Spring Valley Partnering Meeting
June 27, 2019
Spring Valley Project Federal Property Conference Room

Name	**Organization/Address**	
Allyn Allison	USACE – Huntsville	**X**
Brenda Barber	USACE – Baltimore	**X**
Brian Barone	DOEE	**X**
Matt Beatty	Weston Solutions	**X**
Todd Beckwith	USACE – Baltimore	
Bethany Bridgham	American University	
Sean Buckley	Parsons	**X**
Paul Chrostowski	CPF Associates, American University Consultant	
Chris Gardner	USACE – Corporate Communications Office	
Alma Gates	Former RAB Member – Horace Mann Representative	**X**
John Gerhard	Weston Solutions	**X**
Ivanna Goldsberry	USACE – Baltimore	**X**
Whitney Gross	ERT – Community Outreach Team	**X**
Steven Hirsh	EPA – Region III	**X**
Bryan Hnetinka	Weston Solutions Project Manager	**X**
Holly Hostetler	ERT	**X**
Carrie Johnston	ERT - Community Outreach Team	
David King	USACE – Baltimore	**X**
Kevin Kingdon	Black Tusk Geophysics	**X**
Carlos Lazo	USACE, Government Affairs Liaison	**X**
Caitlyn Martin	Weston Solutions	
Chris Moran	Weston Solutions	**X**
Dan Nichols	American University	

Dan Noble	USACE – Baltimore	**X**
Steven Norman	ECBC	
Randall Patrick	Parsons	**X**
Tom Rosso	ECBC	
Dave Tomlinson	DOEE	
Matt Verderosa	American University	**X**
Amy Walker	USACE – Huntsville	**X**
Bruce Whisenant	USACE – Huntsville	
Rebecca Yahiel	ERT – Community Outreach Team	**X**
Alex Zahl	USACE – Baltimore	**X**

Summary of 27 June 2019 Spring Valley Partnering Meeting

Consensus Decisions

- None

27 June 2019 Action Items

- Parsons will check to see if ECBC performed an analysis for Thiodiglycol and will follow up with the regulators.
- EPA Region III and DOEE agreed that the median in Dalecarlia Parkway does not need to be investigated as part of the Site-Wide Remedial Action.
- Weston Solutions agreed to draft executive email summaries for the Draft Property Summary Reports to enable EPA Region III to give a quick response.
- Weston Solutions agreed to review the HD video of the previously surveyed properties for unusual landscaping elements.

Thursday 27 June 2019

A. 4825 Glenbrook Road

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

Parsons provided a brief update on 4825 Glenbrook Road.

1. Recent Activities

- Continued Low Probability work in Area B through April and May.
- Completed excavation in the areas surrounding the driveway, including under the former driveway apron. The driveway apron was very close to saprolite and required less excavation. A hit of mercury (Hg) was detected in the driveway area, a new addition to the list of metals. The risk assessor for Parsons will review the Hg detection along with the other metals.
- With the completion of Area 5, Low Probability work was completed on May 24. Area 5 was created out of an abundance of caution because laboratory glass was observed washing out of the side of the hill where the former construction steps were located. The area was known to be near a test pit where

minor pieces of glass were encountered but no evidence of burial pit was found. At that time the test pit was completed in accordance with the workplan.

In response to a question from U.S. Army Corps of Engineers (USACE) Baltimore District, Parsons confirmed that the test pit workplan and activities were from approximately 2001-2002.

The team excavated 1 1/2 feet down in Area 5 and found no other evidence of glass or a burial pit. The Project Delivery Team (PDT) determined that no further sampling was warranted.

All Level B activities are completed. The team packed up the personnel decontamination station (PDS), cascade system, and other Level B equipment.

Hazardous and toxic waste (HTW) operations began on June 3. Areas of As in exceedance of 20mg per kg will be addressed and remediated:

- This includes As removal from 3 grids:
  - 30, -50 (completed)
  - -30, -70
  - 10, -90 (completed)
- The north wall of grid -30, -70 needs further excavation due to As exceedance. Sample results are pending.
- The team plans to address the As found in the north wall of grid -10, 90 as well.
- Other than grids -30, -70 and -10, 90, no other As exceedances remain.
- During Low Probability operations, benzaldehyde samples were rejected by the Parsons laboratory validator. Samples were re-collected for benzaldehyde analysis in grids (90, -30), (90, -50), (70, -30), and (70, -50) (Area B).

Results are pending for the north wall to the left of Area B. The north wall next to the 1996 Debris Area requires relocatingon of the air conditioning (AC) units. A contractor visited the site to develop a cost estimate to move the units to the back of the house during operations and then back into position when the work is completed. In the meantime, the team has a reduced crew; one team of three members that supports the excavation work in addition to the equipment operators and truck drivers from Zimmer Environmental Services. When not excavating, the team processes the drums and disposal of waste.

2. Area 4 Preliminary Results Summary

During previous HTW excavations the team encountered an odor. The team stopped operations and labelled the area 'Area 4', to be included in Low Probability operations in Level B. Level B excavations began in late winter and the Miniature Chemical Agent Monitoring System (MINICAMS) began registering detections. The team determined that the detections were inconclusive or had high probability of false detections. The issue was not resolved to the team's satisfaction before higher seasonal temperatures prohibited further work in the area. Area 4 remains to be addressed:

- Samples from the floor and the walls contained HTW compounds exceeding comparison values for background concentrations for metals: As, cyanide (CN), aluminum (Al), and vanadium (V).
- 1,4 Thioxane and 1,4 Dithiane were detected below workplan comparison values.

In response to a question from Environmental Protection Agency (EPA) Region III, Parsons explained that one of the comparison values represents a USACE-published value for residential areas and one of the comparison values was drawn from the original Parsons Remedial Investigation (RI) back in the 1990s.

In response to a question from EPA Region III, Parsons and USACE Baltimore explained that Thiodiglycol was not specifically requested in the sample analyses because there were no detections of mustard (HD). Analysis for Thiodiglycol was not triggered by Edgewood Chemical Biological Center (ECBC) protocol.

EPA Region III pointed out that if Thiodiglycol creates toxicity the compound should be part of the Risk Assessment.

Parsons will check to see if ECBC performed an analysis for Thiodiglycol and will follow up with the regulators. Parsons reports any detects for agent or agent breakdown products (ABPs) and any metals. Metals were the only detects that exceeded the screening values.

The Al, CN, and V can be part of the group of metals included in the risk assessment used to calculate an exposure point concentration (EPC) for the property. The As values will not be part of the group of metals because As has a hard concentration value of 20mg per kg. However, the excavation is ~8 feet deep and clean fill will be used to fill the excavation.

In response to a question from Parsons, EPA Region III believed the concentrations are not representative of a residential exposure scenario but pointed out that exposure point concentrations may be inconsistent with the Record of Decision (ROD).

EPA Region III and USACE Baltimore agreed that the 4825 Glenbrook Road ROD and Decision Document (DD) stated that the excavation would remove all AUES-related contamination.

EPA Region III explained that the DD and the ROD may be changed, but an explanation of significant difference (ESD) may be necessary if the metals will be left in place. If the team is unable to remove the metals and will leave the metals in place, that plan will need to be explained. He did not believe there is a residential or ecological risk from the metals at 8 to 16 feet below the surface, but he believed the plan to leave the metals in place may be inconsistent with the remedial action objective (RAO).

USACE Baltimore pointed out that the excavation is at the point of scraping the top of saprolite; almost at mechanical refusal.

EPA Region III acknowledged USACE Baltimore's point but reiterated that if the ROD and DD state that all contaminants will be removed, then the change in plan will need to be explained. The three ways to make a change to a ROD include an insignificant change that is simply a modification recorded in a file, an ESD that informs the public of the change, and a re-ROD, that changes the approach to the cleanup. He did not believe this change rises to the level of a re-ROD.

3. Near and Mid-Term Schedule:

- Complete As removals during the summer.
- Parsons' risk assessor will calculate EPCs for Al, antimony (Sb), As, cobalt (Co), total cyanide (CN), manganese (Mn), Hg, nickel (Ni), thallium (Tl), and V.
- Upon review of the EPCs, any 'hotspots' will be excavated to reduce unacceptable EPCs.

In response to a comment from EPA Region III, Parsons confirmed that this approach has not been used for As in the past. The depth of fill or clean cover over the spot of As will be considered during the review of the As in Area 4. The 20mg per kg level is based on a residential exposure level. Once the final grading plan is approved, the amount of cover over that spot will be known.

EPA Region III and Parsons agreed that the only other As that was essentially left behind was under the house and garage at the Spaulding and Captain Rankin Area (SCRA), given that there was no exposure from under the hardscapes.

In response to questions from Alma Gates, Former RAB Member – Horace Mann Representative, EPA Region III and USACE Baltimore explained that there is no specific process required, should the owners at SCRA decide to tear the house down and rebuild. There is no letter, other than the Remedial Investigation document, alerting the owners that As was left under the house and garage. There are no institutional controls, notices, or restrictions on the deed that must be considered. There is no future requirement other

than the neighborhood educational material related to munitions. The homeowners are aware of the decisions that brought the determination of 'No Action.' The team drew a hard line at 20 parts per million as the As cleanup level; the same level used for the last 20 years at the Spring Valley site and continue to use. However, the clean-up of the yard at the property allowed some averaging of the levels, which is the method proposed by Parsons for Area 4 on Glenbrook Rd. In the past, the team used a single As data point to decide.

4. Tentative Long-Term Schedule:

- Spring/Summer - complete final HTW removal.
- Fall - address remaining Area 4 soil in roll-off that has the potential to contain HD breakdown products. Out of an abundance of caution, the team plans to drum the soil.

5. Drumming Location Discussion

In response to questions from EPA Region III, Parsons and USACE Baltimore confirmed that the removed soil from Area 4 is currently at the federal property and will be taken to the remediation site at 4825 Glenbrook Road for drumming. In the past, the soil was drummed at the remediation site and then stored at the federal property. Soil was drummed at the remediation site because the infrastructure was in place at the site.

EPA Region III and USACE Baltimore agreed that the federal property is more secure than 4825 Glenbrook Road.

Parsons and USACE Baltimore suggested that the PDT discuss the possibility of drumming the soil at the federal property. The single roll-off of soil could be drummed under the Quonset hut with the chemical agent filtration system (CAFS) in place.

USACE Baltimore noted that the team needs the final grading plan for 4825 Glenbrook Road from Dan Nichols, American University (AU) to determine how the site needs to be restored.

B. 4835 Glenbrook Road

The goal of this segment of the meeting was to review the status of 4835 Glenbrook Road.

USACE Baltimore provided a brief update on 4835 Glenbrook Road.

ECBC is slated and almost funded to conduct hand excavation in Area 2 to determine if the glassware dissipates. This work hinges on moving the AC units and the team will likely not be ready to begin before mid-July.

While conducting the Area 2 work, ECBC will also set up the soil gas samplers in the basement area of 4835 Glenbrook Road to run the next round of soil gas samples. This second round of soil gas samples is expected to determine if the removal of soils along the shared property line removed the source of the soil gas detections. The sampling is expected to begin in July and must run for three weeks. The analysis of the samplers takes six weeks and the team expects to receive the results in early fall.

C. Site-Wide Remedial Action (RA)

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

Weston Solutions provided a brief update on the Site-Wide Remedial Action (RA).

1. Public Safety Building (PSB)

- Washington Gas completed the gas line abandonment at the PSB on June 14. Weston Solutions is awaiting the confirmation letter from Washington Gas indicating that the gas line was properly abandoned. Washington Gas cut and capped the line at the curb on Rockwood Parkway.

- During the week of June 10, three large trees near the PSB excavation area were removed and one tree a little farther away underwent root pruning to protect the tree's root system from the excavation.
- Mobilization and training tasks began the week of June 24. Training and preparatory exercises will continue into the first week of July.
- Demolition of concrete and excavation work is expected to begin the week of July 8.
- The PSB demolition and excavation work is expected to take approximately six weeks in July and August, followed by site restoration.

In response to a question from EPA Region III, Weston Solutions and USACE Baltimore confirmed that the work will all be conducted under low probability with perimeter air monitoring.

In response to a question from USACE Baltimore, Weston Solutions confirmed that Weston Solutions met with ECBC on June 26 for a 3 ½ hour kick-off meeting to discuss the scope of work (SOW).

a. PSB Scope of Work (SOW)

Completed:

- Sub-slab pre-characterization completed July 2018: 12 Geoprobe borings to bedrock; headspace and soil samples sent to ECBC were negative for agent and ABPs.
- Abandon gas line and remove trees: completed June 2019.

Planned:

- Remove concrete walkway footers, sidewalk that comes down from a parking lot above, and the concrete pad at a door of the building.
- Cut and remove the abandoned gas line.
- Remove some rows of cinder blocks to allow cutting back of the soil slope above the PSB. That soil will be excavated and pulled to the side. The soil will be characterized and stored for future use, as agreed with AU.
- Demolish and remove PSB foundation for disposal along with the wall, footers, and sidewalk. The concrete will be cleaned of any soil and shipped offsite for disposal.
- Begin soil excavation and investigation for American University Experiment Station (AUES)-related items and munitions and explosives of concern (MEC). The focus of the sub-slab investigation is to remove any kind of AUES items, munitions debris (MD), and MEC. As the soil is sorted through and the items are removed, the soil will be taken, if non-hazardous, to a landfill in York, PA.

In response to a question from USACE Baltimore and AU, Weston Solutions confirmed that the soil from the slope will be excavated, sampled, and characterized. If the soil meets requirements of clean backfill, the soil will be replaced at the site as backfill. All the soil underneath the concrete foundation will be removed for disposal.

The potential excavation is expected to be 30x60 ft and 8 ft deep. The footprint of the PSB was 30x60 ft. The 8-foot depth is based on the results of Parsons' previous work on the debris field at the back of the building.

In response to a question from EPA Region III, Weston Solutions confirmed that the previous work came right up to the edge of the former PSB. The debris in that area included a lot of MD, 400 lbs. of AUES glassware, and one MEC item. Another concern was a detection of Hg in that area. The team will be monitoring for Hg vapor during the excavation.

In response to a question from EPA Region III, Weston Solutions confirmed that monitoring for Hg vapor will be conducted with a Lumex or Jerome monitor.

Once the excavation is finished, the groundwater will be above 4 ft. The team will conduct de-watering to allow further excavation. The excavation will be protected with trench boxes as the excavation progresses. Soil verification samples will be collected across the bottom of the trench of the excavation and sidewalls. At the point where at least one foot of soil is excavated with no AUES items or debris found, the excavation will continue one more foot deep. During the Geoprobe sampling a year ago, the bedrock was 11 to 13 ft down.

In response to questions from EPA Region III, Weston Solutions confirmed that the debris did not dissipate at 5 ft on the back side of the building. If the soil is clear at 8 ft, the excavation will go to 9 ft. If the soil is clear at 7 ft, the excavation will continue to 8 ft.

In response to a question from Department of Energy and Environment (DOEE), Weston Solutions explained that the water from the de-watering will be collected in frack tanks, sampled, and trucked offsite.

In response to questions from EPA Region III, Weston Solutions confirmed that there will be three single point soil verification samples across the bottom of the excavation as written in the SOW. The sidewall samples will be collected at the 4-ft level; one from each short side and two from each long side.

In response to questions from DOEE and USACE Baltimore, Weston Solutions explained that if debris is encountered during excavation, extra samples will be collected in those areas. As the team excavates, debris will be removed, characterized, and sent for disposal. The goal of the excavation is to remove MD, MEC, and debris from the soils. The results of the Human Health Risk Assessment samples previously collected from underneath the slab and around the building met the risk goals. Additionally, the soil was negative for agent and ABPs. The team is not expecting concerns with the soil.

In response to questions from DOEE, Weston Solutions and USACE Baltimore explained that only the soil on the slope will be tested and re-used if determined clean. All other soils and concrete will be removed for disposal. Weston Solutions will re-create the grade on either side of the building after the excavation work and bring in quality topsoil for restoration of the site.

In response to a question from DOEE, Weston Solutions, AU, and USACE Baltimore explained that future AU plans for the former PSB have not been finalized, but the property will be returned to AU ready for any future use.

In response to a question from USACE Baltimore, Weston Solutions confirmed that fill material has been identified and characterized. Some of the fill material is at the federal property and some fill material is at the original location. The fill material at the original location will be re-sampled to confirm that the fill material is still suitable.

In response to a question from USACE Baltimore, Weston Solutions confirmed that roll-offs will be used for the stored soil from the excavated slope.

USACE Baltimore pointed out that if one sample fails, the whole roll-off will fail.

Weston Solutions confirmed this.

b. Residential Impact Planning for PSB Activities

In response to a question from DOEE, Weston Solutions confirmed that all erosion and sediment control plans have been approved.

In response to a question from EPA Region III, Weston Solutions confirmed that, in addition to the construction road, a gravel road has been extended down to the work area. The extended gravel road ensures that the roll-offs will remain on gravel to help prevent dirt being tracked onto Rockwood Road. Keeping truck wheels clean in the residential area is stressed at team meetings. The excavators and loaders will

remain on site and the roll-offs will require minimal cleaning before being moved to the federal property. A truck route is planned to travel away from the residential area.

A. Gates, Former RAB Member - Horace Mann Representative pointed out that very soon Georgetown University will begin moving 200 to 300 truckloads per day, coming up MacArthur Boulevard and using Arizona Avenue, and that will be a lot of trucks in the neighborhood.

In response to a question from A. Gates, Weston Solutions explained that the trucks will be coming back to the federal property by traveling on Rockwood Road to Nebraska Avenue, then Arizona Avenue, and then MacArthur Boulevard. The roll-offs will be stored at the federal property until characterization data is received and the roll-offs are sent for final disposal. There will be ~2 empty trucks and ~2 full trucks using that route per day at the most.

2. Residential Properties Update

a. Recent Activities

In June, the team began the 4th round of intrusive investigations:

- December 2018: 4 Grids (H4-H7 West).
- February 2019: 5 residential properties.
- April 2019: 9 residential properties. Most are complete except for hardscape excavations that will require permitting.
- June 2019: 12 residential properties.

In total, 26 properties have been prepared for excavations, and several other properties are in the process of preparing for the removal of vegetation to begin geophysical surveys.

b. April 2019 Intrusive Investigations Results

- Intrusive investigations conducted at 9 properties.
- Recovered 1 MEC item; 3.5-inch, 6-lb. case shot Civil War-era cannonball, fuzed.
- Recovered 44 MD items. All MD items were head-spaced by ECBC for HD and lewisite (L). All sample results were non-detect for HD and L.
- Hardscape excavations in front of three properties require District Department of Transportation (DDOT) permits. Permits currently under review at DDOT.

In response to a question from EPA Region III, Weston Solutions explained that the hardscape excavations for the three properties are within public space, specifically sidewalks. The sidewalks will be removed to access the anomalies underneath. A Public Space Occupancy permit is required to remove and replace the sidewalk and to take up parking spaces next to the sidewalk to re-route an Americans with Disabilities Act (ADA)-compliant ramp. A construction permit is required for replacement of the new concrete sidewalk. The permits are expected to be in place by the 2nd or 3rd week of July.

c. June 2019 Preliminary Intrusive Investigations Results

- Intrusive investigations conducted at 12 properties; investigations are ongoing.
- No MEC or Material Potentially Presenting an Explosive Hazard (MPPEH) items recovered.
- Recovered 12 MD items. All MD items were transferred to ECBC for headspace analysis. Sample results received to date (9) were non-detect for HD and L. The remaining three samples are expected to be transferred to ECBC on June 28.
- Hardscape excavations for three properties require DDOT permits.

A potential AUES item found in February 2019 was determined to be a pipe filled with caulking material. The cannonball (MEC item) was located in the Static Test Fire Area Buffer Zone.

d. Current Status of Properties

- In addition to the intrusive work, Advanced Geophysical Classification (AGC) surveys are in progress:
  - Grids H1-H3 (West)
  - Grids H1-H4 (East)
  - Grids I1-I4
- Work is focused on the grids in the Dalecarlia Woods at this time because the groups of homeowners are becoming more challenging to obtain landscape plan approvals than the first group of 26 motivated homeowners.
- A single new property has approved the landscape plan.
- Working with 8 additional properties to gain concurrence on landscape plans.
- Draft landscape plans for 9 additional properties underway. ERT sent Weston Solutions ~16 new properties that may begin the preparatory process to include:
  - Civil survey
  - HD video documenting the existing conditions
  - Vegetation inventory and appraisal process.

e. Discussion of Anomaly Under a Large Tree

DOEE noted that he received a call from a homeowner about a large tree on the homeowner's property that has an anomaly under the tree. The homeowner related to DOEE that USACE would not pay for removal of the tree if necessary. DOEE asked for clarification; his understanding was that the homeowner had the choice to keep a tree if they wanted, but if a tree must be taken down to remove an anomaly, that cost would be paid by USACE.

Weston Solutions explained that the final determination has not yet been made about that target. An anomaly was identified 10 inches away from the base of the tree, buried near large roots a couple inches below ground surface. The team took photos and put together a summary for review to determine how to proceed. Weston Solutions is working with USACE Baltimore on next steps. The collection of additional cued measurements is a possibility. Weston Solutions believes the tree does not need to be taken down, the anomaly is not under the tree. The roots may need to be removed or chiseled to access the item, but there may be a safety concern about chiseling roots near a potential anomaly.

USACE Baltimore explained that USACE Baltimore discussed the anomaly with the arborist and showed the arborist the photos. The arborist cautioned against disturbing the roots of the tree and suggested that using an air-spade might give the opportunity to get down deep enough to identify the item. USACE Baltimore discussed the anomaly with the USACE Baltimore unexploded ordnance (UXO) expert, who suggested that if the team excavated a larger hole with the air-spade there would be more chance to get a route to the item than utilizing hand-digging with shovels. USACE Baltimore was uncertain if the arborist would agree with disturbing a large area around the roots. That method might affect the tree's ability to handle losing the stability that the soil provides. The UXO expert had no concerns with using an air-spade around a munition and thought the air-spade would be better than a shovel.

USACE Baltimore believes Weston Solutions' statement that no final determination has yet been made is accurate. USACE Baltimore has asked Amy Walker, USACE Huntsville and Black Tusk Geophysics (BTG) to review the data for the item as closely as possible to identify the type of the item and whether the item is high-value or barely meets the requirements for removal.

In response to questions from DOEE, Weston Solutions and David King, USACE Baltimore confirmed that a draft excavation list was provided for this property and the anomaly was included on the excavation list as a target of interest (TOI). The draft intrusive results list is not prepared yet.

In response to questions from EPA Region III, Kevin Kingdon, BTG explained that the anomaly (Target 487) was included on the excavation list as the result of the polarizability review. The analysts review the polarizability of each target and how those responses for the targets match items in the AGC library. This target was selected because one of the polarizabilities was a reasonable match to a 3-inch Stokes mortar, one of the items in the TOI library for the site. There is the primary, or major, polarizability axis of the target and there is the secondary polarizability axis. Usually, for a high-likelihood match, such as the blind seeds or items in the Instrument Verification Strip (IVS), all 3 of those polarizabilities are expected to match. That high-likelihood match is considered a High Confidence TOI. In this case, only the primary polarizability axis of the target matched, and the secondaries did not match as well. The degree of the match was good enough that Target 487 was included as an excavation target. This target is in the grey area because of the secondaries. It would not be surprising if the item pulled out of the hole is the same size and shape as a medium ISO or a 3-inch Stokes. BTG believes the conservative plan is to excavate the item, but the item is not a High Confidence TOI. Target 487 is at ~35cm depth according to the predictions. At that depth a better match is expected to all 3 polarizabilities. It is not inconceivable that Target 487 could be a match; there is metal in that spot and the item is a similar shape as one of these targets, but the item is not a super high-quality match.

USACE Baltimore pointed out that sometimes the target situations require a value or balancing judgement for some of the items; how much the team is willing to go through to identify an item.

DOEE explained that his major concern is the homeowner's statement that USACE is not paying to take down trees. He did not believe that these properties were supposed to be left with things in the ground because the excavation was too hard. He believed that these properties were supposed to be cleared so that when the property owners are done with the remediation they are done, and not have something hanging over their property. If that is not the case, he wants to hear that; but if that is the stance, he really wanted to know. If USACE has made a blanket decision that they are not going to remove items when it is too hard or would cost $50,000 or $100,000 or $10,000 to remove a tree, then that is a problem for DOEE.

USACE Baltimore explained that the plan is already in writing; such as it is too hard to look under driveways with rebar in them.

DOEE pointed out that there is a difference between a driveway with rebar and a target that has been identified in the excavation list.

USACE Baltimore agreed with DOEE and explained that both scenarios require the balance judgment decision, 'is it worth tearing up driveways with rebar in them?' The partners decided it was not, and so there could be items left under homeowner's driveways with rebar.

DOEE pointed out that there is an anomaly that has been tagged as a TOI and now the team must deal with it. That is a different situation from an anomaly with too much interference preventing work in that area.

USACE Baltimore explained that there is a standard AGC process that delineates which targets to excavate and which targets to leave in the ground. When that process is applied to a property that has 800 detections, the process brings the number down to 250 items for the cued survey that narrows the items down to 30 targets for excavation. To date, 99% of targets removed are cultural debris. If a target is determined to be difficult to remove or if the excavation will be a difficult inconvenience to homeowners, the team will review the target again. BTG, D. King, and A. Walker conduct further evaluation of hardscape excavations, so the excavations are not tearing up patios unnecessarily. Even though Target 487 is not considered a hardscape target, the item is now undergoing that further evaluation since it is close to a large tree. He was not sure if A. Walker has had a chance to review Target 487 yet.

In response to a question from USACE Baltimore, Weston Solutions confirmed that BTG completed an evaluation of Target 487 and Weston Solutions forwarded the evaluation to USACE for D. King's and A. Walker's review on June 26.

USACE Baltimore noted that a Field Variance Form (FVF) was created for the process of reviewing hardscape excavations. Target 487 would be part of that group of excavations.

f. Field Variance Form (FVF)

SV-FVF-009 - documents procedures to further evaluate and make recommendations on hardscape excavations.

- Performed by an experienced, expert analyst, who will base the analysis on data quality, inversion reliability, the shape of all predicted polarizabilities (from single and multi-object inversions), predicted model depth, and contribution of each model to the predicted data.
- Quality Control (QC) check of hardscape excavation decisions performed by a second experienced, expert analyst.
- The analysts provide a slide show with all the information to Weston Solutions.
- Weston Solutions submits all hardscape recommendations to USACE for review and approval.

g. Median in Dalecarlia Parkway

Between the north and south lanes of the Dalecarlia Parkway is a median with a strip of grass. No survey or investigation work has been performed in the median during previous remedial activities. Weston Solutions believes that the man-portable vector (MPV) magnetometer will detect mostly road construction fill in the median from an unknown source. Weston Solutions sought DOEE and EPA Region III's opinion on surveying the median along the Dalecarlia Parkway.

EPA Region III had no strong opinions on surveying the median. The investigation does not include the road so the controls necessary for roadwork would extend to the median.

USACE Baltimore explained there are two factors concerning surveying the median:

- Utilities are known to be in the median that will likely cause signal saturation.
- In order to perform the work correctly, traffic lanes on either side of the major roadway would be closed, causing impact to traffic and the route to the hospital nearby. The road closures would also require a permit.

A test with analog equipment may be performed in one section to confirm signal saturation.

EPA Region III suggested reviewing the items found on either side of the road and then decide.

In response to a question from EPA Region III, USACE Baltimore explained that he would research if the median was sampled for As.

In response to a question from DOEE, A. Gates explained that the median is ~10 feet wide. She measured the median once for a Sibley zoning case having to do with dump trucks. Dump trucks are longer than the median. The median was likely excavated at the same time as the road during construction and was recently re-planted with trees that are now established.

EPA Region III and DOEE agreed that the median in Dalecarlia Parkway does not need to be investigated.

h. Property Summary Report

Weston Solutions submitted the first Draft Property Summary Report that summarizes the geophysics and intrusive work performed at a property. USACE Baltimore is reviewing the document. The goal is to

submit the document to EPA Region III and DOEE soon so the regulators may determine if the information is enough to approve an assurance letter stating the property has been remediated.

USACE Baltimore explained that as the work progresses through each property, these three documents will be generated for each property:

- Property-Specific Data Summary (PSDS) that includes all the geophysical results and excavation locations.
- List of what was found in the excavations after all excavations are complete at each property.
- A simple report prepared primarily for the homeowner that describes the activities at the property.

At the end of the entire effort, a Remedial Action Closure Report will be drafted that will contain all the technical details. The Remedial Action Closure Report will fully document all the QC and variance forms and will discuss the coverage for each property, whereas the assurance letter and the report that USACE Baltimore plans to give the homeowners is primarily for their own use. The homeowner's Property Summary Report will not discuss topics such as the percentage of the accessible area covered at a property. The document will state in simple language that the required remediation activities were completed at the homeowner's property and USACE is satisfied with the result of those activities. If a significant item is found at the property, a description and pictures of the item will be included in the document.

USACE Baltimore wants to know if the three documents are enough for the regulators to approve USACE issuing assurance letters as each property is completed.

In response to a question from EPA Region III, USACE Baltimore explained that Weston Solutions is preparing the first Draft Property Summary Report. USACE Baltimore is reviewing the document now and the regulators will see the document soon. The Property Summary Reports will be for the homeowner and will be accompanied by the assurance letter that basically says, 'for the purpose of this remedial action your property is done.' The assurance letter will say that USACE will draft a full closure report for this remedial action that will be available for public review and access, but that document will come later.

EPA Region III explained that he was fine with that plan if the Property Summary Report states what USACE Baltimore planned to do at a property and the activities performed at the property. If the plans and activities performed at a property match, then EPA Region III would say that USACE Baltimore met the remedial objectives. Any issues concerning reimbursement, vegetation removal, and the homeowner's satisfaction with the property restoration is between USACE Baltimore and the homeowners.

USACE Baltimore is seeking input from the regulators on how the assurance letter concurrence should occur. USACE Baltimore does not believe there is a need to receive an email from DOEE and EPA Region III approving each individual property for receiving an assurance letter. If the regulators are ok with a check-in process at certain waypoints that USACE Baltimore can follow to address any concerns that the regulators might have about any property underway, USACE Baltimore could issue the assurance letter without checking with the regulators for concurrence unless the regulators want that check-in.

EPA Region III explained that he does not want a check-in unless there is an issue on a property. If there is an issue, he wants the check-in. He does not necessarily need USACE Baltimore to say, 'there were 92 targets, the 92 targets were excavated, and everything is fine.'

DOEE stated that he wants to review the content of the Draft Property Summary Reports.

USACE Baltimore pointed out that not requiring a check-in for each property would alleviate an administrative burden on the regulators, bypassing the need to respond to each check-in. USACE Baltimore will provide the frequency of check-ins that the regulators request, whether for each property or a blanket approval based on the language of the assurance letter.

EPA Region III explained that it is easy for him to send an approval if he knows what is going to be in the letter. If USACE Baltimore can say in the transmittal, for example, 'there were 92 targets, we excavated 92 targets, we did not find anything,' he can see the message and send the approval. He does not want to review 92 reports. He is interested in issues and the resolutions to those issues, not specific details about typical activities, such as vegetation removal.

In response to a question from USACE Baltimore, EPA Region III explained that if the team proposed to leave an item at a property because of a large tree, he would want to know that the item does not appear to be a top-tier target. If the target is a complete match to the polarizabilities and BTG classifies an item as a top-tier target, such as a Livens projector, EPA Region III would not be comfortable leaving that item in place and would want to talk about removal of the item. If the targets do not match all the polarizabilities, USACE Baltimore could explain why the determination was made to leave a target in place.

USACE Baltimore will send out the Draft Property Summary Reports to the regulators. DOEE will review the reports and send his approval as a trigger to send the assurance letters. EPA Region III will send the approval based on the qualitative discussion.

In response to a suggestion from EPA Region III, Weston Solutions agreed to draft executive email summaries for the Draft Property Summary Reports to enable EPA Region III to give a quick response.

In response to a question from DOEE, Weston Solutions explained that the Property Summary Reports cannot be compiled into batches for approval because once the vegetation is cut off a property, the team is motivated to finish and complete the property as soon as possible.

In response to a question from DOEE, USACE Baltimore explained that if a homeowner disputes the decisions made for a property after the remediation is complete, USACE Baltimore will explain to the homeowner that the remediation satisfied DOEE and EPA Region III that the removal action objectives have been met. Once the regulators agree that the removal action objectives have been met, the remedial actions are done. USACE Baltimore will provide a report and the signed comfort letter from the regulators to the homeowners, but USACE Baltimore cannot satisfy all the different homeowners. The remedial actions must satisfy EPA Region III and DOEE that USACE Baltimore performed due diligence for the remediation of munitions. The regulator's approval of the remedial actions will be in writing.

DOEE stated that is why he wants to review the report.

USACE Baltimore confirmed this.

i. Reimbursement Checks

The reimbursement checks for the initial 11 properties are in the final stages of the process. The team is continuing to work with homeowners on additional properties where excavation activities and restoration site walks have been completed.

USACE Baltimore will confirm that all excavations are complete before informing a homeowner that intrusive operations are complete at a property. The ERT Community Outreach Team work very closely with Weston Solutions and the landscaper. The Weston Solutions excavation team has done a very good job minimizing disturbance to lawns during excavations. A final restoration walkthrough is scheduled to include grassy areas disturbed by the excavations that may require sod, additional soil, amd/or mulch. The estimate for the costs identified in the final walkthrough will be added to the arborist estimate for the total reimbursement value. The team strives to complete the final walkthroughs as quickly as possible.

j. Root Cause Analyses (RCAs)

- SV-RCA-011 - The IVS is the test strip used at the federal property to verify the survey equipment every morning and afternoon. During the G-858 IVS surveys that were conducted on five consecutive days, one seed was not detected in one of the surveys 5 days in a row.

In response to a question from EPA Region III, Weston Solutions explained that it was always the same seed missed except for one day when it was the seed next to the missed seed. The missed seed was the seed in the middle of the IVS. Initially, Weston Solutions believed there was an issue with the sensor alignment, but once the team investigated further, the team realized the plotted survey path was not going directly over the seed path. Geophysicists use guide ropes to walk over the seeds since the seeds are buried. The guide ropes get moved when the lawn is mowed. Over time, the guide ropes shifted enough that the data collectors were skirting around the seed in the middle. The corrective action included checking the sensor alignment to ensure that was not an issue, but the real fix was correcting the guide ropes. There has not been a missed seed failure on the IVS surveys since the five consecutive days at the end of May.

In response to a question from EPA Region III, Weston Solutions confirmed that the team is now more diligent about checking the guide ropes weekly.

- SV-RCA-012 – A QC seed placed by Weston Solutions at a residential property was missed during the dynamic MPV data collection phase. The team investigated the missed seed thoroughly to determine how the failure happened and how to prevent the failure from occurring again. Several contributing factors were investigated that may have caused the seed to be missed, including the speed the data collectors were walking, site elevation, height of the MPV sensor head above the ground, and the site conditions at the location of the seed. The seed was placed at the base of stairs and there was a piece of exposed rebar sticking out from one of the steps that caused data saturation. The speed of the data collectors walking down the stairs was within measurement quality objective (MQO), but the data collectors were not able to keep the sensor head close to the ground as they descended each step.

In response to a question from EPA Region III, Weston Solutions confirmed that the data collectors were walking down grassy stairs that had wood railroad ties creating steps in the yard. The data collectors increased speed as they walked down the railroad ties on the grass. During testing to investigate the cause of the missed seed, the team determined that slower speeds allowed a better signal for the equipment even with some saturation in the area. The RCA analysis determined the following corrective actions:

- When surveying steps, the team will no longer collect data walking down or up; each step will be surveyed one at a time and then the data collector will move down to the next step.
- Data collectors will walk at a slower speed in areas with difficult terrain and stairs.

Weston Solutions thanked BTG for the extra effort to review the collected data.

Weston Solutions re-collected the data on the missed seed with the methods determined by the corrective actions and the equipment had no issues detecting the seed.

USACE Baltimore believes that A. Walker and D. King investigated this RCA very thoroughly and noted that Weston Solutions discovered the problem before the data package was sent to USACE Baltimore.

In response to a question from DOEE, Weston Solutions explained that the number of previously completed properties with similar sets of stairs with potential seeds is unknown.

In response to questions from DOEE, BTG explained that this property was a unique situation with the combination of the three factors, including the tiered step-down, the rebar near the case, and the higher than normal survey. He agreed that previously completed properties may be worth re-evaluation, but the scenario of all three contributing factors is not common. Any one of the contributing factors on its own is unlikely to cause an RCA failure.

In response to a suggestion from USACE Baltimore, Weston Solutions agreed to review the HD video of the previously surveyed properties for unusual landscaping elements.

3. Land Use Control (LUC) Explosive Hazards Information - Community Outreach

The Spring Valley Formerly Used Defense Site (SVFUDS) Residential Notice, SVFUDS map, and 3Rs (Recognize, Retreat, and Report) Safety Brochure were mailed to ~1250 residents in the SV community the week of June 13 and 14.

USACE is developing an explosive hazards training video to be sent out the notices to FUDS institutions. Once that training video is developed and approved, Weston Solutions will be sending out the notices to the institutions.

USACE Baltimore confirmed that the smaller second mailing with the video will likely be ready at the end of summer. USACE Baltimore is updating the institutional mailing list. The residential notice identified Chris Gardner's USACE Corporate Communications Office as the office to contact with questions. C. Gardner's office has only received a handful of calls from the ~1250 letters; most of the calls from residents that believe their property is not part of the FUDS. USACE Baltimore reviewed the locations of the properties with the ~10 residents and confirmed the properties were not part of the FUDS. The properties adjoined the boundary of the FUDS and were removed from the list.

EPA Region III noted that the Partners used to have a rule that said, 'if you touch the line, you are in.'

USACE Baltimore explained that the properties were located across the street from the boundary of the FUDS. The residents may have requested to be on the list in the past, perhaps to receive the *Corps'pondent*.

ERT Outreach Team noted that residents have mentioned receiving the mailing from the Outreach Team. The residents asked questions but did not seem alarmed. The residents' questions served as verification that the mailing reached the homeowners.

4. Spaulding Rankin

- Landscape restoration activities were completed for spring 2019 in May. Additional plantings areplanned for fall 2019 along with an assessment of trees potentially impacted by the soil excavation work.
- The Draft Final Soil Remediation Property Report for the Spaulding-Rankin property was submitted to the EPA Region III and DOEE on May 25, 2019 and is under review.

USACE Baltimore requested comments from DOEE and EPA Region III if the regulators believe the Draft Final Soil Remediation Report is technically insufficient. The report will be the final document for this part of the action, there will be no future report about the Spaulding/Rankin Area. USACE Baltimore will respond to the comments and finalize the report.

D. Groundwater Feasibility Study (FS)

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

USACE Baltimore reminded EPA Region III and DOEE that T. Beckwith is awaiting their comments on the sampling strategy.

EPA Region III explained that he will submit three comments that are not complicated.

DOEE noted that his comments will be submitted on June 28.

E. Open Issues and New Data

In response to a question from DOEE, Weston Solutions explained that the potential disposal pit identified as a gas line was marked in the utility mark-out before the beginning of excavations, but that data is not on a geophysical map.

DOEE noted that he believed the results of potential burial pit area investigations would be discussed in more detail and include follow-up, in addition to the reports.

In response to a question from DOEE, Weston Solutions explained that the results of potential disposal pit investigations are included in the excavation results packages.

DOEE requested that Weston Solutions share more information with the regulators during the process of investigating potential disposal pits, either by phone call or email.

In response to a question from DOEE, Weston Solutions confirmed that if an AUES or a potential MEC item is found, the regulators will be notified immediately.

In response to a question from USACE Baltimore, EPA Region III confirmed that USACE Baltimore sent emails describing the cannonball, but the timing was not immediate, and the action had already occurred.

In response to a question from USACE Baltimore, DOEE confirmed that he wants to be notified of the results of a potential disposal pit investigation, whether the items found are cultural debris or MEC items. EPA Region III reiterated that he just wants to know if a MEC item is found or if something happens.

F. Future Agenda Items

1. Groundwater FS
2. 4825 Glenbrook Road/4835 Glenbrook Road
3. Site-Wide PP
4. Site-Wide RA

G. Agenda Building

The next meeting was scheduled for Thursday, August 13, 2019.

H. Adjourn

The meeting was adjourned at 12:10.