



### **SPRING VALLEY FORMERLY USED DEFENSE SITE PROJECT** RAB Meeting

November 12, 2019 7:00 – 8:30 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 TAPP Contractor RAB Membership
7:15 p.m.	II.	USACE Program Updates
		Project Funding Site-Wide Remedial Action Glenbrook Road Groundwater Study
8:05 p.m.	III.	Community Items
8:10 p.m.	IV.	Open Discussion & Future RAB Agenda Development <u>Upcoming Meeting Topics</u> : • (Suggestions?)
		*Next meeting: January 14, 2020 (First meeting of 2020)
8:20 p.m.	V.	Public Comments
8:30 p.m.	VI.	Adjourn

\*Note: The RAB meets every odd month.

# SPRING VALLEY FORMERLY USED DEFENSE SITE

Restoration Advisory Board Meeting 12 November 2019

C OPERATING PLOOP RE- 49-49

100-0010-0010

PROCESSION CONCILIENCE







## **AGENDA REVIEW**

**Co-Chair Updates** 

Introduction, Announcements

Task Group Updates

- TAPP Contractor
- RAB Membership

**USACE** Updates

- Project Funding
- Site-Wide Remedial Action
- Glenbrook Road
- Groundwater Study



**Community Items** 

Open Discussion & Future RAB Agenda Development

**Public Comments** 





## **CO-CHAIR UPDATES**

Introductions





### **CO-CHAIR UPDATES**

About Business With Us Missions Locations Careers Media Contact US Army Corps of Engineers Baltimore District

👫 / Home / Spring Valley

#### Announcements

Next Restoration Advisory Board Meeting - March 12, 2019

The next RAB meeting is scheduled to be held on Tuesday, March 12 at 7 pm. These meetings are open to the public. Currently, the RAB meets every other month for 60 90 minutes in the 'Undercroft' meeting room at St. David's Episcopal Church, 5150 Macomb Street NW, D.C.

(Please note - The St. David's Episcopal Church staff have asked that we refrain from using the outside stainwelk as a safety precaution due to wetter issues, poor lighting, and lock of stairs with grips; and use the bell tower entrance (which has internal stars and an elevator). There will be signs clearly posted to direct KMF meeting attendees to the new entrance. We thank you in advance for following the neguest of our horts; the St. David's following attendees to the new entrance.

#### Final Site-Wide Decision Document Now Available:

The Final Site-Wide Decision Document is complete and is now available at the information Repository and for download here on our site. The Decision Document outlines the selected remedies to address both unacceptable ricks posed by soil contamination and unacceptable explosive hazards posed by the possible presence of munitions and explosives of concern (MEC).

Click here to visit the Sile Wide section of the Spring Valley page where the Final Sile Wide Decision Document can be downloaded

#### Spring Valley Overview

The Spring Valley Formerly Used Defense Site (FUDS) consists of approximately 660 acres In the northwest section of Washington, D.C. During the World War Lera, the site was known as the American University Experiment Station, and was used by the U.S. government for research and testing of Chemical agents, equipment, and munitions. Today, the site encompasses approximately 1,600 private properties, including several embassies and foreign properties, as well as the American University and Wesley Seminary.

### Project Efforts

Partners

History

Project Update 4825 Glenbrook Road Site-Wide Groundwater Community Participation

#### Associated Organizations

The U.S. Army Corps of Engineers, Baltimore District has the lead responsibility for investigation and cleanup actions at the Spring Valley FUDS and has entered into a formal partnering process with the U.S. Environmental Protection Agency and the Washington, D.C. District Department of the Environment. The three organizations, referred to as the partners, have agreed to prioritize the project work by risk, addressing the highest risks first. The Corps investigation includes the identification and removal of assents-contaminated soil, a groundwater investigation, and the search for additional munitions, both in burial pits and isolated items on residential properties.

Agency for Toxic Substances and Disease Registry American University District Department of the Environment U.S. Environmental Protection

### Announcements

Website Updates

- September and October Monthly Site-

Wide Project Update

– Weekly 4825 Glenbrook Rd Project

Updates with photos

- August Partners meeting minutes
- -Next Partners meeting date:

December 5th

- September RAB Meeting Minutes





Search Baltimore Dis Q





Project Documents

Repository at the Tenley-

Project Documents

Friendship Branch Library.

These are just a few of the project

documents. More key documents

can be found in the information







## **TASK GROUP UPDATES**

New TAPP Contractor







New RAB Technical Assistance for Public Participation (TAPP) advisor

- Two firms appeared qualified and expressed interest in supporting the RAB.
- Two packets of information were sent to the RAB on August 7<sup>th</sup> introducing these companies. The two potential companies are ATI, Inc. and Nspiregreen, LLC.
- Two additional resumes of potential TAPP contractors were sent to the RAB co-chairs in October.

## **ANNUAL PROJECT FUNDING**

**USACE** Updates





### SPRING VALLEY FUDS FUNDING SUMMARY

### FY19, Actual Funding (\$11.054 M)

- Military Munitions Response Program (\$10.870 M)
  - Site-Wide Remedial Action (\$4.254 M)
  - Conduct Remedial Action at 4825 Glenbrook Road (\$6.616 M)
  - Stakeholder Outreach
  - Site Security
  - PRP Effort
- Hazardous Toxic Waste (\$0.163 M)
  - Site-Wide Remedial Action (\$0.065 M)
  - Groundwater RI/FS/PP/DD (\$0.098 M)
- Technical Assistance for Public
   Participation (TAPP) (\$0.021 M)
  - RAB Technical Consultant (\$0.000 M)
  - RAB Cost (\$0.021 M)







### SPRING VALLEY FUDS FUNDING SUMMARY

### FY20, Projected Funding (\$6.173 M)

- Military Munitions Response Program (\$6.021 M)
  - Site-Wide Remedial Action (\$3.772 M)
  - Remedial Action at 4825 Glenbrook Road (\$2.249 M)
  - Stakeholder Outreach
  - Site Security
  - PRP Effort
- Hazardous Toxic Waste (\$0.097 M)
  - Site-Wide Remedial Action (\$0.000 M)
  - Groundwater RI/FS/PP/DD (\$0.097 M)
- Technical Assistance for Public Participation (TAPP) (\$0.055 M)
  - RAB Technical Consultant (\$0.025)
  - RAB Cost (\$0.030)







### SPRING VALLEY FUDS FUNDING SUMMARY

FY	1993	1994	1995	1996	1997	1998	1999	2000
\$\$ in M	11.859	8.861	1.744	0.087	0.292	1.164	8.874	10.892

FY	2001	2002	2003	2004	2005	2006	2007	2008 <sub>a</sub>
\$\$ in M	9.824	19.819	11.000	11.471	20.362	11.063	13.843	20.871

FY	2009	2010	2011	2012	2013	2014	2015	2016
\$\$ in M	15.700	19.345	17.220	6.501	9.210	33.280	3.561	7.497

FY	2017	2018	2019	<b>2020</b> <sub>b</sub>	2021		
\$\$ in M	13.900	25.228	11.054	6.173	-		

### Spent through FY 2019: \$ 324.522 M

a = FY08 includes \$3.2 M Congressional additional funding

**b** = Planned funding for FY 20







**USACE** Updates





Final survey effort at 92 residential properties and 13 Federal/City Lots:

- Currently working with on 81 residential properties at different stages of the remedial action process.
- 80 civil surveys and 80 arborist surveys have been completed.
- 79 properties have been visited by the geophysist team, who provide technical recommendations on plant removal.
- Vegetation has been removed from 34 private properties and 13 City/Fed lots.
- Geophysical surveys completed at 34 private properties and 7 City/Fed lots off Dalecarlia Parkway.
- Anomaly removal completed at 34 private properties and 4 City/Fed lots off Dalecarlia Parkway.
- Issued 1 Assurance Letter.







### **Preparations before Geophysical Surveys this Winter**

	EXIS	TING VEG	ETATION					REPLACE	MENT VEGE	TATION				APPRAISED COST			
1	2	3a	3b	3c	4	5	6	7	8	9	10	11	12	13	14	15	16
	Species	Height (ft)	DBH (in)	Area (sq ft)	Condition	Replacement Species	Size	# of plants	Plant Cost	Total Plant Cost (7x8)	Adjusted Plant Cost (4x9)	Actual Cost to Install	Actual Replacement Cost (9+11)	Years to Parity	Annual Compoun ded Interest Factor	Appraised Value (10+11)	Compounded Appraised Value (14x15)
43	Aucuba	7			70%	Aucuba	26" H x 18" W	1	\$13.20	\$13.20	\$9.24	\$39.60	\$52.80	15	1.77	\$48.84	\$86.25
44	Cherry Laurel	5			75%	Skip Laurel	5-6'	1	\$115.00	\$115.00	\$86.25	\$345.00	\$460.00	0	1.00	\$431.25	\$431.25
45	Cherry Laurel	7			75%	Skip Laurel	5-6'	4	\$115.00	\$460.00	\$345.00	\$1,380.00	\$1,840.00	4	1.17	\$1,725.00	\$2,018.01
46	Cherry Laurel	7			50%	Skip Laurel	5-6'	1	\$115.00	\$115.00	\$57.50	\$345.00	\$460.00	4	1.17	\$402.50	\$470.87



Arborists conduct landscape inventory to thoroughly document all plant life on a property.

# Geophysicists identify vegetation to be removed.





### SITE-WIDE REMEDIAL ACTION Preparations before Geophysical Surveys this Winter

The team is working with homeowners to approve of their landscape removal plans. Once the plans are approved by the homeowners and the Army Corps, the approved plants will be removed.



The team aims to minimize the amount of time between plant removal and restoration efforts.

LANDS	SCAPE REIMBURSEMENT	ESTIMATE	6	
Key	Plant Name	Quantity Existing	Proposed Action	USACE Reimbursment <sup>1</sup>
1	Linden, American	1	Leave	
2	Oak, Northern Red	1	Leave	
3	Yew	3	Remove	\$855.46
4	Hellebores	6	Leave	
5	Perennials	3	Leave	
6	Ferns	6	Leave	
7	Serviceberry	1	Trim to 6 feet	
8	Privet	1	Trim to 6 feet	
9	Liriope	80	Leave	
10	Nandina	2	Remove	\$570.00
11	Yew	7	Remove	\$1,996.07
12	Cherry Laurel	7	Remove	
13	Boxwood, American	1	Remove	\$795.60
14	Holly, Japanese	2	Remove	\$300.30

Leave

Crape Myrtle



This map (above) illustrates the proposed actions for landscaping items, which corresponds with a key (left).





### Hardscape Digs & Restoration



Some anomalies are detected underneath hardscape which are not reinforced with metal.

Once the dig team recovers the anomaly, a professional hardscape company completes the restoration or temporary patching.

Five hardscape digs were completed in October.







In order to avoid trip hazards, holes are temporarily patched until final restoration is complete.

### SITE-WIDE REMEDIAL ACTION October Intrusive Finds





An intact empty 75mm projectile shell was recovered from underneath a asphalt driveway in October.

The item was deemed non-hazardous and cleared headspace for any mustard or lewisite.





A 75mm projectile is about one foot long and 75 millimeters, or ~3 inches, wide.







### **Tentative Schedule**

Fall/Winter 2019	<ul> <li>Continue to finalize plant removal plans and conduct plant removal in Dalecarlia Woods and private properties.</li> <li>Continue geophysical surveys.</li> <li>Continue to obtain Rights-of-Entry from the next group of homeowners.</li> <li>Continue sampling to delineate the soil removal areas in the southern AU campus exposure unit.</li> </ul>
Winter/Spring 2020	<ul> <li>Continue anomaly removal efforts.</li> <li>Continue finalizing plant removal plans with subsequent groups in preparation for geophysical surveys.</li> </ul>



AU's Former Public Safety Building

- Completed preparatory work, installed erosion and sediment controls around the former building's footprint, and pruned tree roots in the excavation area.
- Cut and capped waterline to Jack Child Hall which crossed the slope above the former PSB.
- The team evaluated the slope required to safely excavate the PSB foundation below.
  - Air monitoring DAAMS tubes have been installed around the work area.
- With the DOEE's approval of the updated work plans, the team began excavating the slope.
- The team began intrusive activities in November. The excavation work is anticipated to take 2-4 months to complete.

Clean each truck before they leave the site





Air spading where drainage channel crossed buried electric lines







**AU's Former Public Safety Building** 





**AU's Former Public Safety Building** 

U.S.ARM





**AU's Former Public Safety Building** 



\*Not to scale





### **GLENBROOK ROAD**

USACE Updates





- Completed removal of HTW/arsenic contaminated soil.
- As part of the final restoration efforts, the team began compacting clean soil in these completed areas.
- Began final compaction to existing grade on September 30<sup>th</sup>. First utilizing clean back fill soil already staged then bringing in one truck load of soil at a time, as needed.













- Excavated remaining "hot spots" to reduce potential unacceptable risks.
- Completed the soil gas sampling in the 4835
   Glenbrook Rd.
   basement. Anticipating receiving the sampling results in January.





## **GLENBROOK ROAD – AREA 2 EXCAVATION**

- Completed the planned small dig areas overall, in Areas 2. Area 2 completion is pending additional discussions with American University. Area 4 completion is pending consensus with the Partners.
- Last week, less than 12 pieces of glassware were recovered from Area 2. The glass was found was next to the foundation of the house, and weighed less than (1) one pound. No glass was found as we moved further from the house. There was a total of 27 barrels of soil collected. There were 11 samples taken, with 2 validation samples from the floor and wall, totaling 13 samples.







## **GLENBROOK ROAD – AREA 2 EXCAVATION**





- Completed a draft risk reduction report for
   Partner discussion and consensus.
- The report examines potential risk for HTW components. The primary components are arsenic and dichloronaphthalene.





## **GLENBROOK ROAD**



Worked at the Federal Property on a variety of tasks including preparing and sending waste shipments, performing trailer and site repairs, and carrying out equipment inventory and inspections.



Loading a truck with soil for the Subtitle D landfill.





### **Tentative Schedule**

Late Fall 2019	The final site restoration has began with soil compaction underway at completed areas. Completion of low probability operations: Focus was on recovering glassware at Area 2, at the front of 4835 Glenbrook Road, near the property line. <i>Working hours:</i> Monday - Thursday from 6:30 am to 5:00 pm. Heavy equipment operations do not begin until after 7:00 am.
Winter 2020	Completion of any remaining intrusive activities per Partner consensus on the conclusion of the HTW effort, and the Soil Gas Sampling results. Ongoing site restoration for the Glenbrook project area.
Summer 2020	Anticipated project completion.





## **GROUNDWATER STUDY**

**USACE** Updates





### **GROUNDWATER STUDY: EXPOSURE UNIT 2**



33





## ARSENIC AND PERCHLORATE IN EU2: MP2



34

	MP2-1 (35'-44')	
Date	Arsenic	Perchlorate
Sep-19	6.7	2.8
Apr-15	5.6	3.08
6/30/2014	6.9	1.39
6/30/2014 FD	6.65	NT
12/11/2013	6.6	3.08
4/30/2013	7.6	5.82
7/20/2012	8.4	6.3
5/3/2012	7.4	4.5
3/30/2012	7.5	5.8
3/30/2012 FD	7.6	7

	MP2-3 (56'-71')	
Date	Arsenic	Perchlorate
Sep-19	7.7	2.3
Apr-15	9.5	2.06
7/1/2014	13.7	0.738
12/11/2013	15.2	6.89
5/13/2013	11	2.57
7/20/2012	18	18
5/3/2012	18	17
3/30/2012	15	17

- MP = Multi-Port well
- NT = Not Tested
- ND = Non-Detect
  - = Value over drinking water standards

(Arsenic MCL is 10ppb, and the Perchlorate advisory level is currently 15ppb)

MP2-2 (49'-54')							
Date	Arsenic	Perchlorate					
Sep-19	7.6	1.7					
Apr-15	10	4.05					
6/30/2014	12.4	3.84					
12/11/2013	11	0.403					
12/11/13 FD	7.1	NT					
5/13/2013	12.6	9.74					
7/20/2012	16	12					
5/3/2012	15	12					
3/30/2012	15	12					

MP2-4 (73'-77')		
Date	Arsenic	Perchlorate
Sep-19	6.6	0.7
Apr-15	6.4	1.5
7/1/2014	7.6	ND
12/11/2013	9.9	8.09
5/13/2013	9.2	1.57 J
7/20/2012	12	25
5/3/2012	15	25
3/30/2012	12	21



## ARSENIC AND PERCHLORATE IN EU2: MP2



MP2-5 (96'-102')		
Date	Arsenic	Perchlorate
Sep-19	7.6	3.1
Apr-15	11.3	7.21
7/1/2014	9.8	ND
12/11/2013	10.3	5.07
5/13/2013	9.1	2.67
7/20/2012	14	26
7/20/2012 FD	15	24
5/3/2012	15	26
3/30/2012	13	24

MP2-6 (105'-114')		
Date	Arsenic	Perchlorate
Sep-19	7.5	3.4
Apr-15	11.6	8.11
7/1/2014	10.8	ND
12/11/2013	10.2	2.43
5/13/2013	11	9.05
7/20/2012	16	25
5/3/2012	17	25
5/3/2012 FD	17	26
3/30/2012	18	27

MP2-7 (123'-129')		
Date	Arsenic	Perchlorate
Sep-19	7.6	2.9
Apr-15	10	2.98
7/1/2014	11.8	0.245 J
12/11/2013	12	8.18
5/3/2013	12	<b>16.6</b>
7/20/2012	16	24
5/3/2012	17	25
3/30/2012	14	20

MP2-8 (145'-160')		
Date	Arsenic	Perchlorate
Sep-19	7.2	2.8
Apr-15	9.7	8.44
7/1/2014	11.9	0.917
12/11/2013	10.3	3.67
5/13/2013	12.6	17.9
7/20/2012	15	25
5/3/2012	16	24
3/30/2012	14	24



MP = Multi-Port well NT = Not Tested ND = Non-Detect = Value over drinking water standards

(Arsenic MCL is 10ppb, and the Perchlorate advisory level is currently 15ppb)



### ARSENIC AND PERCHLORATE IN EU2: PZ-4S AND PZ-4D



36

PZ-4S (37' to 47')		
Date	Arsenic	Perchlorate
Sep-19	ND	2.0
Apr-15	NT	4.49
9/16/2014	5.7	4.16
9/16/2014 FD	5.5	4.44
7/2/2014	6.2	8.58
3/20/2014	2.8	10.9
12/13/2013	3.6	6.75
7/24/2013	1.4	ND
7/24/2013 FD	1.5	ND
5/3/2013	.22 J	5.57
2/8/2012	2.4 J	28
11/9/2011	ND	25
8/4/2011	ND	19
7/28/2011 (a)	NT	18
5/16/2011	<b>2.6 J</b>	30
11/10/2009	NT	50
6/16/2007	ND	146
7/7/2006	ND	71.8

PZ-4D (52' to 62')		
Date	Arsenic	Perchlorate
Sep-19	ND	32.5
Apr-15	NT	16.1
9/16/2014	6.1	13.8
7/2/2014	7.8	16.7
3/20/2014	3.9	44.5
12/13/2013	1.8	39.8 D
7/24/2013	1.5	5.59
5/3/2013	NT	NT
4/9/2012	NT	36
2/7/2012	2.7 J	39
11/8/2011	ND	45
8/5/2011	ND	39
7/28/2011 (a)	NT	9.8
5/16/2011	2 J	39
11/11/2009	NT	41
6/13/2007	ND	41
7/7/2006	0.6 J	34.7



(Arsenic MCL is 10ppb, and the Perchlorate advisory level is currently 15ppb)



### ARSENIC AND PERCHLORATE IN EU2: MW 44, 45S AND 45D

MW-44 (80' to 95')		
Date	Arsenic	Perchlorate
Sep-19	0.1 J	15.7
Apr-15	NT	39.2
9/16/2014	0.55 J	40.1
7/1/2014	1.2	49.8
3/20/2014	0.69 J	42.3
3/20/2014 FD	0.78 J	40.5
12/12/2013	0.75 J	40.2
12/12/2013 FD	0.85 J	39.8
4/29/2013	0.15 J	40.5
9/6/2012	ND	35
9/6/2012 FD	ND	36
3/29/2012	ND	34
3/29/2012 FD	ND	33

MW-45S (119' to 124')		
Date	Arsenic	Perchlorate
Sep-19	0.6	1.4
Apr-15	NT	2.42
9/6/2014	1.2	2.55
7/1/2014	1.8	5.74
3/20/2014	1.2	5.86
12/13/2013	1.5	1.28
5/3/2013	0.53 J	31.1
5/3/2013 FD	0.32 J	30.9
9/6/2012	ND	6
M	W-45D (147' to 15	52')
Date	Arsenic	Perchlorate
Sep-19	0.9	0.5
Apr-15	NT	ND
9/6/2014	3	0.22 J
7/1/2014	1.5	ND
3/20/2014	1.3	ND
12/12/2013	1.3	5.3
12/12/2013 FD	1.4	5.26
5/3/2013	ND	54.3
5/3/2013 FD	0.16 J	52.9
9/6/2012	ND	3.6



<u>Key</u>

= Value over drinking

water standards

MW = Monitoring well

(Arsenic MCL is 10ppb,

and the Perchlorate

advisory level is

currently 15ppb)

**NT = Not Tested** 

ND = Non-Detect

37



## **GROUNDWATER STUDY**

The Dispute Resolution was paused at Tier 2 while the Army Corps and their Partners agreed to conduct additional groundwater data collection.

The Army Corps and the regulatory Partners (DOEE and EPA) reviewed the initial sampling results and agreed to conduct additional groundwater data collection in Spring 2020.

### Next Steps:

- Confirm arsenic concentrations are below drinking water standard.
- Continue to monitor perchlorate concentrations.
- Perchlorate MCL scheduled to be published in June 2020.





Groundwater Sampling Well



### SPRING VALLEY RESTORATION ADVISORY BOARD

### **Community Items**







### SPRING VALLEY RESTORATION ADVISORY BOARD

**Open Discussion:** 

### **Reminders:**

- The next RAB meeting will be **Tuesday**, **January 14**<sup>th</sup>, **2020** 

### **Upcoming Agenda Items:**

- Suggestions?
- Upcoming Spring 2020 Groundwater sampling results.





### SPRING VALLEY RESTORATION ADVISORY BOARD



- Public Comments
- Wrap-up



г

1

### U.S. Army Corps of Engineers Spring Valley Restoration Advisory Board St. David's Episcopal Church Minutes of the November 2019 Meeting

RESTORATION ADVISORY BOARD MEMBERS PRESENT AT THIS MEETING	
Dan Noble	Military Co-Chair/USACE, Spring Valley MMRP Manager
Greg Beumel	Community Co-Chair
Jennifer Baine	Community Member
Brenda Barber	USACE, Spring Valley Project Manager
Brian Barone	Agency Representative - Department of Energy & Environment
Paul Bermingham	Community Member
Mary Bresnahan	Community Member
Marguerite Clarkson	At Large Representative - Horace Mann Elementary School
Mary Kathryn Covert Steel	Community Member
Mary Douglas	Community Member
Steve Hirsh	Agency Representative - Environmental Protection Agency (EPA) Region III
William Krebs	Community Member
Lawrence Miller	Community Member
Lee Monsein	Community Member
Malcolm Pritzker	Community Member
Tom Smith	Community Member
John Wheeler	Community Member
RESTORATION ADVISORY BOARD MEMBERS NOT PRESENT AT THIS MEETING	
Paul Dueffert	Community Member
Dan Nichols	At Large Representative - American University
ATTENDING PROJECT PE	RSONNEL
Todd Beckwith	USACE

Ivanna Goldsberry	USACE	
Whitney Gross	Spring Valley Community Outreach Program	
Holly Hostetler	ERT, Inc.	
Carrie Johnston	Spring Valley Community Outreach Program	
Julie Kaiser	USACE	
Carlos Lazo	USACE, Government Affairs Liaison	
Rebecca Yahiel	Spring Valley Community Outreach Program	
HANDOUTS FROM THE MEETING		
I. Final Agenda for the November 12, 2019 RAB Meeting II. Army Corps of Engineers Presentation III. October 2019 Monthly Project Summary		

IV. August 2019 Corps'pondent

### <u>AGENDA</u>

**Starting Time:** The November 2019 Restoration Advisory Board (RAB) meeting began at 7:07 PM.

#### I. Administrative Items

#### A. Co-Chair Updates

Dan Noble, U. S. Army Corps of Engineers (USACE), Spring Valley Project Manager, welcomed everyone and opened the meeting.

#### **1. Introductions**

D. Noble, USACE, introduced Julie Kaiser, USACE Baltimore, who will be joining the USACE Spring Valley team.

#### 2. General Announcements

D. Noble reviewed the website updates which included the September and October Site-Wide Monthly Project Update, weekly 4825 Glenbrook Road updates and photos, August Partner meeting minutes, and the September RAB meeting minutes.

The next Partner meeting will be on December 5.

<u>Comment from Allen Hengst, Audience Member</u> - With the weekly 4825 Glenbrook Road updates, I know they go up week by week, and you store them by the month at the website, but the last old one is June. So, there are no updates from July, no updates from August, none from September, none from October. You have last week's, and you have June and before, but nothing in between June and November.

D. Noble explained that he would look into the missing website updates.

### **B.** Task Group Updates

### 1. RAB Technical Assistance for Public Participation (TAPP) Consultant

D. Noble sent additional resumes for potential candidates from the two companies that expressed interest in the TAPP Consultant position to Greg Beumel, Community Co-Chair.

G. Beumel confirmed he received the resumes and the resumes are under review.

### 2. RAB Membership

<u>Comment from Malcolm Pritzker, Community Member</u> - We have an applicant to join the RAB. Unfortunately, he was not able to come to this meeting, so we are going to have to delay voting on him. His name is Jonathan Harms and, again, he will hopefully come to the next meeting.

#### **II. USACE Program Updates**

### A. Annual Project Funding

### 1. FY19, Actual Funding (\$11.054 M)

- Military Munitions Response Program (\$10.870 M):
  - Site-Wide Remedial Action (RA) (\$4.254 M)
  - Conduct RA at 4825 Glenbrook Road (\$6.616 M)
  - Stakeholder Outreach
  - Site Security
  - Potentially Responsible Party (PRP) Effort (~\$10-\$15 K of the Site-Wide RA)
- Hazardous Toxic Waste (HTW) (\$0.163 M):
  - Site-Wide RA (\$0.065 M) (Spaulding/Ranking Area)
  - Groundwater Remedial Investigation/Feasibility Study/Proposed Plan/Decision Document (RI/FS/PP/DD) (\$0.098 M)
- TAPP Consultant (\$0.021 M):
  - RAB Technical Consultant (\$0.000 M) (No TAPP Consultant in FY19)
  - RAB Cost (\$0.021 M)

#### 2. FY20, Projected Funding (\$6.173 M)

- Military Munitions Response Program (\$6.021 M):
  - Site-Wide RA (\$3.772 M)
  - RA at 4825 Glenbrook Road (\$2.249 M)
  - Stakeholder Outreach
  - Site Security
  - PRP Effort
- HTW (\$0.097 M):
  - Site-Wide Remedial Action (\$0.000 M) Milestone: this represents the first time Site-Wide HTW RA funding will not be spent since the beginning of the project.
  - Groundwater Remedial Investigation/Feasibility Study/Proposed Plan/Decision Document (RI/FS/PP/DD) (\$0.097 M)
- TAPP Consultant (\$0.055 M):
  - RAB Technical Consultant (\$0.025 M) This is the statutory spending limit allowed.

- RAB Cost (\$0.030 M)

<u>Question from A. Hengst, Audience Member</u> - I know you do not like to talk about the PRP Effort, but can you at least say what the money was for? What was the 15 thousand spent on? What category?

Brenda Barber, USACE and D. Noble explained that USACE Baltimore cannot discuss specifics of the PRP Effort; the PRP Effort has been passed to the Department of Justice (DoJ). When DoJ asks questions in relation to the PRP Effort, staff time is charged.

<u>Question from Paul Bermingham, Community Member</u> - I see that nothing is forecast for Fiscal Year 21. Is that because nothing is expected to be needed or the budgetory process has not got underway yet?

D. Noble explained that the out-year was always left out of the report to the RAB. When USACE Baltimore performs the mandatory annual formal cost-to-complete exercise, the budget is forecast for 10 years, but the numbers are less meaningful further out in years. USACE Baltimore has been reporting to the RAB the expenditures for the past year and intended expenditures for the upcoming year.

<u>Question from P. Bermingham, Community Member</u> - So, it may continue or probably will continue?

D. Noble confirmed this and explained that he does not have confidence in the 2021 budget numbers. The expenditures in FY2020 will inform the numbers for FY2021. If the RAB requests the budget forecasts for years beyond the upcoming year, USACE Baltimore can add those forecasts to the RAB funding report.

<u>Question from P. Bermingham, Community Member</u> - Presumably, it is the best estimate, however [Ed. garbled] My second question is, I see the amounts have been varying significantly. Is the amount, is the work taking place limited by the absence of budget or is the money being spent generally what is considered to be needed to do the work?

D. Noble explained that USACE Baltimore has not been funds-limited on this project. If USACE Baltimore presented a project need, USACE Headquarters (HQ) provided funding. The drop in projected funding from FY19 to FY20 is based on the project team's request to USACE HQ. USACE Baltimore requested less funds for FY20 in anticipation of projected expenditures, rather than USACE HQ dictating the ~\$6.2 amount to USACE Baltimore.

<u>Question from P. Bermingham, Community Member</u> - Funding is available for what is considered to be needed?

D. Noble confirmed this.

The actual funding spent on the entire project through FY19 is \$324.522 M.

<u>Question from Brian Barone, Agency Representative - Department of Energy & Environment</u> (<u>DOEE</u>) - What is the timeline for a Technical Consultant?

D. Noble explained that USACE Baltimore is awaiting feedback from the RAB on the RAB's preference of TAPP Contractor firm and candidate. The USACE Contracting Office is prepared to approach the prospective firm to request a proposal. The firms are 8(a) Contractors, so USACE Baltimore may utilize Sole Source for the company that the RAB prefers.

<u>Question from B. Barone, Agency Representative - DOEE</u> - So, you are waiting on the RAB. Does the RAB know that?

G. Beumel confirmed this and explained the RAB's decision will be made soon.

### **B. Site-Wide Remedial Action (RA)**

Ivanna Goldsberry, USACE Baltimore briefly reviewed the Site-Wide Remedial Design (RD)/Remedial Action (RA).

#### 1. The final survey effort continues at the 92 residential properties and 13 Federal/City lots.

- In the past 2 months, additional anomaly removals have been completed at 9 residential properties.
- Currently working on 81 residential properties at different stages of the remedial action process.
- Completed 80 civil surveys and 80 arborist surveys.
- The geophysicist team visited 79 properties and provided technical recommendations for plant removal.
- Completed vegetation removal from 34 residential properties and 13 Federal/City lots.
- Completed geophysical surveys completed at 34 residential properties and 7 Federal/City lots off Dalecarlia Parkway.
- Completed 34 anomaly removals at residential properties and 4 Federal/City lots off Dalecarlia Parkway. The map on Slide #12 of the presentation has been updated to show the completed properties. The yellow dots on the map indicate the locations where munitions debris (MD) items were found. The red dot is the cannonball found in April.
- Issued 1 Assurance Letter. Additional Assurance Letters are planned to be issued in the next few weeks.

#### Question from M. Douglas, Community Member - What were the anomalies like?

I. Goldsberry explained that most of the items found were MD or non-munitions-related metallic items, such as nails and cultural items.

Question from M. Douglas, Community Member - Nothing with anything, live substance in it?

I. Goldsberry explained that all the items found tested negative for mustard (HD) and Lewisite (L) during headspace analysis. The only item considered hazardous was the single munitions and explosives of concern (MEC) item found, the civil war cannonball.

<u>Question from A. Hengst, Audience Member</u> - Yeah, I was just trying to compare September's map with November's map. It looks like you filled in 5 properties blue that used to be white. Is that correct? In September. I mean, I have got the map here. You had white, now they are blue. But I only counted 5. Maybe I am missing something.

I. Goldsberry explained that when properties are completed, the shading on the map for those properties goes from blue to white.

<u>Comment from A. Hengst, Audience Member</u> - No, white is not. Wait a minute, I thought blue was done.

I. Goldsberry explained that blue shading on the map indicates properties that have not been completed yet, and the white indicates properties that have been completed. USACE Baltimore

will review the map.

<u>Question from A. Hengst, Audience Member</u> - Oh, I see. So, you have increased some white properties?

I. Goldsberry confirmed this.

Question from A. Hengst, Audience Member - About 5?

I. Goldsberry explained that the map should show 8 completed properties. At the request of a homeowner, the team returned to 1 property to conduct survey and removal activities on the property outside the Area of Focus.

Site preparation activities include putting together a landscape plan to identify plants that need to be either removed or trimmed for the team to conduct the geophysical survey. The landscape plan process begins with a professional arborist visiting a property to perform a thorough inventory and appraisal of each plant on the property. The arborist then creates a table that itemizes all of the plants; including names of the plant species, condition of the plants, and an appraised value. The arborist also creates a map figure that shows the location of each plant. The map figure is reviewed by the geophysical team to determine which plants need to be removed, trimmed, or left in place in order to perform the geophysical survey.

Once the geophysicists have made their recommendations, the USACE contractor puts together a color-coded table and figure indicating the proposed actions the geophysicists recommend. The table and figure are included in the landscape plan and reviewed by USACE. The landscape plan is then sent to the homeowner and the Outreach Team meets with the homeowner to review the plan and discuss the proposed actions. It is during this step that the homeowner may choose to not allow the team to remove or trim specific plants. The team encourages the homeowner to allow the proposed actions so the team can achieve the most survey coverage of the property as possible. Once the landscape plan is approved by the homeowner, the plan is executed by a professional landscaper that removes the plants or performs the trimming.

The geophysical survey equipment can detect anomalies under hardscape areas that are not reinforced with steel. Excavations were completed under five hardscape areas in October. The hardscape areas were patched immediately and then restored by a professional hardscape company.

An intact 75mm projectile shell was found under an asphalt driveway in October. The item was full of dirt when uncovered and upon further investigation was determined by the onsite ordnance safety team to be a non-hazardous MD item. The item underwent headspace analysis and tested negative for L and HD.

Question from Jennifer Baine, Community Member - How deep was it?

I. Goldsberry explained that the item was found approximately 2 feet in depth.

Question from Tom Smith, Community Member - Did you say under 2 feet?

I. Goldsberry explained that the item was found at a very shallow depth, between 0-2 feet.

Question from Jerry Barton, Audience Member - How big is the shell?

D. Noble explained that the shell was ~12 inches long and ~3 inches in diameter.

<u>Question from J. Barton, Audience Member</u> - We were talking, you need something for scale; a pen knife or a pen or something. Where was that?

#### Draft Minutes of November 12, 2019 RAB Meeting

I. Goldsberry and Rebecca Yahiel, Spring Valley Community Outreach explained that the item was found in an asphalt driveway on 52<sup>nd</sup> Street.

<u>Question from J. Baine, Community Member</u> - So, I thought you guys were not going under driveways. Was there something that, like, triggered looking under that driveway?

I. Goldsberry and Whitney Gross, Spring Valley Community Outreach explained that surveys and removals are conducted under driveways if the geophysical equipment can detect a clear signal with no interference from steel rebar. If the driveway has rebar, then the equipment cannot detect anomalies.

Question from J. Baine, Community Member - But otherwise you do?

I. Goldsberry confirmed this.

Most of the items found were non-munitions-related debris, such as metallic pipes and scrap metal. Blind seeds were recovered that USACE team and the contractor placed on properties for quality assurance/quality control (QA/QC) of the geo-physical equipment. When MD items are found, the MD items are double-bagged in zip plastic bags and sent for headspace analysis. All the items found in October tested negative for HD and L.

Question from P. Bermingham, Community Member - What does blind seed mean?

I. Goldsberry explained that a blind seed is a metallic pipe, similar to metal pipe sold found in home improvement stores, that mimics an anomaly munition due to its shape and size. The blind seed is placed in the ground in different locations unknown to the geophysical technicians. The area is then surveyed, and the blind seeds serve as a QA/QC test.

Question from J. Baine, Community Member - Have you found all the seeds?

D. Noble explained that sometimes the blind seeds are missed. If a blind seed is missed, a Root Cause Analysis (RCA) is performed to determine why the blind seed was missed. If the reason why the seed was missed is acceptable, no action is necessary. If the reason why the seed was missed is not acceptable, then the project procedures must be adjusted.

Question from J. Baine, Community Member - Have you had to do that?

D. Noble confirmed this and explained that sometimes landscape features can cause seeds to be missed. For example, wide landscaped stairs will cause the instrument to be off the ground in varying amounts, affecting the signal. The team walked a set of landscaped stairs up and down, and a seed was missed. The team adjusted procedures to walk across each stair to keep the signal consistent.

#### 2. Tentative Schedule

- Fall/Winter 2019
  - Continue to draft landscape plans and conduct plant removal along Dalecarlia Woods and residential properties.
  - Continue geophysical surveys.
  - Continue to obtain Right-of-Entries from the next group of homeowners.
  - Continue sampling to delineate the soil removal areas in the southern American University (AU) campus exposure unit.
- Winter/Spring 2020
  - Continue anomaly removal efforts.

- Continue finalizing plant removal plans with subsequent homeowner groups in preparation for geophysical surveys.

<u>Question from William Krebs, Community Member</u> - Is this on southern AU campus exposure unit? Is that on the other side of Nebraska?</u>

D. Noble explained that the sampling will be conducted on AU campus.

Question from W. Krebs, Community Member - It is on the main campus?

D. Noble confirmed this.

<u>Question from W. Krebs, Community Member</u> - Ok, so, it is not the south campus, there is a new [Ed. garbled] where they are building all the new dorms?

D. Noble confirmed that the sampling is not in the area with the new dorms, but on the main campus near the former Public Safety Building (PSB).

<u>Question from J. Baine, Community Member</u> - Has there been any resolution about the re-planting on Dalecarlia in response to the neighbors before?

I. Goldsberry explained that USACE Baltimore contacted the Department of Transportation (DOT), and DOT is not willing to remediate the bamboo in the Dalecarlia Parkway area. USACE Baltimore will not re-plant if the bamboo is not remediated. Any plants from the approved species list would die because the bamboo is very invasive. No re-planting is planned in the Dalecarlia Parkway area.

<u>Question from Mary Kathryn Covert Steel, Community Member</u> - Were the homeowners that acceptable?

D. Noble explained that the bamboo will grow back faster than any approved species.

I. Goldsberry asked M. K. Covert Steel if she was asking if the plan was acceptable to the homeowners.

Question from M. K. Covert Steel, Community Member - Yeah, what was their reaction?

USACE Baltimore notified the homeowners and received an email from one homeowner that accepted the plan. USACE Baltimore is awaiting contact from another homeowner that reached out to the DC Mayor's office. USACE Baltimore notified the DC Mayor's office contact person that USACE Baltimore is available to answer any questions but has not received a response yet.

<u>Question from Lawrence Miller, Community Member</u> - This part of the remedial action, what comes after this part of the tentative schedule? At one point, I think the estimate was 3 years for the whole effort. There was a target to try and cut that down as much as possible. What is the end point projected now?</u>

I. Goldsberry and D. Noble explained that an end point for the schedule is not projected yet, but the remedial action will extend for at least for another year. The total effort will extend past 3 years.

#### C. Former Public Safety Building (PSB)

Brenda Barber, USACE, Spring Valley Project Manager provided a brief update on the former Public Safety Building (PSB).

- Completed preparatory work, installed erosion and sediment (E&S) controls around the former building's footprint, and pruned tree roots in the excavation area. Completed work to protect the trees adjacent to the excavation area.
- Cut and capped the waterline to Jack Child Hall that crossed the slope above the former PSB. To continue to provide utilities to Jack Child Hall, the team worked with AU to re-route a sanitary sewer line discovered last week.
- The team evaluated the slope required to safely excavate the PSB foundation below.
- With DOEE's approval of the updated work plans, the team began excavating the slope.
- Conducted benching of the upslope soils to safely proceed with excavation of the former footprint of the building.
- Installed Depot Area Air Monitoring System (DAAMS) tubes for perimeter air monitoring around the work area.
- Conducting soil screening with metal detectors to ensure no anomalies are present in the excavation area.
- Excavation soils are transported to Federal Property for potential re-use.
- The team began intrusive activities in November. The excavation work is anticipated to take 2-4 months to complete.

Extensive pot-holing was conducted to locate utilities for capping and re-routing to avoid impact to the excavation work. Restoration work will be necessary as a result of re-routing the sanitary sewer line and water line that crossed the property. The team resolved the issues with AU's maintenance staff and are currently removing the upslope soils to properly bench the site to begin the excavation of the former footprint of the building.

<u>Question from M. K. Covert Steel, Community Member</u> - Is that a home in the top right-hand corner [Ed. photo on Slide #20 of the presentation] or is that building owned by AU?

B. Barber confirmed that the building shown in the photo on Slide #20 is owned by AU.

Question from J. Barton, Audience Member - So, you can bench the site?

B. Barber explained that the team is benching the site to safely perform the subsurface excavation without installing sheet piling. Some trench boxes will be utilized, but by benching the upslope areas the team can minimize the use of those protective measures.

<u>Question from J. Barton, Audience Member</u> - That is a very steep thing. I stand up on top and I look down.

B. Barber confirmed this and explained that the slope will be benched to the top.

Question from J. Barton, Audience Member - Ok. It is going to be stable; it is not going to go?

B. Barber confirmed this.

Comment from J. Barton, Audience Member - That is what you think. Ok.

B. Barber explained once the benching is complete, the contractor will begin the process of removing the former walls and foundation of the PSB to conduct excavation.

<u>Question from J. Barton, Audience Member</u> - So, there has not been anything done to the slab, yet? I cannot see the slab.

B. Barber confirmed that the slab has not been removed yet.

Comment from J. Barton, Audience Member - It seems like there is lots of dirt, lots of soil on top.

B. Barber confirmed that the slab and former walls have not yet been removed. The preparatory work is still being completed. The goal is to remove the slab after the Thanksgiving holiday.

<u>Question from W. Krebs, Community Member</u> - So, have you found anything in the subsoil that has been removed?

B. Barber explained that a few items were found during the pot-holing activities for the utilities and in the excavation area. The items were sent for headspace analysis and the locations of the items were marked for discussion. The items were MD; no items of concern or MEC items were found.

#### D. Glenbrook Road

B. Barber provided a brief update on 4825 Glenbrook Road and 4835 Glenbrook Road.

#### **1. Recent Activities**

- Completed removal of HTW/arsenic (As) contaminated soil.
- As part of the final restoration efforts, the team began compacting clean soil in the completed areas.
- Began final compaction to existing grade on September 30. First utilizing clean backfill soil already staged, then bringing in one truckload of soil at a time, as needed.
- Excavated remaining 'hotspots' to reduce potential unacceptable risks.
- Completed the soil gas sampling in the 4835 Glenbrook Road basement. Sampling results expected in January.

Question from A. Hengst, Audience Member - If the results in January are negative, you are done?

B. Barber explained that USACE will need to discuss the results with the Partners and AU before any decisions are made.

Question from A. Hengst, Audience Member - But if they are positive what happens then?

B. Barber reiterated that no decisions will be made without discussing the results internally and with the Partners and AU.

#### 2. Area 2 Excavation

Area 2 is the small area in the front yard of 4835 Glenbrook Road. USACE Baltimore worked with Edgewood Chemical Biological Center (ECBC) to excavate in Area 2, completed last week.

- Excavation in Area 2 was conducted by hand.
- Safety procedures included air monitoring, a decontamination station, and step-off pads.
- Recovered ~12 pieces of glassware from Area 2; found primarily adjacent to the foundation of the home at 4835 Glenbrook Road.
- The recovered glassware weighed less than 1 lb. in total.
- The glassware dissipated as the excavation moved farther away from the home, so Area 2 is considered complete.
- The team collected 27 barrels of soil, 11 soil samples, and 2 validation and confirmation samples from the floor and wall of the excavation. The results are pending.

#### **3. Ongoing Efforts**

• Completed a draft risk reduction report for Area 4, the last area at the site to be addressed. The

report was presented to the Partners. Based on feedback from the Partners, changes will be made to the report for review and concurrence by the Partners.

- The draft risk reduction report examines the potential remaining risk for HTW components within Area 4, primarily hotspots for As and Dichloronaphthalene encountered in Area 4.
- Continuing to work at the Federal Property on a variety of tasks:
  - Preparing and sending all waste shipments. All waste is removed from the Federal Property.
  - Bringing in backfill material to support the backfill requirements for Glenbrook Road and PSB.
  - Trailer and site repairs.
  - Equipment inventory and inspections.

### 4. Tentative Schedule

- Late Fall 2019
  - The final site restoration has begun with soil compaction underway at completed areas.
  - Completion of low probability operations: focus was on recovering glassware at Area 2 and at the front of 4835 Glenbrook Road, near the property line.
  - Working hours: Monday-Thursday from 6:30 AM to 5:00 PM. Heavy equipment operations do not begin until after 7:00 AM.
- Winter 2020
  - Completion of any remaining intrusive activities per Partner consensus on the conclusion of the HTW effort and the Soil Gas Sampling results.
  - Ongoing site restoration for the Glenbrook Road project areas.
- Summer 2020 anticipated project completion.

<u>Question from J. Barton, Audience Member</u> - So, the summer would be for 4835 also, with all that back together?

B. Barber explained that the end date depends on the outcome of 4835 Glenbrook Road. If the outcome is positive and no additional work is required for 4835 Glenbrook Road, then both properties will be fully restored. Along with the restoration on 4801 Glenbrook Road, the combined work on all of Glenbrook Road could be completed by summer 2020.

#### E. Groundwater Feasibility Study / Dispute Resolution

Todd Beckwith, USACE Baltimore provided a review of the Groundwater Remedial Investigation (RI) and a brief update on the Groundwater Feasibility Study (FS).

#### 1. Exposure Unit 2 (EU2)

The Area of Concern for groundwater is Exposure Unit 2 (EU2), the area within the oval shown on Slide #33 of the presentation. Historically, a few wells in EU2 had detections of As and perchlorate above drinking water levels. Multi-port (MP)-2, located on Glenbrook Road, consistently had As concentrations above drinking water levels. Piezometer (PZ)-4D and Monitoring Well (MW)-44, located in front of Kreeger Hall, consistently had perchlorate concentrations above drinking water levels. The September 2019 sampling effort involved sampling the wells within EU2.

The wells have not been sampled in 4 years, since April 2015. A new round of samples were collected to determine the current concentrations.

#### a. Well MP-2

- Multi-Port well on Glenbrook Road.
- Deep well, drilled to 200 ft, with sampling ports installed at 8 different depths.
- The contaminant As had been an issue in MP-2 in the past, but the results from the September 2019 sampling indicate that As is now below the drinking water standard of 10 parts per billion (ppb) at all the different sampling ports; with a maximum detection of 7.7 ppb in MP-2-3.
- The As concentrations observed from the time of the first sampling in 2012 through 2015 had been reducing over time, and now, with the additional 4 years, the concentrations are below 10 ppb.

### b. Wells PZ-4S and PZ-4D

- PZ-4S and PZ-4D are shallower Piezometer wells located in front of Kreeger Hall.
- Each well represents a different depth.
- PZ-4S had low detections of As and perchlorate in the past, and in September 2019 there was no detection for As and 2.0 ppb for perchlorate.

PZ-4D, at ~52-62 ft below ground surface, had a detection for perchlorate at 32.5 ppb, which indicates the concentration has gone up since April 2015. The results are more consistent with earlier results in 2012 and 2013.

Question from P. Bermingham, Community Member - What does ND mean, does it mean zero?

T. Beckwith explained that ND means Non-Detect.

Question from P. Bermingham, Community Member - It means zero, nothing was detected?

T. Beckwith confirmed this and explained that a concentration marked ND means the concentration was below the detection limit that the equipment is capable of detecting.

<u>Question from T. Smith, Community Member</u> - So, the increase in the perchlorate amount in PZ-4D, what does that tell you?

T. Beckwith explained that MW-44 is a well in front of Kreeger Hall that is deeper than PZ-4D, at 80-95 ft below ground surface. MW-44 has consistently been in the 40-ppb range for perchlorate, but now has the result of 15.7 ppb, indicating that the concentration went down, while the concentration for PZ-4D went up. The team wondered if the results from MW-44 had been mixed up with PZ-4D, so the team verified that the samples were not mixed up. The team does not have an explanation for why the results flip-flopped. All the samples were collected from within the same weathered bedrock formation. The team plans to sample PZ-4D and MW-44 again.

#### c. Wells MW-44, MW-45S, and MW-45D

- Deeper Monitoring Wells located in front of Kreeger Hall.
- Perchlorate above drinking water standards is found in the groundwater at the  $\sim$ 50 to  $\sim$ 100 ft depth.

<u>Question from W. Krebs, Community Member</u> - Years ago, you did an analysis of what might be the source of the perchlorate, something about Peru. Have you done a similar analysis with this particular [Ed. garbled]?</u>

T. Beckwith confirmed that isotopic analysis was performed for chlorine and oxygen within the

perchlorate. Based on the ratios of the different isotopes, the source location of the perchlorate may be identified. The perchlorate detected in Spring Valley likely came from the Atacama Desert in Chile, where there are sodium nitrate (Chile saltpeter) deposits used for fertilizer and nitrogen sources. While the Chile saltpeter may have been used as a fertilizer source, it is possible the U.S. Army may have used the Chile saltpeter as a nitrogen source for making explosives in WWI.

<u>Question from J. Baine, Community Member</u> - What is your hypothesis for the ups and downs? Like, some of these have trends, but some of them just seem to, like, the other one goes from 6 to 30, then down to 1; 5 down to 1. What seems to be causing? I know that is really old.

T. Beckwith explained that the team believes the fluxuations were sample mix-ups; the sample for PZ-4S was mixed up with MW-45S and PZ-4D was mixed up with MW-45D. The results for MW-45S and MW-45D were more consistent with what was seen in PZ-4S and PZ-4D and there were no detections in MW-45S and MW-45D above drinking water standards since the potential mix-up.

The two results for the same date (5/3/2013) for MW-45S and MW-45D represent one sampling result and one field duplicate collected at the same location at the same time.

#### 2. Dispute Resolution

- The Dispute Resolution with DOEE and EPA over the proposed groundwater remedy was paused at Tier 2 while additional data was collected in September.
- USACE Baltimore discussed the results with DOEE and EPA. The conclusion of the discussion was to perform an additional round of sampling in the spring of 2020.

#### 3. Next Steps

- Collect an additional round of samples to confirm that As concentrations are below drinking water standards. If the As concentrations remain below the drinking water standard, 'No Action' would likely be the conclusion for As in groundwater.
- Continue to monitor the perchlorate concentrations.
- The Maximum Contaminant Level (MCL) groundwater standard is scheduled to be published in June 2020. The current proposed MCL is 56 ppb. The team has been using the drinking water advisory level of 15 ppb for comparison purposes. If the published MCL is 56 ppb, then there will no longer be an issue for perchlorate, since all recent concentrations for perchlorate have been below the proposed MCL.

<u>Question from M. K. Covert Steel, Community Member</u> - I recall you saying at the last meeting that the arsenic levels in DC are very high, or higher than the national average. Is that true for perchlorate?

T. Beckwith explained that the perchlorate levels in DC are not similar to the As levels in DC. In certain parts of the US perchlorate is naturally-occurring. Perchlorate is not naturally occurring in DC in any significant quantity.

Comment from B. Barone, Agency Representative - DOEE - No, it is not a similar situation at all.

#### **III.** Community Items

#### IV. Open Discussion and Future RAB Agenda Development

A. Upcoming Meeting Topics

- RAB TAPP Consultant
- Groundwater FS Study/Policy Issues between USACE, EPA, and DOEE
- Site-Wide RD/RA
- 4825 Glenbrook Road/4835 Glenbrook Road

### **B.** Next RAB Meeting:

Tuesday, January 14, 2020

### C. Open Discussion

### **V. Public Comments**

### VI. Adjourn

The meeting was adjourned at 7:57 PM.