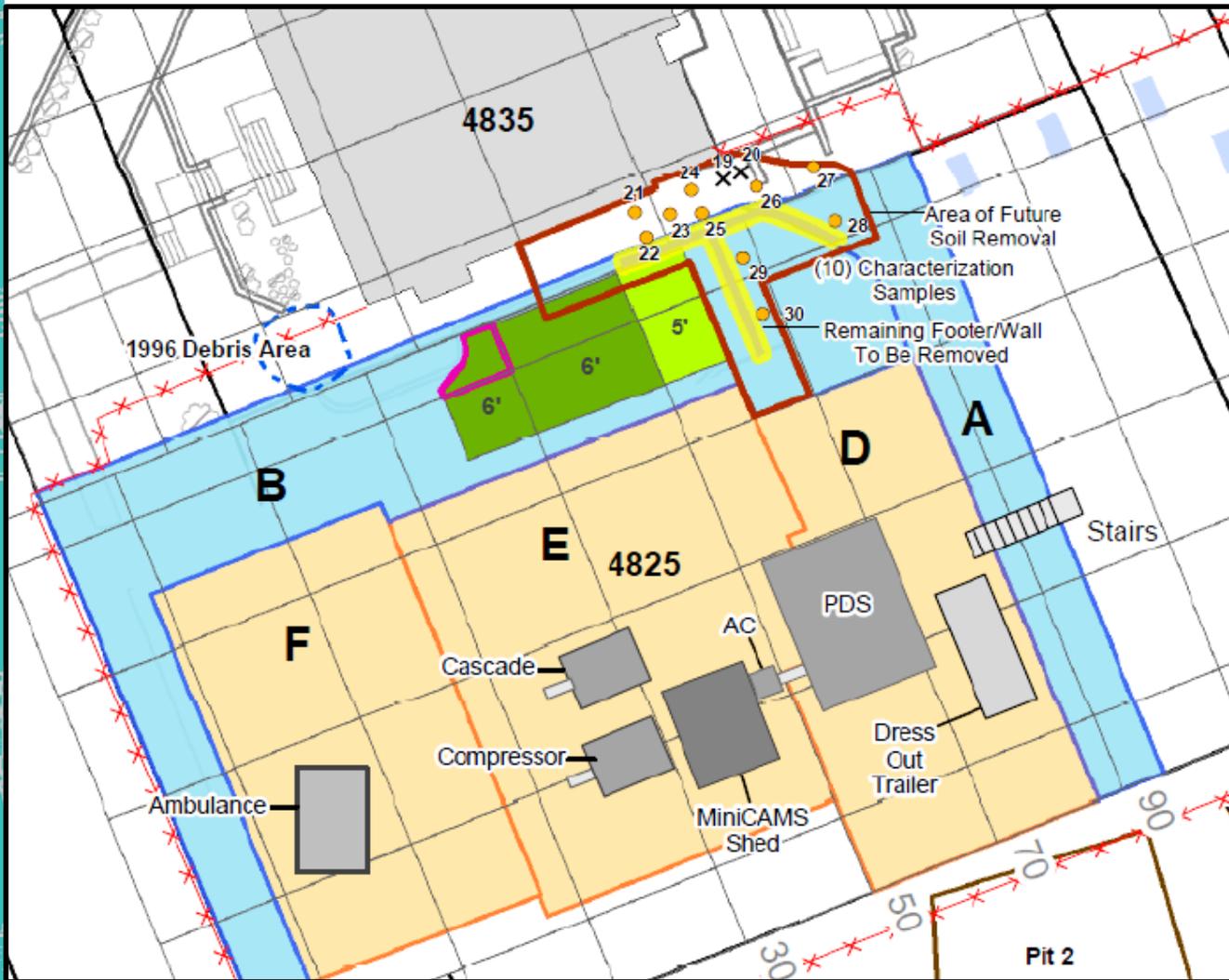
US Army Corps
of Engineers.

FUTURE ACTIVITIES AT 4825 GLENBROOK RD

Based on the Board of Investigation report, we are currently completing operations plans for an additional phase of soil borings, to be conducted

at the 4825 Glenbrook site.

The focus will be on the remaining soil to be excavated near the shared property line.



TENTATIVE SCHEDULE: GLENBROOK RD PROJECT AREA

January	<p>4825:</p> <ul style="list-style-type: none">▪ Ongoing site maintenance▪ BOI soil sampling along property line to begin ~mid-month (2-3 weeks duration) <p>4835:</p> <ul style="list-style-type: none">▪ Complete 1st row of sampling mid-month
February	<p>4825:</p> <ul style="list-style-type: none">▪ Complete BOI soil sampling▪ Ongoing site maintenance▪ Continue writing 'return to work' plan<ul style="list-style-type: none">➤ Resume intrusive work in Spring 2018 <p>4835:</p> <ul style="list-style-type: none">▪ Upon contract approval, resume basement sampling at approximately 50 sample locations (2-3 months of sampling)<ul style="list-style-type: none">➤ Complete sampling effort in late Spring/Summer 2018

BOARD OF INVESTIGATION

SAFETY INCIDENT – AUG 9, 2017

USACE Updates



US Army Corps
of Engineers.

BOARD MEMBERS

- Mr. Gary Schilling, Program Manager, NAB (*President*)
- Mr. Steve Norman, Chemist, ECBC (*Voting Member*)
- Dr. Roger McIntosh, Occupational Physician, PHC (*Voting Member*)
- Mr. Steven Hirsh, Environmental Engineer/RPM, EPA Region III (*Voting Member*)
- Mr. Jim Sweeney, Chief, Land Remediation and Development Branch, Department of Energy and Environment (*Voting Member*)
- Mr. Donnie Butler, Safety Specialist, HNC (*Non-voting*)
- Ms. Sharon Wilkinson-Barnes, Safety Specialist, NAB (*Non-voting*)
- Mr. Martin Chu (*Counsel, Baltimore District – Non-voting*)



BACKGROUND

- **Contractor:** Parsons
- **Mission:** Removal of Munitions and Explosives of Concern (MEC), Materiel Potentially Presenting an Explosive Hazard (MPPEH), Explosive Hazards, Industrial chemical hazards, and Chemical Warfare Materiel (CWM) as well as residence demolition at 4825 Glenbrook Road located in the Spring Valley Formerly Used Defense Site.
- The sequence of events that led to the likely exposures occurred on August 9, 2017 as workers were excavating soils on the property of 4825 Glenbrook Road, looking for glass, laboratory debris, and other anomalies.
- In accordance with the work plan, the workers wore personal protective equipment that did not provide respiratory or complete dermal protection.
- On **August 9, 2017**, three of seven workers hand excavating soil experienced exposure symptoms to an unknown chemical or chemicals, which did not result in any latent or long term health effects.
- The specific chemical species causing these effects has not been identified.
- The Safety personnel determined medical evaluation was necessary and transported the seven workers to GW Hospital.



DAILY SITE LOG 9 AUGUST 2017

09 August 2017

0630 Safety Brief

0700 Radio Checks, Traffic Signs in Place

0736 Team 3 Downrange

0919 Team 3 Cleared PDS

0910 Team 1 Downrange

1015 Team 1 Cleared PDS. WBGT 82.0

1047 Team 3 Downrange. WBGT 81.1

1130 Team 3 Cleared PDS. Start Midday Challenge

1148 Midday Challenge Complete

1220 Team 1 Downrange

1308 Team 1 Cleared PDS

1331 Team 3 Downrange

1405 WBGT 81.9

1416 Team 3 Cleared PDS, Intrusive Work Stopped

1427 Team 3 Lead Complaint of Vomiting and Nausea. Team 3 Tech 1 and Tech 2 Complaint of Nausea

1430 Team 1 Lead complaint of burning, itchy eyes; Tech 2 Complaint of Nausea; Second Tech 2 Complaint of Diarrhea

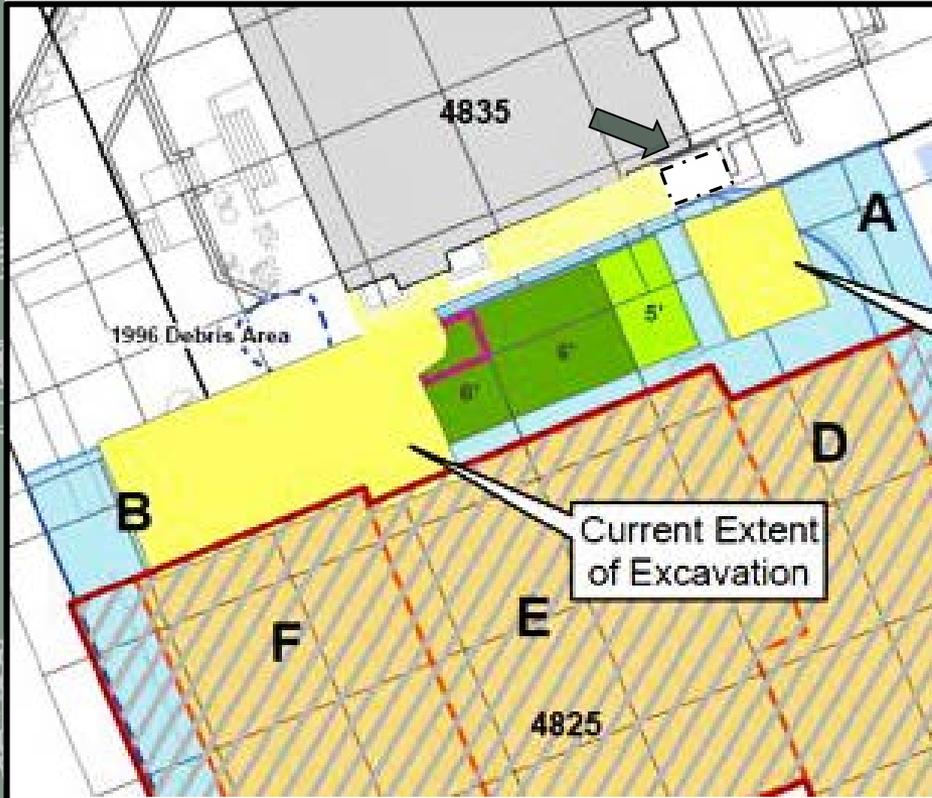
1448 USACE Site Safety Officer, Parsons Chief Safety Officer Notified of Reported Symptoms

1550 Transported the Following to the Hospital: Team 1 Lead, Team 1 Tech 2 (2), Team 3 Lead, Team 3 Tech 1, Team 3 Tech 2, and Heavy Equipment Operator



INCIDENT SITE

Current Excavation Map



View from the South



View from the West

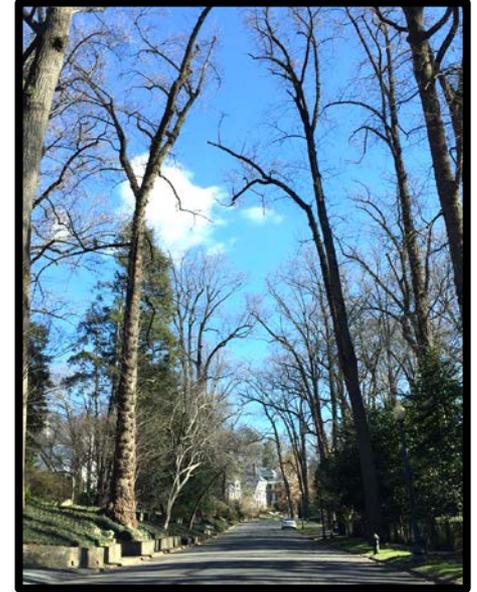


BOARD OF INVESTIGATION CONCLUSIONS

- It is the opinion of the board that at least three of seven contractor workers were exposed to an unknown substance, most likely by inhalation exposure on 9 August 2017. The board draws this conclusion based on exposure symptoms exhibited by the workers.
- The exposure was localized to the excavation work area which amplified the exposure to the workers due to the configuration of the area
- The substance causing the exposure symptoms remains unknown; however, the board has determined exposure was not caused by HD, L, PS, CG, CK, or arsenical compounds. Analytical results of soil samples taken at the excavation site and the spoils pile were non-detect for these compounds.
- A review of the medical records of the seven workers examined at GW Hospital on the evening of August 9 revealed no medical, historical, or physical signs of industrial chemical or chemical agent exposure.
- In the days and weeks following the August 9th incident, none of the workers had a recurrence of signs or symptoms that they experienced on the day of the event. No worker developed any delayed onset eye findings, skin blisters, or upper or lower respiratory complaints after the August 9, 2017 incident.
- The exposed workers were operating in Modified Level D PPE without respiratory, mucous membrane, or complete dermal protection.
- The Board has recommended the Project Delivery Team re-evaluate Personal Protective Equipment (PPE) and engineering controls to be protective of workers and the public prior to returning to work.



SPRING VALLEY FUDS RESTORATION ADVISORY BOARD



Community Items



SPRING VALLEY FUDS RESTORATION ADVISORY BOARD

Reminders:

- The next RAB meeting will be
Tuesday, **March 13th, 2018**



Upcoming Agenda Items:

- Policy issues between USACE, EPA, and the D.C. DOEE concerning Groundwater restoration at CERCLA sites.
- Suggestions?



SPRING VALLEY FUDS RESTORATION ADVISORY BOARD

AGENDA (con't.)

- **Public Comments**
- **Wrap-Up**



US Army Corps
of Engineers.

**U.S. Army Corps of Engineers
Spring Valley Restoration Advisory Board
St. David's Episcopal Church
Minutes of the January 2018 Meeting**

RESTORATION ADVISORY BOARD MEMBERS PRESENT AT THIS MEETING	
Greg Beumel	Community Co-Chair
Alma Gates	At Large Representative - Horace Mann Elementary School
John Wheeler	Community Member
James Sweeney	Agency Representative - Department of Energy & Environment
Mary Bresnahan	Community Member
Tom Smith	Community Member
Dr. Peter deFur or representative	Environmental Stewardship Concepts/RAB TAPP Consultant
George Vassiliou	Community Member
Dan Noble	Military Co-Chair/USACE, Spring Valley MMRP Manager
Paul Dueffert	Community Member
William Krebs	Community Member
Lee Monsein	Community Member
Steve Hirsh	Agency Representative - US Environmental Protection Agency, Region III
Mary Douglas	Community Member
Lawrence Miller	Community Member
Linda Argo	At Large Representative - American University
RESTORATION ADVISORY BOARD MEMBERS NOT PRESENT AT THIS MEETING	
Kathleen Connell	Community Member
Malcolm Pritzker	Community Member
ATTENDING PROJECT PERSONNEL	
Gary Schilling	USACE, Spring Valley Board of Investigation President
Brenda Barber	USACE, Spring Valley Project Manager
Alex Zahl	USACE, Spring Valley Technical Manager
Rebecca Yahiel	Spring Valley Community Outreach Program

Carrie Johnston	Spring Valley Community Outreach Program
Whitney Gross	Spring Valley Community Outreach Program
Holly Hostetler	ERT, Inc.
Chris Gardner	USACE, Corporate Communications Office

HANDOUTS FROM THE MEETING

- I. Final Agenda for the January 9, 2017 RAB Meeting
- II. Army Corps of Engineers Presentation
- III. December 2017 Monthly Project Summary
- IV. Spring Valley Formerly Used Defense Site Fact Sheet
- VI. December 2017 Corps' pondent

AGENDA

Starting Time: The January 2018 Restoration Advisory Board (RAB) meeting began at 7:12 PM.

I. Administrative Items

A. Co-Chair Updates

Dan Noble, Military Co-Chair/U. S. Army Corps of Engineers (USACE), Spring Valley MMRP Manager, welcomed everyone and opened the meeting. He noted that January 5, 2018 was the 25th anniversary of the 52 Court pit discovery.

1. Introductions

D. Noble introduced Gary Schilling, USACE Baltimore, President of the Spring Valley Board of Investigation (BOI) for the August 9 incident.

2. General Announcements

D. Noble reviewed website updates which included the November and December monthly project updates, the weekly 4825 Glenbrook Road updates and photos, November RAB meeting minutes, October Partner Meeting Minutes, December Corps' pondent, and the updated American University former Public Safety Building Summary and Next Steps Fact Sheet.

B. Task Group Updates

The Community Member vacancy on the RAB is still open.

USACE Baltimore District is moving offices to 2 Hopkins Plaza, Baltimore, MD 21201 on January 16, 2018.

II. USACE Program Updates

A. Site-Wide Remedial Design/Remedial Action

D. Noble briefly reviewed the Site-Wide Remedial Design (RD)/Remedial Action (RA).

The contractor hired by USACE continues to draft the Site-Wide RD Work Plans. The Site-Wide RA will be a three-pronged effort, consisting of:

- Small-scale contaminated soil removal on the southern American University (AU) campus and a residential property that borders the southern AU campus.
- Clean-up under the foundation of the former Public Safety Building (PSB), now that the PSB has been removed.
- Final survey effort at 91 private residences in the neighborhood with an elevated likelihood of a munition item left behind by former American University Experiment Station (AUES) activities.

USACE conducted two meetings for the first group of 18 Remedial Action residents. Ten residents participated. During these meetings, USACE discussed the RA process, next steps, and answered residents' questions. USACE will continue to reach out to the residents to answer any questions and will accommodate residents' needs for a different meeting time with USACE.

Question from Alma Gates, Community Member - Have all accepted that their property will be remediated?

D. Noble confirmed that the residents in the first group of 18 have accepted remediation. The first group of 18 residents is made up of homeowners that reached out to USACE in order to be prioritized first. USACE does not expect any issues with gaining access to the first 18 properties. In the larger group of 91 residents, there are home owners with whom USACE has not been able to make any contact, even after several attempts.

Question from Allen Hengst, Audience Member – Two questions about that residential property where you are going to do the removal of contaminated soil. I believe it is the Spaulding/Rankin area? Will you be doing anything with the Livens gun battery or will you leave it undisturbed?

D. Noble confirmed the Livens gun battery will be left undisturbed.

Question from A. Hengst, Audience Member - Ok. Is that gun battery in the right-of-way or is it actually on private property? In other words, I think there is a right-of-way in between AU's property line and that residence. And the Livens battery is in that right-of-way. Is that your understanding?

D. Noble explained that he did not know if there is a right-of-way, and if so, how big the right-of-way would be on either side of the property line. He understands the Livens gun battery is on private property, and seems to be within the private owner's fence line. He did not know what that meant as far as the legal line on the ground.

Comment from A. Hengst, Audience Member - I know that AU has a fence there. So that is the fence line AU has?

D. Noble confirmed this, and noted that the Livens gun battery is on the other side of the AU fence.

Question from A. Hengst, Audience Member - About 10 foot in?

D. Noble confirmed this.

1. Schedule

- USACE Baltimore plans for all aspects of the Site-Wide effort field work to begin as early as possible in calendar year 2018.
- Winter 2018-2020 - conduct Remedial Action field work, including at the former Public Safety Building at AU.

Question from Mary Douglas, Community Member - Do you have an estimate on how long it is going to take to go through the 91 properties?

D. Noble explained that during the initial planning with the contractor, USACE estimated addressing 30 properties per year, which would take 3 full calendar years from the day work begins. USACE based that estimate on a similar process used to investigate ~100 properties during the Site-Wide Remedial Investigation. If the process begins to lag, USACE will consult with the contractor about any delays and ways to address those delays.

Question from M. Douglas, Community Member - And it sounds as if there was kind of an informal attempt to prioritize, depending on how anxious people were about making a sale or whatever?

D. Noble confirmed this and explained that the first group of properties is made up of 18 homeowners that reached out on their own or responded to the letters USACE sent out concerning the designation of the areas requiring additional remediation. USACE plans to conduct the remediation of the first group of 18 properties on a house to house basis. The remaining properties will be divided into batches. The first 18 properties may be a large batch, and the successive batches may be smaller groups of ~12 properties, depending on how the project progresses.

Question from L. Miller, Community Member - Will the contractors have the new geophysical machines that were tested, and will that speed things up?

D. Noble confirmed that USACE expects the new technology to speed up the excavation process. He explained that the designation and location of where items might be on a property will require an additional survey from the previous investigation. USACE plans to utilize 3 complete surveys; an electromagnetic survey, a magnetometer survey, and a cued survey. The 3 surveys will be conducted at each property, which will create a short list of items that will need to be excavated for examination, therefore creating less damage to the properties during excavation. While the damage caused by the preparation of a property for survey may not be avoided, the time spent on each property may be shortened by using the 3 surveys.

Question from Dr. Peter deFur, Environmental Stewardship Concepts/RAB TAPP Consultant - [During the Remedial Investigation], there were a couple of steps that were the critical timing issues that kept us from moving faster, doubling the rate. I do not think one of them was equipment, but there was budget. We had a certain amount of budget that we could spend in a given time period; so even if we doubled the amount of equipment, we did not have the budgetary capacity for it.

D. Noble confirmed this and explained that at this point in time all of the properties have been funded. All of the properties were funded in the last fiscal year. There is no money issue at this point. He recalled the time delay of the investigation was caused by the process of analyzing the data. There was an initial survey which created a lot of data that had to be analyzed to create a product for USACE to review.

Comment from P. deFur - But the data analysis should also be more streamlined with the new analytical equipment.

Comment from Steve Hirsh, Agency Representative - US Environmental Protection Agency, Region III - Some of this is really new. I do not think this technology has been used at a residential site like this before. So there is a bit of a learning curve. There is also so much quality assurance involved, because the decision they are making is to not dig something up that could be a munition.

The penalties for making bad choices are very severe for the contractor. Things are put in [the ground] that look like a munition and [if] they miss that? That stops work. I think once they start [the field work], they will get a better feel for how long it is actually taking.

D. Noble explained that USACE will independently conduct quality control and quality assurances of the contractor's work, by placing blind seeds on some of the properties. Then the contractor must locate the blind seeds and recommend excavation of those blind seeds. Once the analysis reaches a point on the curve where there is no recommendation to excavate items, there is a requirement that excavation is still conducted into that population of items to prove the accuracy of the analysis.

S. Hirsh noted that as time passes, that requirement may be made smaller and smaller, once the contractor figures out that they are doing an excellent job and nothing is missed. There is a site-specific learning curve.

Question from M. Douglas, Community Member - Were you the first in the country to do this?

S. Hirsh confirmed Spring Valley is the first residential site to implement this technology. Typically Advanced Geophysical Classification (AGC) has been used at ranges. There are not many sites like Spring Valley.

Chris Gardner, USACE, Corporate Communications Office added that normally sites are like cow pastures, rather than residential neighborhoods.

S. Hirsh explained that the technologies have not been used on quarter to half acre residential properties, which introduces new complications. House walls and power lines overhead may interfere with the signal. The devices are good technology, but someone had to make the machine, and the contractor had to go purchase the machine. The contractor had to attend training at Aberdeen Proving Ground for a certification process to show the contractor's competency. There is a lot of concern that the contractor be well-qualified, because the decision the contractor is making is to not excavate an item. If everything is being excavated, the extra precautions are not necessary. But if the decision is to be made between a munition and a muffler, then the precautions are necessary, because the items look alike. I believed the process will get faster. The contractor will learn a lot during the first 30 properties. Everyone will figure out how to process the data in a more efficient manner. In the beginning there is a bit of a learning curve for both the people and the technology.

Question from A. Hengst, Audience Member - In the October Partnering meeting minutes it talks about these 18 properties that labels them as 'priority properties.' From what you have said, I just wanted to make sure I understood you correctly, that label of 'priority properties' is because the owners wanted to be first; it has nothing to do with the risk or the likelihood of finding anything. Have you made a ranking like that, of which properties are most dangerous?

D. Noble explained that there are no individual rankings because the analysis in the Remedial Investigation report was based on areas associated with specific facilities that were in the area during World War I. That facility area was given a ranking, so every property currently in the boundary of that facility would share that ranking. All of the areas received the same Munitions and Explosives of Concern Hazard Assessment (MEC HA) ranking, so there is no area with a higher hazard ranking than the other areas.

Question from A. Hengst, Audience Member - So there is one area that is not just one property but a whole block. Is that not Area of Interest 9 over by Seminary? Is that going to be treated any

differently? That is a lot of individual properties.

D. Noble confirmed that most of the areas that USACE is focused on from World War I are made up of individual properties today. Area of Interest 9 was the area where the Pilot Project was conducted, so 3 of the properties in that area have already been completed. USACE issued completion letters to the property owners that agreed to participate in the Pilot Project.

B. Groundwater Feasibility Study

D. Noble provided a brief status update on the Groundwater Feasibility Study (FS).

USACE Baltimore continues to monitor the disagreement between USACE HQ, the Environmental Protection Agency (EPA), and the Department of Energy & Environment (DOEE), and will update the RAB as a future agenda topic.

USACE Baltimore also continues to address the comments received from the regulators on the Draft Groundwater FS. Once the comments have been addressed and the Groundwater FS has been finalized, the next step in the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) process is the Groundwater Proposed Plan (PP). USACE Baltimore has begun drafting the format of the Groundwater PP. P. deFur will be included in that distribution.

The first step in the process is to get to the point where USACE Baltimore can finalize the Groundwater FS with DOEE and EPA. USACE Baltimore continues to work on that and expects, hopefully, by the end of January or early February to have a new submission of the Groundwater FS back to DOEE and EPA.

Question from A. Hengst, Audience Member - So you are changing the Groundwater FS in response to objections?

D. Noble explained that USACE is adding an alternative to the various alternatives listed in the Groundwater FS.

C. 4825 Glenbrook Road

Brenda Barber provided a brief update on 4825 Glenbrook Road.

1. Sampling Efforts at 4835 Glenbrook Road

Last November, work plans were finalized for a sampling effort in the basement of the home at 4835 Glenbrook Road. Sampling was conducted in Level B personal protective equipment (PPE), and the same standard air monitoring procedures and methods used at 4825 Glenbrook Road were employed at 4835 Glenbrook Road.

The first phase included:

- A single row of sample borings was taken in the basement and the exterior of the home.
- Four vapor points were installed in order to accommodate sub-surface soil gas monitoring at a later date.
- An air sample was collected from a small sump that is located in basement area.
- Samples were taken from the exposed concrete foundation wall along the shared property line.

The site was reset just prior to and after the Thanksgiving holiday, and sampling operations began December 4. The miniature chemical agent monitoring system (MINICAMS) trailer was relocated and some site maintenance was conducted to move equipment closer to the shared property line in order to support the sampling and required air monitoring.

On December 4, the site operations team was prepped and ready to go. The team mobilized inside the home and used the driveway area to support medical monitoring, ambulance staff, and the personnel decontamination station (PDS). On the day that sampling began, the Community Outreach Team was in the area to answer questions and address any concerns the neighboring residents might have about USACE's efforts.

All of the interior basement sampling has been completed. The team collected 16 sample borings inside the basement set along the entire foundation wall adjacent to the foundation. Dependent upon the depth to saprolite, the team collected at least one sample per boring and in some instances two or three samples. Nothing unusual was noted in the samples except in Boring 7. Glassware was encountered in Boring 7, potentially associated with American University Experiment Station (AUES) activities.

The air sample collected from the basement sump was tested for mustard (HD) and lewisite (L); there were no detections.

In the 16 locations inside the home, 24 soil samples were collected. Sampling then moved to the back patio and front corner of the home. The team cored through the back patio and ran into a sub-surface concrete slab, so an approach to core through the second concrete slab will need to be developed. The outdoor sampling operations have been impacted by weather but continue to make good progress.

Barring any weather delays, sampling is expected to be completed at 4835 Glenbrook Road by mid-January.

All indoor soil samples were cleared for low level agent; no HD or L was detected in any of the soil samples from the interior of the basement. All samples were sent to an offsite commercial lab for testing for the full suite of potential AUES chemical parameters; to include metals, volatile organic compounds (VOCs), and semi volatile organic compounds (SVOCs).

The glassware encountered in Boring 7 was tested and headspaced clear for agent. No agent was detected in slightly discolored soil found in Boring 7.

2. Next Steps

- Conduct additional sampling along the exterior foundation walls along the front of the house, and the side by the driveway/garage.
- Extend the sampling across the entire basement. An additional grid pattern will be set up to collect 40 to 50 samples across the entire footprint of the basement to yield soil data to illustrate whether the soil is clean or not clean.
- Additional sampling will be conducted in the front yard and back yard.

3. Future Activities

Once the sampling at 4835 Glenbrook Road is complete, the focus will shift back to 4825 Glenbrook Road. Based on the findings from the Board of Investigation (BOI) report, plans for an additional phase of soil borings are being completed. The remaining soils that need to be excavated at 4825 Glenbrook Road will be assessed to accommodate any new discoveries of contaminants in the soil before returning to work. A similar sampling approach is planned at 4825 Glenbrook Road. The team will be in Level B PPE, continue to employ the same air monitoring, collect samples to depth in all areas that still require excavation, and use that data to determine the next steps to go back to work at 4825 Glenbrook Road.

4. Schedule

January

- Complete the sampling at 4835 Glenbrook Road.
- Ongoing site maintenance.
- Complete sampling at 4825 Glenbrook Road to support responses to the BOI findings.

February

- Complete Board of Investigation sampling at 4825 Glenbrook Road.
- Ongoing site maintenance.
- Continue to develop a 'return to work' plan. Intrusive work expected to begin in spring 2018.
- Resume sampling at 4835 Glenbrook Road to extend the sampling across the entire basement. Set up an additional grid pattern for ~50 sample locations (2-3 months of sampling). Expected to be completed in spring/summer 2018.

D. Spring Valley Board of Investigation (BOI)

Gary Schilling, USACE Baltimore, Spring Valley Board of Investigation (BOI) President provided an update on the Spring Valley BOI.

1. Formation of the SV BOI

The BOI was appointed on August 18 by the USACE North Atlantic Division (NAD) commander. The purpose of the BOI was to conduct an independent investigation into the August 9 incident. The BOI sought to determine what happened, why it happened, and make recommendations to prevent a similar incident from happening again.

The BOI convened on August 22 and met at the federal property behind Sibley Hospital for interviews and information gathering for ~2 ½ weeks. Once all pertinent information was gathered, the BOI granted a conditional release for mitigation of the site and has granted an additional conditional release since.

The BOI then moved to USACE Baltimore HQ for analysis of the investigation and to draft the BOI Report. The Report is in the final stages of completion. G. Schilling has briefed the commanders of USACE Baltimore, USACE Huntsville Center (HNC), and the NAD.

The BOI resulted in 14 findings, and USACE leadership has agreed to implement all of those findings prior to return to work at the site.

2. Members of the Board

- Gary Schilling, Program Manager, NAB (President)
- Steve Norman, Chemist, Edgewood Chemical Biological Center (ECBC), (Voting Member) - Mr. Norman leads the group in charge of the analysis of soils and air for chemical agents. He is also a monitoring equipment expert, specifically the devices used at the site: MINICAMS and depot area air monitoring system (DAAMS).
- Dr. Roger McIntosh, Occupational Physician, PHC, (Voting Member) - Dr. McIntosh is a subject matter expert in exposures to and treatment of chemical agent incidents. He was able to help with interviews to determine what symptoms were significant, and he was able to oversee the analysis of the blood and urine samples that were collected and sent to the Centers for Disease Control and Prevention (CDC).

- Steve Hirsh, Environmental Engineer/RPM, EPA Region III, (Voting Member)
- Jim Sweeney, Chief, Land Remediation and Development Branch, DOEE, (Voting Member)
- Donnie Butler, Safety Specialist, HNC, (Non-Voting Member) - Mr. Butler's specialty is industrial hygiene and the protection of workers and the public during this kind of operation.
- Sharon Wilkinson-Barnes, Safety Specialist, NAB, (Non-Voting Member)
- Martin Chu, Counsel, Baltimore District, (Non-Voting Member)

3. Background

- The likely exposures occurred on August 9 as workers were excavating at 4825 Glenbrook Road.
- The workers were in a low area, excavating with hand tools and were in close contact with the soil.
- In accordance with the work plan, workers were excavating in Modified Level D PPE. This included coveralls, gloves, and a slung mask for emergency egress. The workers were not wearing respiratory protection, and the workers' face and hair were not covered.
- On August 9, at least three of seven workers experienced exposure symptoms to an unknown chemical or chemicals. The specific chemical causing these symptoms has not been identified.
- Safety personnel determined medical evaluation was necessary and transported the seven workers to the hospital.

4. Daily Site Log August 9 2017

Teams 3 and 1 started the day early with a safety brief and radio checks. The teams alternated downrange for most of the day until the exposure incident occurred. The daily site log noted a wetbulb globe temperature (WBGT) of 81.1 and 82.0, which was reported to be a hot day by the workers in the interviews. Teams were operating in 50% on / 50% off, which is protocol for a hot day. Team 1 went down range after lunch and then cleared the PDS.

At 1:31 p.m., Team 3 went down range, and at 2:16 Team 3 cleared the PDS. At that time, the Team 3 lead complained of vomiting and nausea. The Team 3 Tech 1 and Tech 2 also complained of nausea. The Parsons Safety Officer stopped all work, gathered all of the workers, and asked what the workers had noticed. The Team 1 lead complained of burning and itchy eyes, the Tech 2 complained of nausea and another Tech 2 had a complaint of diarrhea.

At 2:48 p.m. the USACE Site Safety Officer and Parsons Chief Safety Officer were notified of reported symptoms.

At 2:50 the seven workers (two teams of three workers and the heavy equipment operator) were transported to George Washington University (GW) Hospital.

5. Incident Site

The workers were excavating in a low area surrounded on 2 sides by soil that was higher than the worker's heads, and a retaining wall on the third side that was waist-high. This configuration restricted air flow, which prevented vapor or airborne contaminants from dissipating.

In addition, the teams were excavating using short-handled tools in order to avoid breaking laboratory glassware or closed cavity items.

Question from Mary Bresnahan, Community Member - Did you find evidence of vapor and air contaminants?

G. Schilling explained that no evidence of vapor or air contaminants was found. Soil and air samples were taken, and there were no detections. The cause of the exposure symptoms is still unknown. The exposure symptoms were not caused by HD, L, phosgene (CG), cyanogen chloride (CK), or known agents of concern at the site. No industrial compounds were detected in the soil or air samples. There is no other causal information other than the reported irritated eyes and noses, and nausea. During the interviews, the diarrhea was determined to be from another cause.

Question from M. Bresnahan, Community Member - Another cause?

G. Schilling confirmed the diarrhea was caused by food.

Question from A. Hengst, Audience Member - On the daily log it shows the site safety officer was notified at 1448, and an hour and 2 minutes later they were transported to the hospital. So that is an hour and 2 minutes. Did the site safety officer have to make calls to other higher-ups? What took an hour and 2 minutes?

G. Schilling explained that the site team discussed what the best course of action was, and the site safety officer made calls to discuss the best course of action. The workers had temporary symptoms that went away shortly after the symptoms were noted. For the worker that vomited, the nausea was gone within 10 minutes. These symptoms were very short lived. The incident was not a situation where personnel had to be evacuated quickly in order to save lives.

Question from A. Hengst, Audience Member - So it sounded like you said the Site Safety Officer consulted others? Maybe in Baltimore or Huntsville?

G. Schilling explained that the Site Safety Officer consulted Parsons, since the site safety officer is a Parsons employee.

B. Barber noted that she was notified at the time and there was extensive communication during that time frame.

Question from A. Hengst, Audience Member - About 'what do we do now'?

B. Barber explained that there were decisions to be made. The team took into account that the symptoms had subsided at the time, and was trying to determine the best course of action.

Comment from A. Hengst, Audience Member - So it was not like you were in a hurry. You are not in a hurry because these guys are fine.

B. Barber explained that there was no immediate danger. No one was in cardiac arrest, blistering, or suffering from respiratory failure.

G. Schilling explained that he believed there was a sense of urgency to do the right thing. The decision to have the workers evaluated was a precaution.

Question from M. Bresnahan, Community Member - Have the men done the same work since then in the same location?

G. Schilling explained that the site has not been released for intrusive work yet. The BOI issued conditional releases during the investigation. The findings of the BOI were reported to the Division commander and local commanders, who instructed the Project Delivery Team (PDT) to implement the findings before intrusive work resumes.

S. Hirsh noted that the site teams have not gone back to work on the soil removal, but have conducted other work.

B. Barber clarified that initially the excavation site was covered with plastic mitigation and the site teams conducted some sampling to support the BOI's investigation. Since the investigation would likely take a considerable amount of time, the site teams installed geotextile over the area, covered with a base of soil and a base of gravel. This mitigation will prevent any impact from potential off-gassing of any chemicals, therefore enabling other work to take place at the site. The other work includes concrete work, site maintenance, and moving equipment around to support activities at 4835 Glenbrook Road.

Question from Tom Smith, Community Member - Are you planning to monitor the worker's health over a period of time?

G. Schilling explained that no additional medical monitoring of the workers is planned. Dr. McIntosh determined that there were no latent impacts, and the blood and urine analysis of the workers indicated no further monitoring.

Question from Theo Emery, Audience Member - You said that you are not sure of the origins of the compounds. Had anything at all been excavated from that spot; mortars, glassware, anything like that, previous to this? I mean, from that very pit.

G. Schilling explained that the teams were working in an area where laboratory glassware and chemical agent contaminated media (CACM) had been found in the general area, so AUES-related materials were assumed to be present.

Question from T. Emery, Audience Member - Of the compounds that were excluded, does that include adamsite?

G. Schilling confirmed this. The samples were specifically screened for arsenical compounds.

Question from P. deFur - The soil samples that were taken from immediately afterwards were not analyzed for the full list of AUES compounds?

G. Schilling explained that the samples were initially for agent and once the samples cleared for agent the samples were analyzed for industrial compounds.

Question from P. deFur - And those were the ones from the immediate area, so they came back all negative?

G. Schilling confirmed this.

Question from P. deFur - The BOI, in addition to findings, reached some conclusions and made one or more recommendations that the site team was working on, right?

G. Schilling confirmed this and explained that the BOI found 8 Contributing Findings and 6 Non Contributing Findings. All recommendations are to be implemented on the local level, except for one Department of the Army-level recommendation. The BOI is in the process of briefing the Department of Army Safety on the recommendation.

Question from T. Smith, Community Member - When will we know what those are?

Question from William Krebs, Community Member - Can you just give us an example of one, just so we know?

G. Schilling explained that the Findings include:

- It is the opinion of the BOI that at least three contract workers were exposed to an unknown substance, most likely by inhalation. The exposure was localized to the excavation work area.

This is known because several people in the area did not experience any symptoms. Three of the workers that were in the excavation area did not experience any of the symptoms.

- There were no latent or lingering symptoms, no delayed-onset eye findings, skin blisters, or upper or lower respiratory complaints.
- Exposed workers were operating in Modified Level D PPE without respiratory, mucous membrane, or complete dermal protection.
- The BOI has recommended that the PDT re-evaluate the PPE and engineering controls to be protective of workers and the public prior to returning to work.

Question from W. Krebs, Community Member - What are engineering controls?

G. Schilling explained that there are a couple ways to protect people at an excavation site. Protections include PPE or placing a hood or other engineering means over the site that filters the air that would prevent people from coming in contact with gasses that may be coming out of the ground.

Question from T. Smith, Community Member - You said that there were eight contributing factors and six non-contributing factors. Can you go back over that, in terms of what is the relevance of that and when do we get to find out what those contributing and non-contributing factors are?

G. Schilling explained that one of the eight contributing factors addressed the level of PPE that did not provide respiratory protection. The BOI concluded that the work plan may not have adequately addressed respiratory protection.

Another finding was that Team 1 was down range in the excavation area and noticed symptoms of exposure, such as burning eyes and irritated noses. One of the workers had dry heaves when exiting the PDS. The BOI would have liked to have seen more thorough and complete communication between the excavation teams and the Site Safety Officer. This better communication would have stopped work as soon as the symptoms were reported.

Question from T. Smith, Community Member - Are we going to be provided with a set of what those recommendations are? My question is when are we going to see this? I assume that this is all being discussed at higher levels, so when do we get some access to that information?

G. Schilling explained that the USACE Division Commander appointed the BOI and the BOI reports to him. There is a process for this information to be shared publicly. The USACE Baltimore District Office of Counsel is reviewing that process and preparing to share available information to the public. G. Schilling believed the process would be the Freedom of Information Act (FOIA) process.

Question from T. Smith, Community Member - Are you telling me that the RAB has to do a FOIA in order to get access to that information?

D. Noble explained that USACE's hands may be tied in this case simply because the BOI is a formal Board of Investigation. USACE Baltimore is looking in to the issue. The BOI results may require a FOIA request to get the information released.

Comment from M. Bresnahan, Community Member - Unless you provided it freely to the public. You do not have to go through a FOIA.

G. Schilling explained that the BOI has to comply with the regulations on how this information is handled.

Comment from M. Bresnahan, Community Member - But that is the case if you are willing to provide it, then you do not have to go through the FOIA.

S. Hirsh explained that USACE must perform a review to remove data relating to personal information, the same kind of review that would be performed whether or not there is a formal FOIA request. Information concerning worker's health needs to be screened out and never released. Whether USACE will require data requests to be an online FOIA or not is a decision USACE will have to make.

Comment from T. Smith, Community Member - But it sounds like some of these things that you are talking about are actually recommendations that are being made, they are going to be reviewed.

S. Hirsh explained that is a separate issue. USACE might be able to release the 14 recommendations. The report is not that big but there are a lot of appendices, and some of the appendices include medical history and other information that everyone would agree there is no need to be publicly released.

G. Schilling asked for clarification from T. Smith that he was asking what are the findings.

Comment from T. Smith, Community Member - Yes, I am asking for the findings and recommendations. You talked about contributing factors and non-contributing factors. I do not have to understand what the difference between the two is. I would like to see what they are. But I think that it is particularly important to be as transparent as possible because you have not been able to tie the exposure to any particular chemical. So the more transparency there is on all this other stuff, I think, the better off we all are. However that is done, fine. I guess what I am asking is to please keep us posted on what the process is for learning this information.

G. Schilling explained that for the purpose of this presentation, the bottom line is that the teams conducting the excavations were not wearing respiratory protection when the teams were doing the work. The teams were exposed to an unknown substance. The exposure symptoms were subtle until a worker vomited. Adequate communication did not occur between Team 1 and Team 3 when Team 1 first noticed subtle exposure symptoms. The BOI recommended that the PDT re-evaluate the PPE. The BOI does not intend to tell the PDT to put the teams in Level B PPE, because it might be more appropriate to use engineering controls. The BOI recommends a more robust, formalized communication process when teams clear the PDS.

There is a Department of Army-level recommendation. There is a guidance that talks about low probability and high probability sites. A low probability site is not required to have a stand-by ambulance and emergency medical technician (EMT), and there is no requirement for an agreement with a hospital to treat people that might be contaminated. At a high probability site, the ambulance, EMT, and hospital requirements are in place. This site, in accordance with the guidance, was a low probability site. The BOI has recommended that the Department of Army re-evaluate the guidance; that any site where HD, L, or any agents may be encountered, whether containerized or not, should have a stand-by EMT and memorandum of agreement (MOA) or other contract with a hospital.

Comment from T. Smith, Community Member - It would be helpful to see those in writing.

G. Schilling explained that he would contact the USACE Baltimore Office of Counsel for approval to share a summary of the findings and recommendations with the RAB. If approved, G. Schilling would pass the information to D. Noble and B. Barber for release to the RAB.

Question from M. Bresnahan, Community Member - Did they do any skin samplings on these workers?

G. Schilling explained that no skin samples were taken. The workers went through some decontamination procedures at the worksite and then decontaminated further before entering the hospital. Anything that might have been on the workers' skin would have been washed off.

Question from W. Krebs, Community Member - Did you look at the distinctions between the ones that got sick and did not get sick in terms of what area they were working in or how long, whether all three men were working in the exact same area or how long anybody was there when they got sick?

G. Schilling confirmed that the BOI reviewed those variables. He explained that there were two techs that were excavating on the walls with hand tools. The techs were scraping soil away by hand in order to avoid breaking any glass bottles or other containers. That soil was then transferred to another area and then moved to a third area where there was a heavy equipment operator. One of the techs that was excavating experienced symptoms. At the same time, another tech, positioned four steps back and two steps to the left, did not experience any symptoms. The BOI concluded that this was a localized event.

Question from Larry Miller, Community Member - You have that five people who reported symptoms; putting aside the guy that [the cause] was probably food and the heavy equipment operator. So you have one vomiting and nausea, three nausea, one burning, itchy eyes. The finding is at least three were exposed, so is there some thought that two of those five had symptoms that did not relate to what they were working at?

G. Schilling explained that there were three people that exhibited symptoms.

Question from Larry Miller, Community Member - But you had one vomiting and nausea, three nausea, and one burning, itchy eyes. That would be five, right?

G. Schilling explained that the two workers that had nausea also had burning and itchy eyes.

G. Schilling reiterated that he agreed to check on a release of either an abbreviated description of the findings or the actual findings and recommendations through the USACE Office of Counsel.

Comment from Lee Monsein, Community Member - Let us know what process is necessary. I understand the situation; just let us know if possible what is what.

III. Community Items

IV. Open Discussion and Future RAB Agenda Development

A. Upcoming Meeting Topics

- Groundwater FS Study/ Disagreement between EPA, DOEE, and USACE
- Site-Wide RD/RA
- 4825 Glenbrook Road/4835 Glenbrook Road
- Incident BOI

B. Next RAB Meeting:

Tuesday, March 13, 2018

C. Open Discussion

V. Public Comments

VI. Adjourn

The meeting was adjourned at 8:15 PM.