

SPRING VALLEY FORMERLY USED DEFENSE SITE (FUDS)

Partners Meeting Presentation
April 2020



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AGENDA REVIEW

Parsons Update

- 4825 Glenbrook Road
- 4835 Glenbrook Road

Weston Updates

- Site-Wide Remedial Action
- Public Safety Building

U.S. Army Corps of Engineers (USACE) Updates

- Groundwater Study
- New TAPP Advisor

Future Partners Agenda Development

SPRING VALLEY GLENBROOK ROAD SITES

PARTNER'S MEETING
April 2020



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



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4825 Glenbrook Road - Recent Activities

- February was spent:
 - ✓ Setting up the site for Area 4 and -10, -90 (shared property line area) activities
 - ✓ Mobilizing and training the team for intrusive work



4825 Glenbrook Road - Recent Activities (cont.)

- On March 2nd began removal of the temporarily placed clean backfill covering Area 4
- On March 4th Parsons began intrusive operations in Area 4
- On March 10th collected two grab samples (Grabs 9 and 10) to determine if further excavation was required:
 - ✓ Grab 9 was collected from the E wall of the SE quadrant of Area 4. It was clear for agent and agent breakdown products (ABPs) and contained 2.2 mg/kg arsenic (below the comparison value of 20 mg/kg).
 - ✓ Grab 10 was collected from the S wall of the SE quadrant of Area 4. It contained 170 ug/kg of ABP 1,4-dithiane and the remaining split sample was not sent to the commercial lab for arsenic analysis.
 - ✓ Grab 10 sample location was over-excavated and Confirmation Sample 17 was collected. Confirmation Sample 17 was clear of agent and ABPs and contained 3.2 mg/kg arsenic (below the comparison value of 20 mg/kg).
- While awaiting grab sample results, began transfer of soil in previously filled roll-offs from Area 4 on March 17th
 - ✓ Roll-off transfer of soils to drums completed March 18th



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4825 Glenbrook Road - Recent Activities (cont.)

- On March 19th returned to Area 4
 - ✓ Miniature Chemical Agent Monitoring System (MINICAMS) alarm on the downwind MINICAMS for Lewisite determined to be a false positive with (Depot Area Air Monitoring System) DAAMs tube confirmation
- On March 20th completed the two foot over excavation of Area 4
 - ✓ Removed more soil and sampled the remaining wedge of saprolite between Area 4 (Confirmation Sample 17) and the grid to the south
 - ✓ Collected remaining 7 Confirmation Samples (including sample 17)
 - ✓ Achieved excavator refusal in southern portion of Area 4
- No further intrusive work performed after the 20th (i.e. grid -10,-90) to Combat Capabilities Development Command Chemical Biological Center (CCDC Chemical Biological Center) COVID-19 related demobilization
- On March 31st Baltimore District geologist confirmed refusal in southern portion of Area 4



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4825 Glenbrook Road - Recent Activities (cont.)



Area 4 excavation facing northwest



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4825 Glenbrook Road - Recent Activities (cont.)



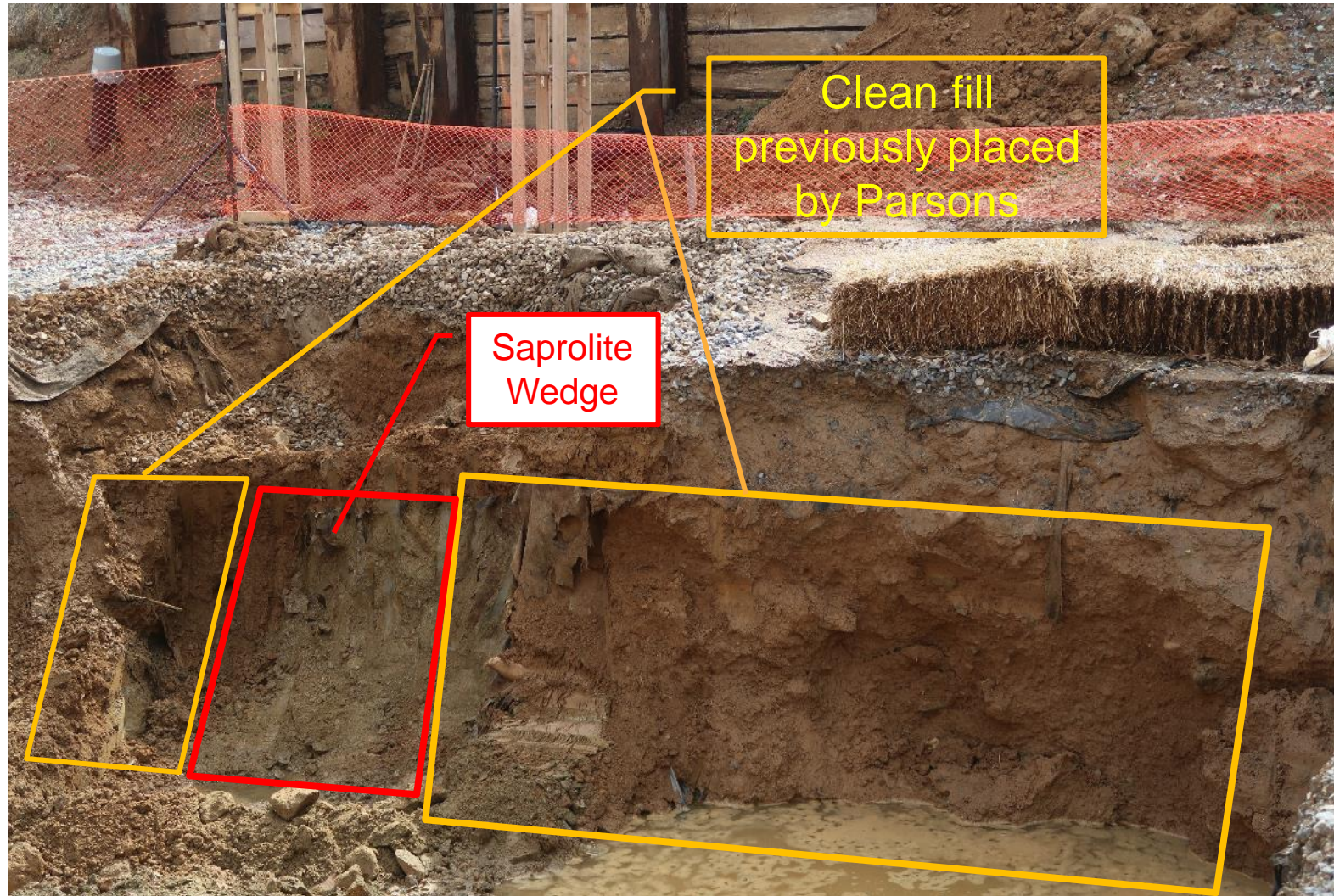
Area 4 excavation facing east



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4825 Glenbrook Road - Recent Activities (cont.)



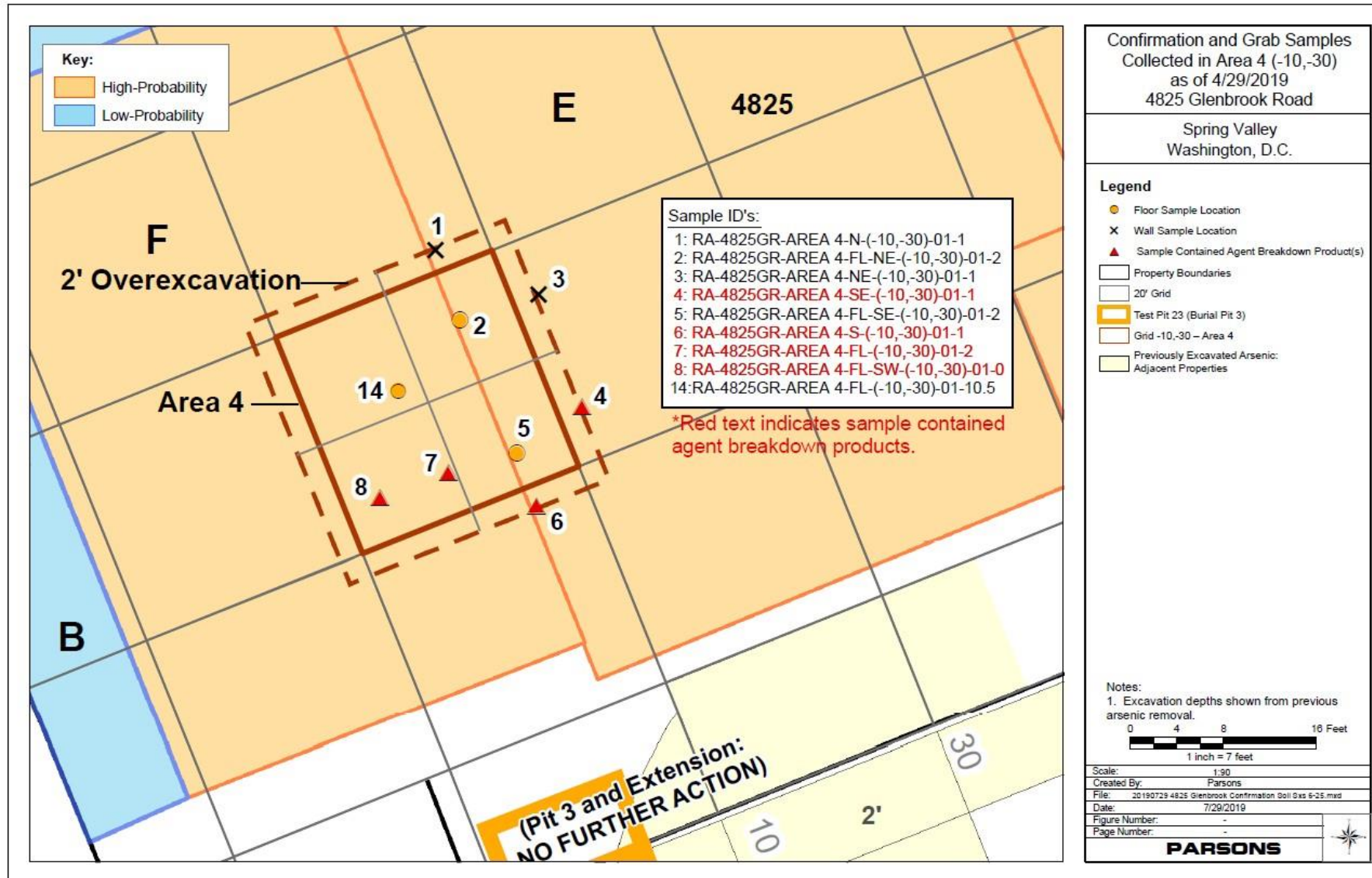
Area 4 excavation south



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Previous Confirmation/Grab Sampling in Area 4



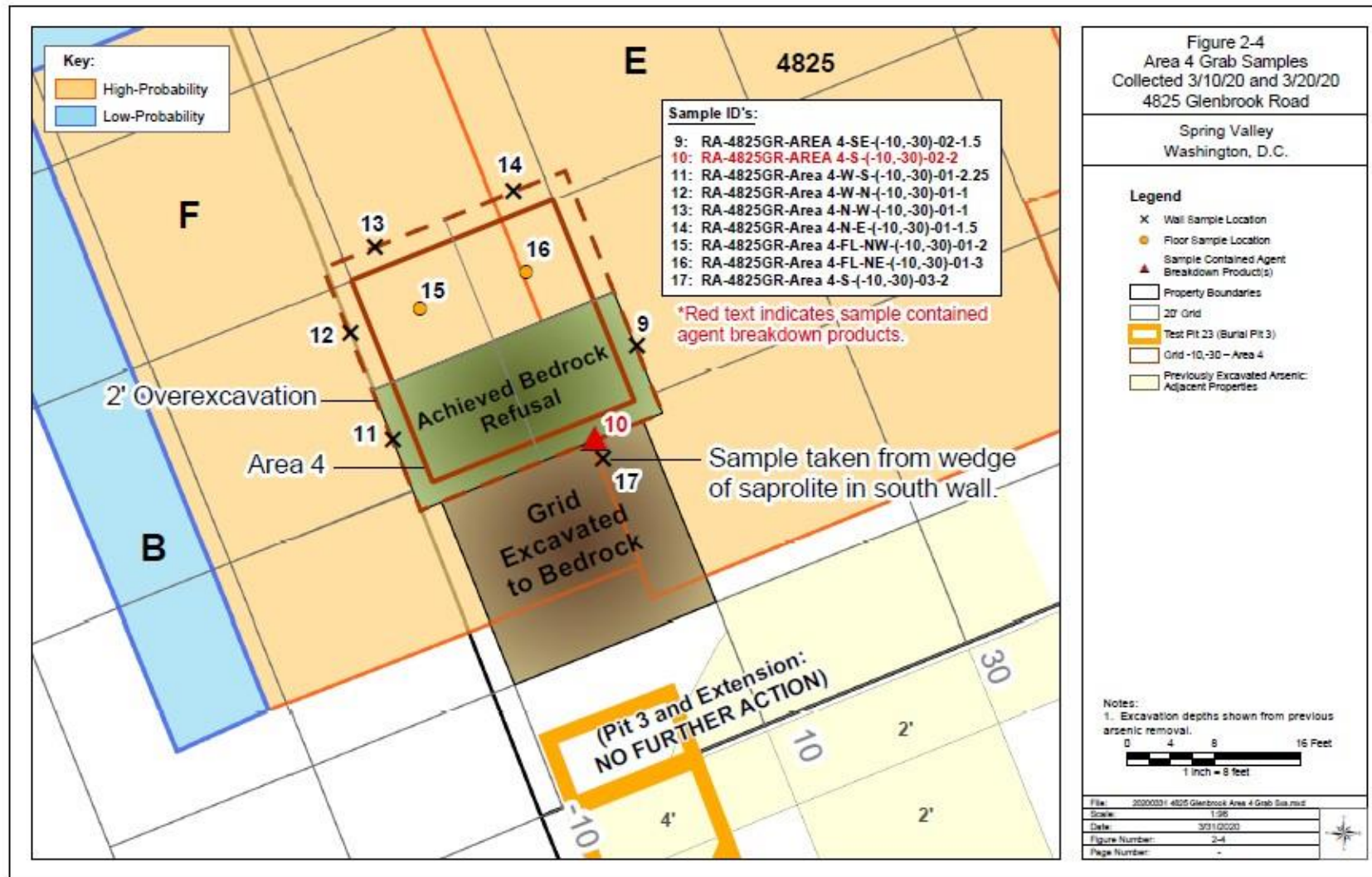
Area 4 excavation south



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Recent Confirmation Sampling in Area 4



Area 4 excavation south



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Recent Confirmation Sample Analytical Results

- Samples collected in newly exposed competent saprolite where bedrock refusal is not achieved
- Analyzed Samples for the following parameters
 - ✓ Agent (Mustard [HD], Lewisite [L])
 - ✓ HD agent breakdown products (ABPs)
 - ✓ Arsenic
- No agent or ABPs detected
- All data shows arsenic concentrations are below the 20 mg/kg comparison value



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4825 Glenbrook Road – Site Restoration Activities



In April completed removal of remaining temporary soldier piles



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4825 Glenbrook Road – Late April Site Conditions



Facing Glenbrook Road



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Near and Mid-Term Schedule

- Look for a window to complete Grid -10, -90
 - ✓ If CCDC travel restrictions are lifted will look to do early morning excavation work
 - ✓ Should take a matter of hours (~8) to complete
 - Begin final site restoration
 - ✓ Re-install American University (AU) water line
 - ✓ Re-install AU sanitary sewer line
 - ✓ Re-install 4835 waterline lateral
 - ✓ Re-install 4835 sanitary sewer lateral
 - ✓ Move 4835 AC units to original location
 - ✓ Restore fence along 4801 and 4825 Glenbrook Road properties
 - ✓ Restore site to final grade in 6-inch lifts with compaction in accordance with the Work Plan
 - ✓ Remove Siren from AU Property



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Tentative Long-Term Schedule

Spring 2020	Address Grid -10,-90 soil. Begin restoration of utilities. Continue final backfill.
Summer 2020	Final restoration of 4801 and 4825 Glenbrook



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4835 GLENBROOK ROAD



Soil gas monitoring was conducted at borehole locations in the basement. The timeframe below reflects the dates of the sampling and results of those efforts.

July 27, 2018: The site team conducted non-quantitative soil sampling at the 10 boreholes at the property.

August 30, 2018: Preliminary results from the soil gas sampling efforts indicated trace amounts of agent breakdown products were detected in soil gas samples from 8 of the 10 borehole sites. This includes 4 boreholes along the foundation wall closest to the shared property line, where contaminated soil remains to be removed, plus 4 additional boreholes further toward the center of the house.



4835 GLENBROOK ROAD– TIMELINE



Continued...

August 30, 2018: The team suspected that these positive results could be due to the close proximity of the contaminated soils to the exterior foundation walls of the house.

October 18, 2019: U.S. Army Combat Capabilities Development Command Chemical Biological Center (CCDC) team completed another round of soil gas sampling in the basement of the house once the contaminated soil was removed.

Dec 10, 2019: Results received that the second round of soil gas sampling at 4835 Glenbrook Road show no agent breakdown product detected.



GLENBROOK ROAD – PATH FORWARD

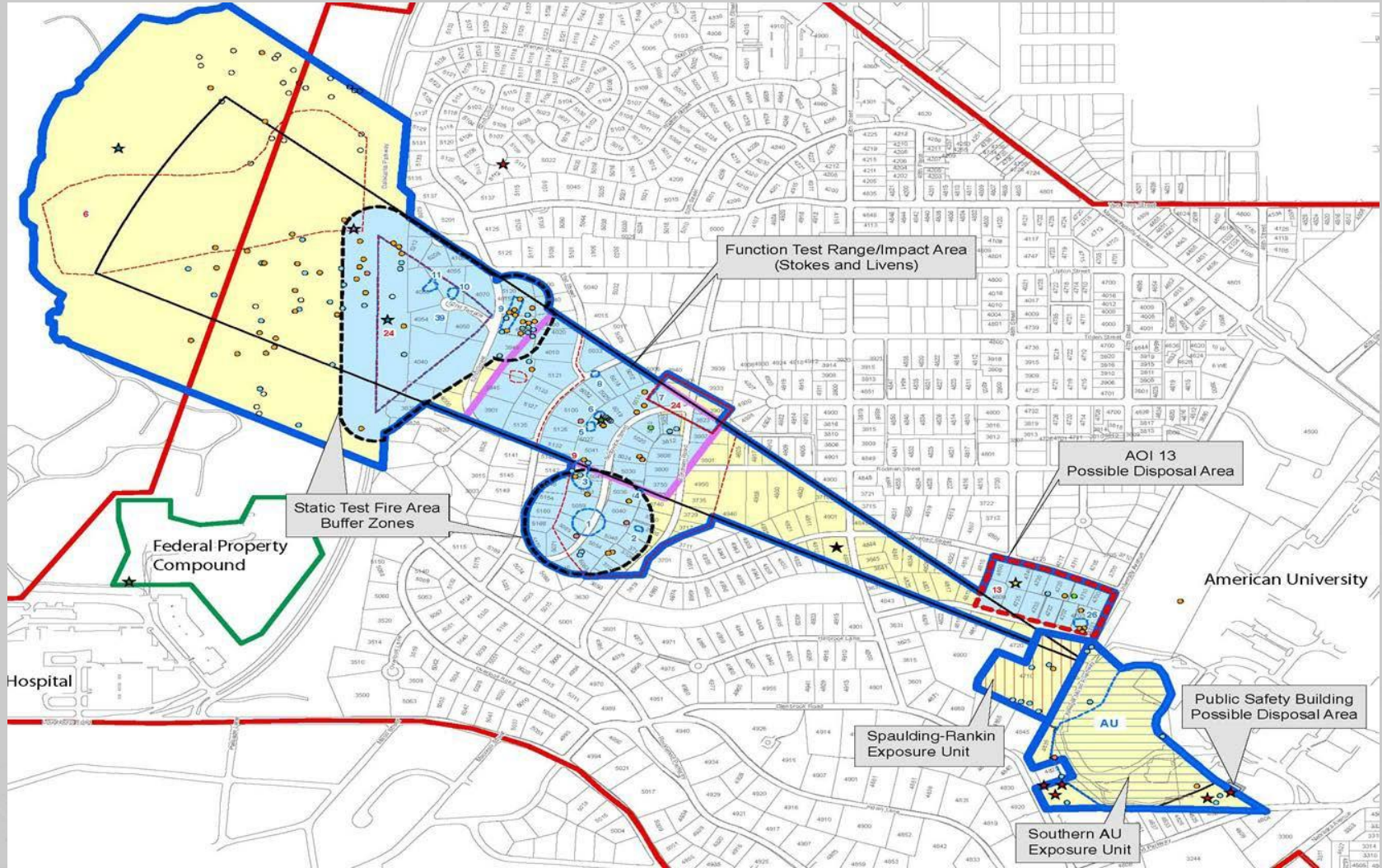


- Army suggests that the combination of the removal of all known contaminated soil against the foundation of the house and the clear second round is sufficient to show that this issue has been adequately addressed.
- Input is needed from the Partners in respect to the completion of the sampling effort at 4835 Glenbrook Road.
- Army and Partners to provide an assurance letter to American University describing the results of the sampling efforts and returning the property with unrestricted residential use. Unlike munition efforts, this issue is a Hazardous and Toxic Waste (HTW) issue and Partner assurance seems more appropriate than Army Assurance.

SVFUDS SITE-WIDE REMEDIATION STATUS APRIL 2020

Weston Solutions, Inc.

April 30, 2020



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SPRING VALLEY STATUS UPDATE – COVID-19



- **Public Safety Building (PSB) Site** – Field operations at the PSB Site have been suspended due to the COVID-19 pandemic. CCDC could not continue their daily air monitoring services due to Government travel restrictions, so PSB operations were shut down as of March 28th and demobilization was completed on March 31st. A re-start date has yet to be determined.
- **92 Residential Properties** – Field operations at the 92 Residential Properties have continued and they have not been impacted, so far, by the COVID-19 pandemic. CCDC has been able to provide single-day operations required to support the Advanced Geophysical Classification (AGC) anomaly dig teams.



RESIDENTIAL PROPERTIES – FIELDWORK*



- **Property Availability –**
4 new properties approved their landscape plans and became available for geophysical surveys.
- **Vegetation removal/Blind Seeding –** Vegetation removal and blind seeding completed at 11 properties.



*info provided includes progress since last Partners Meeting conducted on February 13, 2020



RESIDENTIAL PROPERTIES – FIELDWORK* (CONTINUED)



- **Geophysical surveys –**
Dynamic surveys completed at 9 properties. Cued surveys completed at 16 properties.
- **Intrusive Investigations –**
Intrusive investigations completed at 10 properties between 02/24/20 and 03/10/2020.



*info provided includes progress since last Partners Meeting conducted on February 13, 2020



RESIDENTIAL PROPERTIES – FIELDWORK* (CONTINUED)



- **Intrusive Investigations (continued)** – Intrusive investigations completed at 5 properties between 03/30/20 and 04/08/2020.



*info provided includes progress since last Partners Meeting conducted on February 13, 2020



RESIDENTIAL PROPERTIES – FIELDWORK (CONTINUED)



Sedgwick Livens – On 04/06/20, an intact Livens was found. The USACE Ordnance and Explosives Safety Specialists (OESS), explosive ordnance disposal (EOD), and CBRNE* Analytical and Remediation Activity (CARA) responded to the site. Local police and fire departments also responded at EOD's request. CARA transported the item to the interim holding facility at the Fed Property.



* CBRNE - Chemical, Biological, Radiological, Nuclear and Explosives



RESIDENTIAL PROPERTIES – SCHEDULE



- **Geophysics** – Geophysical surveys at available properties are expected be completed on 05/04/20. Weston is currently planning to demobilize the geophysics team on 05/05/20. Weston will remobilize the geophysics team once 4-6 properties become available.
- **Intrusive Investigations** – May 2020 intrusive investigations will complete all available properties. Future dig team mobilizations will be dependent upon property availability.



PUBLIC SAFETY BUILDING UPDATE



- PSB Site was shut down as of 28 March 2020
- PSB concrete slab, block wall and footers have been removed
- Excavation is down to 3-4 feet below the PSB slab
- Site is secure and in stable condition





PUBLIC SAFETY BUILDING STATUS



- The PSB Site is currently shut down, but remobilization will commence once CCDC is able to provide air monitoring support and Weston is directed by USACE to restart the work.
- All of the excavation equipment and other non-essential rental equipment has been demobilized from the PSB Site. The trailer, locked Conex storage container and one Frac tank (to hold any water pumped from the excavation) remain at the site. Electric utilities have been shut off and locked out.
- An inner (second) security fence was installed around the PSB excavation to further limit access to the working area.



PUBLIC SAFETY BUILDING - PHOTOS



Current PSB Site Conditions – A second security fence was installed around the excavation and site was clean up and excavation equipment demobilized from the site.



PUBLIC SAFETY BUILDING – ONGOING TASKS



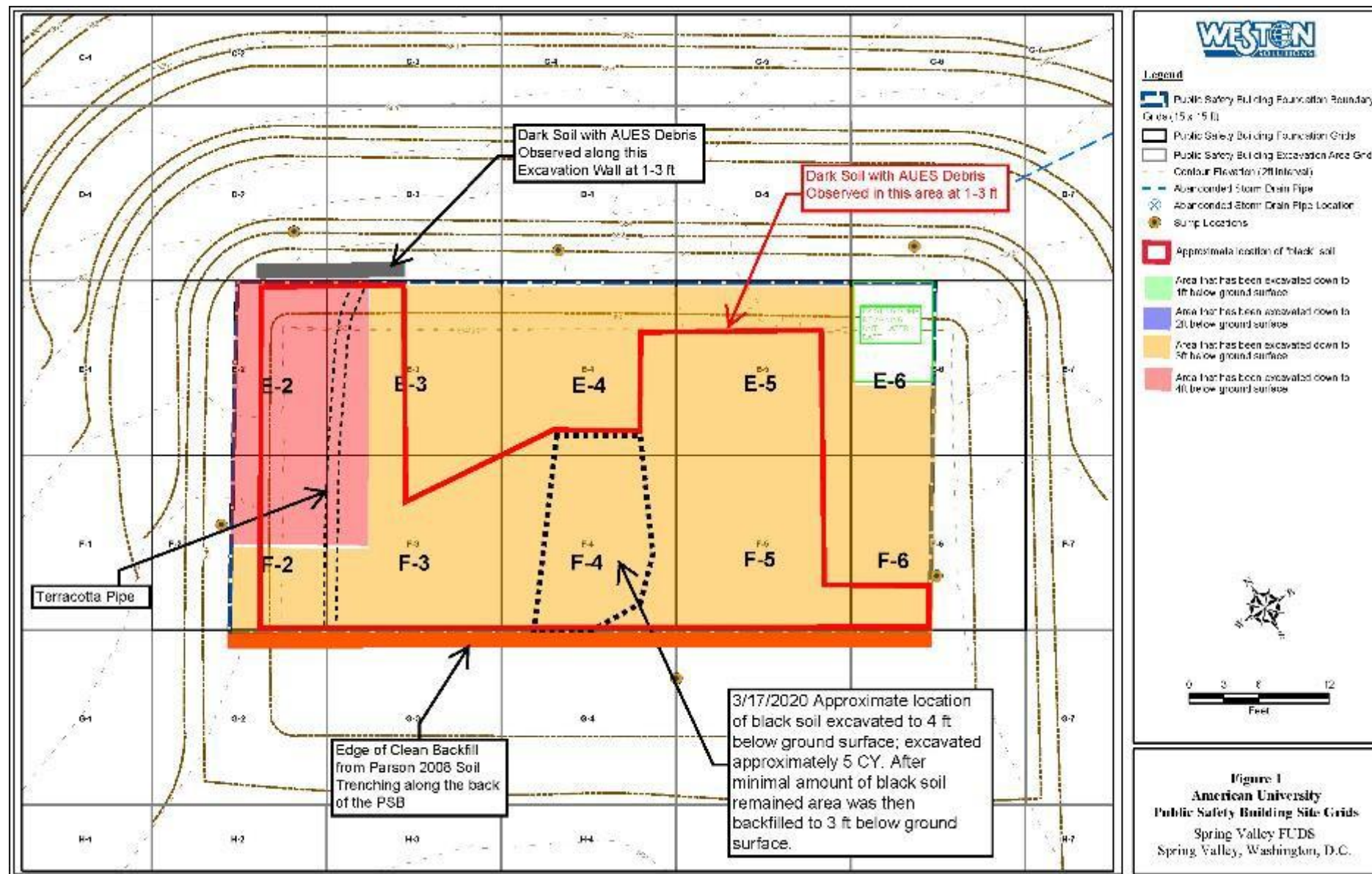
- Weekly, security plus erosion & sediment (E&S) control inspections are being conducted at the PSB site. The E&S control inspections are also targeted to occur after major rain events.
- Excess water in the excavation will be pumped off into the Frac tank, as needed to keep the excavation from filling up with water.
- Grass mowing operations will start soon to manage the spring growth.
- Management of PSB waste containers stored at the Federal Compound will continue during the PSB Site shut down.
- The site gates are locked but access is available using combination lock.
- Standard Operating Procedure (SOP) G21 for Determining Final Excavation Boundaries and Post- Excavation Confirmation Sampling is in review by the Partners



PUBLIC SAFETY BUILDING - EXCAVATION



- PSB excavation extent as of March 31st shut down
- Excavation depths range from 3-4 feet.
- Excavated dark American University Experiment Station (AUES) debris field mostly from 1-3 feet but with 1 area 1-4 feet.





PSB EXCAVATION - PHOTOS



Terracotta Pipe along the edge of Grids E2 and F2 at 5 feet bgs



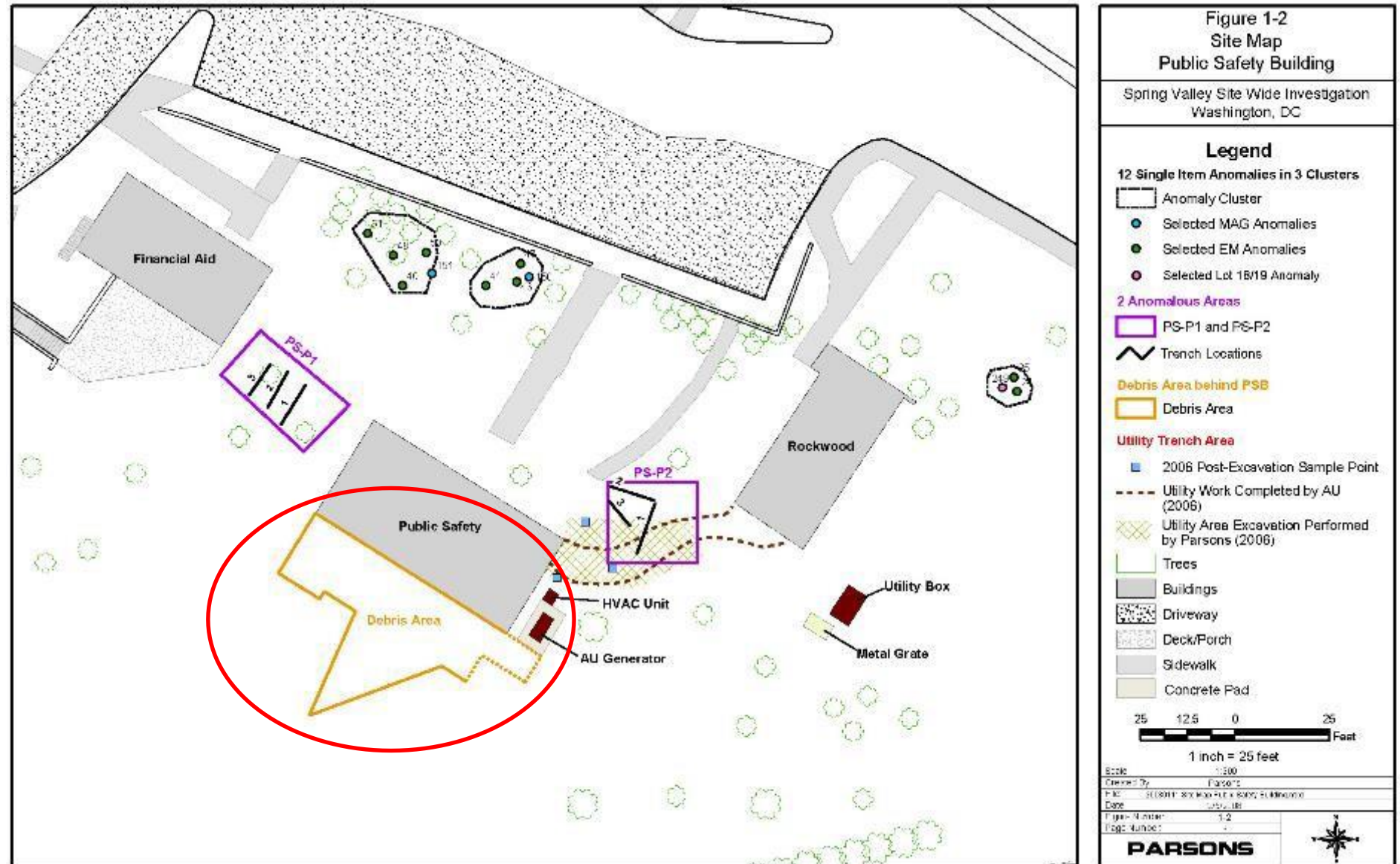
PSB North Wall at West End with Dark Brown Soil and AUES Items Outlined in Red



PSB Southwest Wall (Back) with Reddish Brown Clean Backfill from Parsons 2008



- Parsons dug up the AUES debris area behind the PSB in 2008.
- The current 2020 AUES debris area under the concrete slab appears to be an extension of the 2008 debris area at similar depth.





PUBLIC SAFETY BUILDING - PROGRESS



- Excavation extends down 3-4 feet below the former PSB concrete slab. All the concrete slab, cinder block wall and footers have been removed except around the former sanitary sump in the NE corner.
- The AUES debris field encountered behind the PSB building in 2008 was found to extend under the building foundation. The bulk (90-95%) of this dark brown soil with abundant AUES glass debris and munition debris has been excavated and removed from the site. No agent or ABPs were detected in the headspace or low-level analyses.
- As expected a terracotta pipe was uncovered under the PSB slab in the NW part of the excavation at approximately 4-5 feet.
- The excavation has continued to remain dry – except after rain events. Groundwater has been encountered between 4 and 5 feet.



AUES DEBRIS ENCOUNTERED



AUES Debris: The AUES Debris layer contained dark brown soil, abundant unsealed lab glassware bottles, pipettes and tubes, plus munitions debris from 75-mm projectiles and 4" Stokes mortar rounds. All items were negative for chemical warfare agent (CWA) headspace analysis and soil samples were non-detect for low-level chemical agent and agent breakdown product analyses.



RECENT LOW PROBABILITY CONTINGENCY PLAN EVENTS



- **2 March 2020** – 2 crew members detected a garlic-like odor when opening a roll-off soil container. The roll-off was re-covered and a DAAMS tube sample was run within it by CCDC. Head space result was below detection level for mustard. All soil and headspace analyses associated with the roll-off were negative for agent and agent breakdown products. Crew did not experience any exposure symptoms, but to be safe, the 2 individuals were sent to George Washington Hospital for evaluation and they were cleared for release back to work by the doctor. The 2 crew members returned to work the next day.

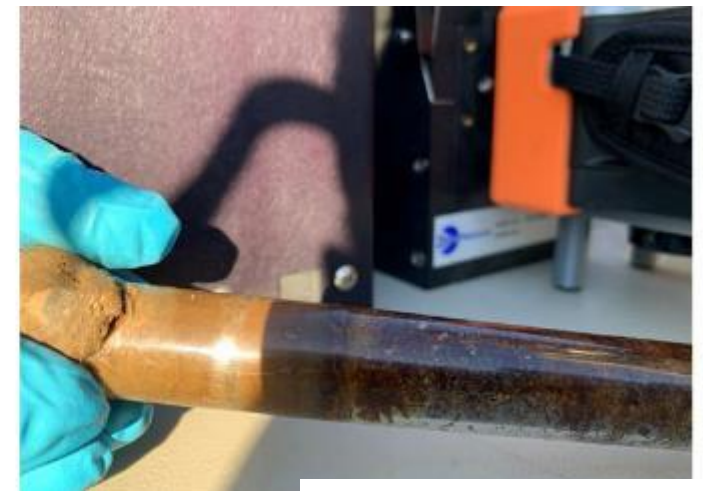




RECENT LOW PROBABILITY CONTINGENCY PLAN EVENTS



- **4 March 2020** - Unexploded ordnance (UXO) Techs found an intact, sealed test tube containing a solid substance while processing soil at the screening table. USACE contacted CARA for technical support. CARA responded and assessed the item. The data determined that the item's signature resembled TNT. CARA described the item as a "glass tube, 7" x $\frac{3}{4}$ ", 90% full". CARA packaged and transported the item off site. The item was negative for chemical warfare materiel (CWM), but positive for Munitions and Explosives of Concern (MEC).





RECENT LOW PROBABILITY CONTINGENCY PLAN EVENTS



- **9 March 2020** - UXO Techs found a flame-sealed glass tube with an intact glass. Also, an intact, sealed, glass bottle (with glass stopper) containing a solid material and a small amount of liquid was found plus an unsealed bottle with a solid material. USACE contacted CARA for technical support. CARA responded and assessed the item. The data was sent to Edgewood and it was determined that the contents of the items were negative for CWM and MEC. Items were decontaminated in bleach and stored for disposal.



Vial 1
PI-PSB-GRF4-002



Jar 1
PI-PSB-GRF4-003



Jar 2
PI-PSB-GRF4-004



SCHEDULE



- Continue weekly PSB security and E&S controls inspections and grass mowing.
- Receive notice from USACE to remobilize to the PSB site once CCDC can provide air monitoring support.
- Remobilize team and equipment.
- Re-start groundwater sump dewatering
- Re-start sub-slab soil excavation with UXO Tech support & soil screening in 1-foot lifts. Move west to east, grid by grid from NW corner of foundation.
- Current schedule has PSB demolition and excavation work taking approximately 5 to 6 weeks followed by site restoration activities.



GROUNDWATER STUDY



- The Army Corps has prepared the groundwater sampling plan for the upcoming sampling event. It is currently being reviewed by the regulatory Partners (Department of Energy and Environment [DOEE] and EPA). Once the plan is approved by the Partners, the sampling event will be carried out following COVID-19 guidelines as needed.
- After the confirmation sampling is completed, the Army Corps and Partners will discuss the results and determine the path forward for the final groundwater approach.

Next Steps:

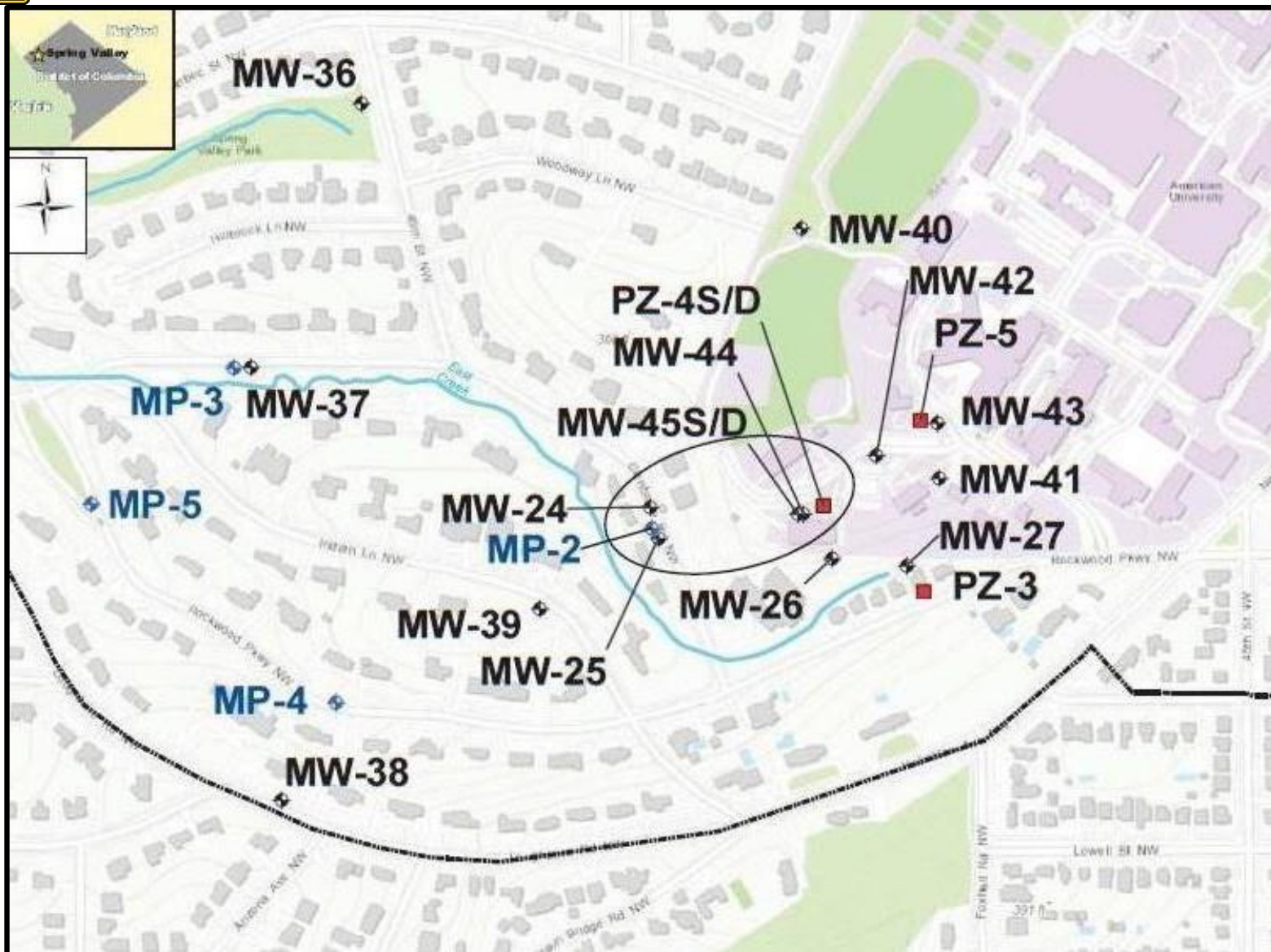
- Confirm that the arsenic concentrations are below established drinking water standards.
- Continue to monitor perchlorate concentrations.
- The Perchlorate Maximum Contaminant Level (MCL) is scheduled to be published in June 2020.



Groundwater sampling well



GROUNDWATER STUDY: EXPOSURE UNIT 2



Key

 Area encompassing the EU2 Monitoring Wells

 Spring Valley FUDS Boundary

 Piezometer

 Monitoring Well

 Multiport Well

S/D = Monitoring well or piezometer with screened intervals in the same borehole.



TECHNICAL ASSISTANCE FOR PUBLIC PARTICIPATION (TAPP) ADVISOR UPDATE



- Following the January Restoration Advisory Board (RAB) meeting, the RAB submitted electronic votes to secure Devamita Chattopadhyay, Ph.D. a local Environmental/Chemical Engineer, for the Spring Valley RAB TAPP position.
- Following the RAB's decision, the 8A contract to the original contractor expired. USACE worked to redirect the offer to Dr. Chattopadhyay through another firm.
- The extension request to spend the funding is currently being reviewed at USACE Headquarters. Once the request has been reviewed/approved it will be sent to the Pentagon for final approval.



SPRING VALLEY PARTNERS



Reminders:

- Confirm the next Partners meeting date for **June**.

Upcoming Agenda Items:

- *Suggestions?*
- Upcoming Spring 2020 groundwater sampling results

