The fifty-third (54th) meeting of the Restoration Advisory Board (RAB) was online as a virtual meeting hosted by WebEx. Panelists for this meeting included representatives from the Navy (Mel Acree), Navy and Marine Corps Public Health Center (NMCPHC) (Melissa Forest), New York State Department of Environmental Conservation (NYSDEC) (Henry Wilkie and Lynn Winterberger), New York State Department of Health (NYSDOH) (Shaun Surani), Suffolk County Department of Health Services (SCDHS) (Andrew Rapiejko and Jonathan Wanlass), Town of Riverhead (Catherine Kent), Suffolk County Legislature (Gwynn Schroeder for Al Krupski), Suffolk County Department of Environment and Energy (Amy Juchatz), RAB Community Members (Vincent Racaniello, Adrienne Esposito, Kelly McClinchy, Catherine Karl, Amanda Lauth, Frank Mancini, Tela Troge), Resolution Consultants (Robert Forstner), Tetra Tech (Ben Francisco, Lauren Donston, David Brayack, Jackie Boltz, and Vin Varricchio), and a Congressional Representative (Mark Wooley). The list of meeting attendees is included as Attachment 1.

WELCOME AND AGENDA REVIEW

There were technical issues with the WebEx Platform used to host the virtual meeting, and attendees had issues logging into the meeting. The issues were resolved and the meeting, scheduled for 6:15 pm began at approximately 7:00 pm. Ms. Boltz, began the meeting by reviewing the virtual meeting controls. Mr. Melvin Acree, welcomed everyone to the RAB meeting and reviewed the agenda. Mr. Acree then introduced the RAB Co-Chair, Mr. Vincent Racaniello. Mr. Racaniello thanked everyone for coming to the meeting and provided an update on the RAB members, including the addition of new RAB members. He expressed his hopes that future RABs will be able to be in person again and asked the Navy to please update the public website with meeting information, including presentations if possible, further in advance of the future RAB meetings.

NWIRP CALVERTON RAB CHARTER

Ms. Melissa Forest, facilitated the vote to finalize the NWIRP Calverton RAB Charter. All eight RAB members in attendance approved the charter and it was finalized.

SITE 2- FORMER FIRE TRAINING AREA AND SITE 6A- SOUTHERN AREA VOLATILE ORGANIC COMPOUNDS AND 1,4-DIOXANE

Mr. Ben Francisco provided an update on the annual monitoring results for volatile organic compounds (VOCs) and 1,4-dioxane in groundwater at both Site 2 and Site 6A. The presentation is provided in Attachment 2.

Ms. Adrienne Esposito inquired about what it means that the Navy will evaluate state standards once they are promulgated state promulgates standards? Mr. Dave Brayackresponded that the Navy would evaluate how these new, 1,4-dioxane

standards would apply to these investigations. He noted that the new standards become ARARs once they are promulgated.

Ms. Catherine Karl inquired about Slide 9, and how the air stripping at Site 6A stopped in March of 2019. She asked how we still have positive findings in on and off site wells after the system was shutdown. Mr. Francisco responded that the Fence Line Treatment System (FLTS) was meant to intercept groundwater as it flows off the facility. Ms. Karl requested clarification and Mr. Francisco responded saying that it was designed to prevent migration from the source area. The Navy is monitoring the offsite concentrations, and they are and continue to decrease over time. Ms. Karl asked requested to see the concentration changes over time, and Mr. Francisco directed her to the tag maps which were uploaded to the NWIRP Calverton website. Mr. Brayack added further explanation that concentrations have decreased over time and are much lower at the source area as expected.

Ms. Kelly McClinchy inquired about what else is the Navy doing other than just monitoring those wells with orange circles (indicating exceedance of criteria)? Mr. Brayack provided a description of remedial activities that were conducted on property, including a large scale soil excavation at the source area and the installation and operation of the FLTS which also addressed VOCs. Ms. McClinchy inquired about off property wells? Mr. Brayack responded that the Navy evaluated off property remediation but it was determined that additional remedial actions off property may damage existing habitat and that the concentrations in the off property wells are continuing to decrease. He added that the Peconic River Sportman's Club (PRSC) was pulling water from this area, the Navy has put them on a public water supply line to protect those receptors. The Navy will continue to monitor groundwater off property. The remedy was outlined in the Record of Decision.

Mr. Francisco discussed specific results at several off property monitoring wells, specifically, SA-PZ145D, and SA-PZ142, which show results decreasing over time. Ms. Esposito clarified that there is no active remediation off property at Site 6A and Mr. Francisco concurred.

Ms. McClinchy inquired about the status of the 1,4-dioxane PA and asked if there were additional site interviews done since April? Mr. Francisco responded that there were not. Ms. McClinchy asked if the documents used in the literature search are listed on the website. Mr. Francisco replied that they are not on the website but that they are typically listed in the PA and provided in the Administrative Record for the facility. She asked if the PA report could be provided to the public now. Mr. Acree replied that the PA report will be provided to the public once the document is finalized.

Mr. Andy Ropjeko inquired about the why the Trichloroethene (TCE) Anomaly Area is called an anomaly. He explained that the wells are within the defined VOC plume so this is not surprising to see high results there and that calling it an anomaly is confusing. He

noted that the Navy is saying that the source was unclear, but it looks like it is from Site 2. Ms. Esposito also asked if it also could just be a slug that came from the source that could be moving through? Mr. Francisco responded that the concentrations are much higher in that area than the Navy has seen at the source area at Site 2. Additionally, the concentrations were first found in this area, it was almost pure TCE. On site, TCE and its breakdown products are observed but these breakdown products were largely absent at the anomaly area. Mr. Ropjeko expressed confusion, as the fingerprint looks similar to what is on the site. It wasn't at the top of the water table but 60 feet into the water table. Mr. Francisco clarified that what is shown is the latest data for that point, but that in 2012, when we first found it was almost 100% TCE and not the breakdown products. Mr. Ropjeko expressed confusion about the other possible sources that could be around there. He noted that there are no other real potential source areas that would mix with the plume coming from Site 2. He continued to express concern that this is not an anomaly. Mr. Acree explained that this area will continue to be defined as an anomaly until we identify the source. Mr. Ropjeko agreed to disagree.

Mrs. Amanda Lauth inquired if fingerprint analysis was performed to see if it is coming from the site? Mr. Brayack replied, no. He explained that we have data from this site back to 1991, and we did not historically see concentrations of TCE that high. This is far downgradient now and based on the almost pure TCE concentration, we concluded that this was a fresh spill, and we have been monitoring it. It does not appear to be impacting receptors at this point and the concentrations of VOCs in the TCE Anomaly Area are decreasing over time.

PER- AND POLYFLUOROALKYL SUBSTANCES UPDATE

Mr. Ben Francisco, from Tetra Tech, provided an update on the facility-wide per- and polyfluoroalkyl substances (PFAS) investigations. The presentation is provided in Attachment 2.

Ms. Espositio inquired about the Site 2 PFAS results on property, specifically about the number of exceedances and asked how many locations were above the NYSDOH MCL. Mr. Francisco directed her to the tag maps for specific results. Ms. Boltz attempted to update the pdf files of the tag maps to the WebEx viewer, but this caused some technical difficulties. Data is presented on the tag maps which are available on the Navy public website.

Mr. Racaniello inquired about what is upgradient or around the area NSH-PZ108 and if there is anything suspect that could be the source. Mr. Francisco replied that there is a compass rose to the west but given the location of NSH-PZ108, AOC-04 is not likely the source. The Navy is continuing to investigate the concentrations observed at NSH-PZ108.

Ms. Karl asked how the Navy determines the locations of samples and test wells. Mr. Francisco explained that locations are chosen upgradient and downgradient of the potential source areas.

Ms. McClinchy inquired if the NSH-PZ108 location is potentially related to AOC10. Mr. Francisco replied that it could be and the Navy is continuing to investigate it in relation to AOC10.

Mr. Racaniello inquired about the location of the maximum detections of PFOA and PFOS at Site 16 and the source. Mr. Francisco pointed out the location on the figure at AOC-07 and explained that there was use and storage of AFFF in the fire house building.

Mr. Racaniello inquired if there was any reason that samples were not collected within the boundary of AOC-14. Mr. Francisco replied that the Navy considers what is coming onto the AOC and what is going off. Mr. Racaniello asked why they didn't take any soil samples from within the AOC, as it would not be expected to find PFAS outside of the AOC boundary, and why the specific area where AFFF would have been released was avoided. Mr. Brayack responded that the soil data was not of as much value as the groundwater data in determining the effects of a PFAS release to potential receptors. Based on research, the likelihood of release at this AOC was low, and these samples were just to confirm that a release did not occur. Ms. Esposito state that it seemed anomalous that there is no PFAS at a fire training area. Mr. Acree replied that this site was only used for a very short period of time. Additionally, the use of AFFF during activities was not confirmed in interviews.

Ms. Catherin Karl inquired about the difference between the solid and dotted lines on Slide 4? Mr. Acree replied that the USGS data is the dotted lines, the solid lines are based on Navy data which we collect from piezometers.

Ms. Esposito expressed concern that the data showing that the PFOA and PFOS concentrations are below the DoD screening level is useless when the state has a lower drinking water standard. She noted that this was talked about last time but would like to reiterate. She asked the Navy to consider showing that in future presentations. The Navy response is the reason that we are presenting the screening level concentrations on the tag maps is to show you what information is being used to determine if further investigation is warranted (proceeding to the Remedial Investigation stage) or if the site can be closed out. These regional screening levels (RSLs) were determined using the United States Environmental Protection Agency's (USEPA's) online calculator. This information coupled with the Conceptual Site Model allows the Navy to make scientific based decisions on each of the areas that are under investigation.

Ms. Esposito expressed frustration that the comparison to the state standard is not part of the actual presentation.

Ms. McClinchy expressed that the way that we are reporting the results, is not only meaningless, it is misleading. The highlighted numbers are not the state standards, and they should be. Ms. McClinchy requested that the state standard be used for comparison on the tag maps and in the presentations. Mr. Acree replied that the Navy will apply the state standards when they are appropriate in the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) process. These PFAS investigations are in the early stages of the CERCLA process. When a determination is made to move the site to the remedial investigation (RI), the Navy will evaluate the potential risk exposures (human health and ecological) at the site based on the data collected. State standards may be a potential applicable or relevant and appropriate requirement (ARAR) that should be evaluated.

Ms. Dawn Thomas noted that RI is proposed for next steps on a couple areas, and asked what is the time frame for that? Mr. Francisco replied that the RI fieldwork for Site 16 is almost complete. Mr. Acree added that then we have to put together the report and get it finalized, and that takes about a year. Mr. Francisco continued that the purpose is to adequately characterize the nature and extent of PFAS at Site 16. There is a risk assessment involved. It is anticipated that a report will be reviewed by the Navy sometime in 2022.

Ms. Thomas asked what are some possible remedial actions that could be implemented? How long would that take? Mr. Brayack responded that the Navy will follow the remedial investigation/feasibility study (RI/FS) process under CERCLA. The purpose of the RI is to adequately delineate and define the nature and extent of contamination at the site. Then a FS is prepared, which evaluates the different options for addressing the contamination. Examples of remedial options might be a groundwater pump and treat system or immobilizing the PFAS in-situ. Following the FS, the Navy chooses an optimal remedy and a Record of Decision (ROD) is signed by the Navy. Subsequently, the system would need to be designed, constructed, etc. Ms. Thomas asked how long the timeframe would be from RI to obtaining a contactor to begin the construction work? Mr. Acree replied that typically this process takes about 3-5 years. Site 6A is a good example and you can find those documents, with date stamps, on the website.

Ms. Esposito expressed concern that using the 40ppt will eliminate areas from getting to the RI/FS process. Mr. Brayack replied that under CERCLA, perflurorooctanoic acid (PFOA) and perfluorooctane sulfate (PFOS) are not considered hazardous substances. The Navy is using EPA risk-based values to determine the risk and if sites should move on to cleanup. The state standard applies as an ARAR at that point in the CERCLA process. He noted that the high concentration sites are moving toward cleanup right now. Conclusions will be drawn, but it is unclear what will happen to the sites that have results between the state standard (10 ppt) and DoD screening level (40 ppt). Ms. Lynn

Winterburger indicated that the state will push the Navy to consider the state standards as applicable.

BIOSPARGE UPDATE AT SITE 7 PRESENTATION

Mr. Melvin Acree provided an update on the biosparge system at Site 7- Fuel Depot. The presentation is provided in Attachment 2. There were no questions from the panelists regarding this presentation.

OPEN PUBLIC QUESTION AND ANSWER SESSION

Mr. Stan Carey asked if the FLTS treat PFOA/PFOS and 1,4-dioxane? Mr. Brayack replied that no it did not. It had an extraction well that picked up groundwater at about 30 feet down, treated for VOCs not PFOS/PFOS or 1,4-Dioxane, and re-introduced the groundwater back into the aquifer.

Mr. Thomas Houghton asked how the plume at Site 2 is derived on the figure. Mr. Brayack responded that the Site 2 plume shown on the figure is 5 years old. At this time, most of the plume has dissipated.

Mr. Stan Carey asked the Department of Environmental Conservation (DEC) to require a fingerprint analysis sample to evaluate if the TCE in the anomaly area is coming from Site 2.

Mr. Thomas Houghton stated that it would appear that sampling outside the 1.5 acre leased parcel (AOC-14) and not sampling the actual parcel would close the site permanently before it may have traveled to the sample sites. Mr. Brayack replied that when evaluating an area for evidence of release, the investigation will look very close to downgradient edge. If there is a well-defined point where a release has occurred, then sampling would occur at that point. But since a large area was used the investigation looked at where the groundwater flows.

Mr. Stan Carey asked will the DEC be seeking natural resource damage (NRD) funds from Navy and or Grumman? Ms. Lynn Winterburger replied that there is not currently an order present for this.

A call-in user asked if there is consideration to go back to the in-person meetings? Mr. Acree replied that yes, funding restraints occurred during this RAB cycle. We anticipate an in-person meeting in April 2022.

Ms. Catherine Karl asked if the presentation can be updated to show state standards so that we have it all in one spot? Mr. Acree replied that we cannot, and that what is presented is the standard for the Department of the Navy. Ms. Esposito stated that it is possible, but the Navy is choosing not to decline. Mr. Acree reiterated that currently this is Navy policy.

A representative from Calverton Civic asked if the Navy would consider a hybrid meeting for future RABs utilizing zoom and an in person location? Mr. Acree replied that the goal is to just do face to face, assuming that we are able to in the future. A combination meeting could be possible and could be considered in the future.

Assembly woman, Jodie Biglio (Town of Riverhead), requested a contact for follow up conversation about the way the maps are presented.

GENERAL DISCUSSION AND CLOSING REMARKS

At the conclusion of the meeting, Mr. Acree thanked the attendees for their participation and remined everyone additional questions must be submitted by November 16th by email or voicemail. Mr. Acree further comment that the additional questions would be captured in the RAB minutes. Meeting Minutes for November 2020 and April 2021 were posted to the public website on November 10, 2021. November 2021 Meeting minutes will be posted after they are finalized by the RAB. The meeting was then adjourned.

Attachment 1 November 9, 2021 RAB Meeting Attendees Naval Weapons Industrial Reserve Plant Calverton, New York Page 1 of 2

| 1 | Panelist | Adrienne Esposito |
|----|----------------|---|
| 2 | Panelist | Amanda Lauth |
| 3 | Panelist | Amy Juchatz |
| 4 | Panelist | Andy- SCDHS |
| 5 | Attendee | Bob Kern |
| 6 | Phone Attendee | Call-in User_12 (631987****) |
| 7 | Phone Attendee | Call-in User_13 (631987****) |
| 8 | Phone Attendee | Call-in User_2 (631871****) |
| 9 | Phone Attendee | Call-in User_3 (631509****) |
| 10 | Phone Attendee | Call-in User_4 (631255****) |
| 11 | Phone Attendee | Call-in User_6 (631872****) |
| 12 | Phone Attendee | Call-in User_8 (631942****) |
| 13 | Phone Attendee | Call-in User_9 (631284****) |
| 14 | Attendee | Calverton Civic |
| 15 | Panelist | Catherine Karl |
| 16 | Attendee | Catherine Kent |
| 17 | Attendee | D Evans |
| 18 | Panelist | David Brayack |
| 19 | Panelist | David Todd - NAVFAC ML PAO |
| 20 | Attendee | Doug paquette |
| 21 | Panelist | Frank Mancini |
| 22 | Attendee | Gwynn Schroeder for Legislator Al krupski |
| 23 | Panelist | Henry Wilkie |
| 24 | Panelist | Jacqueline Boltz |
| 25 | Attendee | Jim Milligan |
| 26 | Attendee | Jodi Giglio |
| 27 | Attendee | John L Cullen |
| 28 | Panelist | Jonathan Wanlass-SCDHS |
| 29 | Attendee | Karen Kemp |
| 30 | Panelist | Kelly McClinchy |
| 31 | Attendee | Kris Almskog |
| 32 | Panelist | Lauren Donston |
| 33 | Panelist | Lynn Winterberger |
| 34 | Attendee | Mark Woolley |
| 35 | Attendee | Michael Madigan |
| 36 | Attendee | Pat Aitken |
| 37 | Panelist | RAB Presenter |
| 38 | Panelist | Robert Forstner |
| 39 | Attendee | Rosemary Theurer |
| 40 | Panelist | Shaun Surani |
| 41 | Attendee | Sid Bail |
| 42 | Attendee | Stan Carey |
| 43 | Attendee | Stephen Shapiro |
| 44 | Attendee | Stephen Tauss |
| 45 | Panelist | Tela |
| | | |

Attachment 1 November 9, 2021 RAB Meeting Attendees Naval Weapons Industrial Reserve Plant Calverton, New York Page 2 of 2

| 46 | Panelist | Thomas |
|----|----------|-------------------|
| 47 | Panelst | Thomas Houghton |
| 48 | Attendee | Tim Gannon |
| 49 | Attendee | Tom |
| 50 | Attendee | Vin Varricchio |
| 51 | Panelist | Vinnie Racaniello |

Welcome to the RAB Meeting!



Thank you for joining the Restoration Advisory Board (RAB) Meeting for Naval Weapons Industrial Reserve Plant (NWIRP) Calverton

The meeting will begin at 6:15 p.m.

If you are experiencing technical difficulties, contact WebEx by telephone at 1-866-779-3239.



WELCOME



NAVAL WEAPONS INDUSTRIAL RESERVE PLANT CALVERTON RESTORATION ADVISORY BOARD

VIRTUAL MEETING NOVEMBER 9, 2021 6:15 P.M.

WEBEX TOOLS



CC

Closed Captioning

-To turn on captions during the meeting, click
SHOW CLOSED CAPTIONS in the lower left of the screen

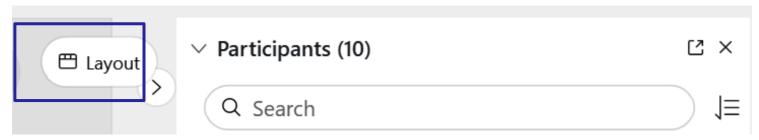


-To zoom in/out on a slide, use the magnifying tool on the left side of the screen



Screen Layout

-To adjust the layout on your screen, click the LAYOUT button at the top right of the screen



Q&A Options

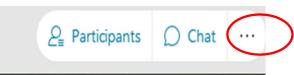


1) Raise your hand to be recognized and have your microphone unmuted.

Raise Hand 🐧 in the Participants panel to signal a question

2) Ask a question by typing it in the **Q&A box**.

You may need to click the three white dots in the control panel to open the Q&A box





3) **Phone-only** attendees can dial *3 to request to have their microphone unmuted and have the opportunity to ask a question.

Virtual Meeting Instructions



- ➤ Attendee cameras are not being used; no attendees will be viewed by others.
- ➤ Attendee microphones will remain muted except when recognized for questions.
- Webinar sign-in names will be used for the record.
- ➤ Meeting minutes will be prepared and will be made available in the Administrative Record.
- ➤ Please hold questions or comments or enter them in Q&A box as they arise; they will be addressed after the presentations.

AGENDA



- Welcome and Virtual Meeting Instructions Jacqueline Boltz, Tetra Tech
- Welcome and Agenda Review, Melvin Acree, NAVFAC Mid-Atlantic
- Community Update, Vincent Racaniello, RAB Co-chair
- Restoration Advisory Board (RAB) Charter, Melissa Forest, Navy Community Involvement Support
- Technical Progress (panelists will have 10 minutes for Q&A after each presentation)
 - ➤ Site 2 Former Fire Training Area and Site 6A Southern Area Volatile Organic Compounds and 1,4-Dioxane, Ben Francisco, Tetra Tech
 - > Per- and Polyfluoroalkyl Substances Update, Ben Francisco, Tetra Tech
 - ➤ Site 7– Biosparge System Update, Melvin Acree, NAVFAC Mid-Atlantic
- Attendee Questions and Answers until 9:15 pm
- Closing Remarks, Melvin Acree, NAVFAC Mid-Atlantic

RAB MEMBERS



Vincent Racaniello – RAB Co-Chair

Adrienne Esposito

Kelly McClinchy

Frank Mancini

Tela Troge

Robert Kern

Catherine Karl

Amanda Lauth

George Bartunek



Site 2 Former Fire Training Area Site 6A Southern Area Volatile Organic Compounds and 1,4Dioxane

Presented by: Tetra Tech, Inc NAVFAC Mid-Atlantic 9 November 2021

Volatile Organic Compounds and 1,4-Dioxane



Volatile Organic Compounds (VOCs):

- Consumer products: cleaning products and paints
- Industrial uses: metal degreasing agent, paints, and glue
- Useful properties: solvent that removes grease and oils

• 1,4-Dioxane:

- Consumer products: deodorants, shampoo, and cosmetics
- Industrial uses: paint strippers, dyes, greases, varnishes, and waxes
- Useful properties: stabilizer for chlorinated solvents such as 1,1,1-trichloroethane (TCA)

Known VOC Sites and Potential Areas of Concern for 1,4-Dioxane:

- Site 2 Former Fire Training Area
- Site 6A Southern Area

1,4 – Dioxane Preliminary Assessment

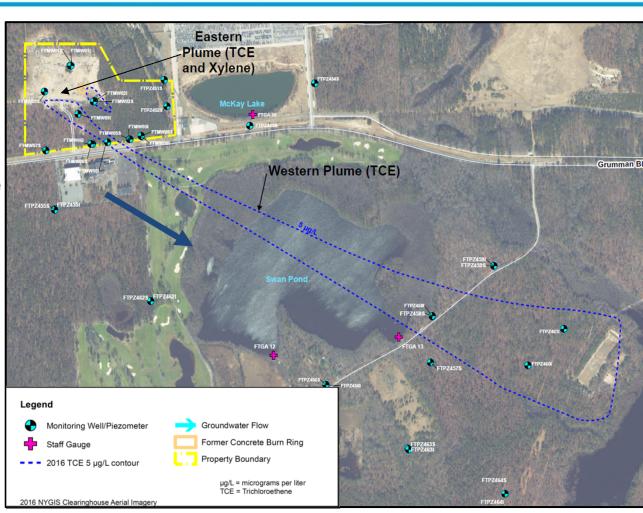


- 2020: Preparation of a Preliminary Assessment (PA) for 1,4-Dioxane at the Former NWIRP
 - Literature Search: Naval Information Restoration Information Solution (NIRIS) and Public Databases (EPA and State of New York)
 - Site Interviews
 - Site Reconnaissance
 - PA Report: Summarizes Findings and Recommendations for Site Inspections
 - Draft report in preparation

Site 2 Former Fire Training Area



- 1950's to 1996: Fire Training Area
- Groundwater has been impacted by petroleum, chlorinated solvents, and other chemicals
- Two VOC groundwater plumes delineated in 2016
- Primary contaminants: Trichloroethene (TCE) and Xylene
- Interim Actions (excavation and Air Sparge / Vapor Extraction)
- Remedy selection for VOCs in groundwater is awaiting investigation per- and polyfluoroalkyl substances and 1,4-dioxane.
- Final Remedial Design finished in Summer 2021, implemented in Fall 2021.
- Fall 2021: Collected groundwater samples from 8 monitoring wells within the plume (VOC and 1,4-dioxane analysis)



TCE and TCE / Xylene Plume

Site 2 Remedial Design



- Current site use is environmental conservation and recreational use.
- Remedial Design defines the Land Use Controls that restrict use of the site and outlines maintenance requirements.
- Land Use Controls:
 - Restrict residential use of site
 - Restrict excavation or digging that disturbs soil
- Implementation of these Land Use Controls consists of:
 - Annual inspections
 - Maintenance of areas of disturbed soil from erosion or other activities
 - Fencing and gates to restrict vehicle access (to prevent tire ruts/erosion)
 - Placement of signs



DANGER / PELIGRO

Public Access Area / Area de Publico Acceso

UNEXPLODED ORDNANCE MUNICIONES NO DETONADAS

Do Not Touch / No Toque

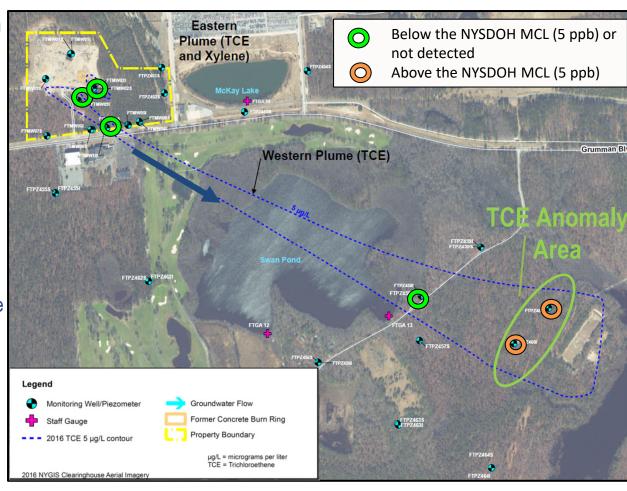
RECOGNIZE --- RECONOZCA
RETREAT --- RETROCEDA
REPORT --- REPORTE



2021 VOC Results Site 2 Former Fire Training Area



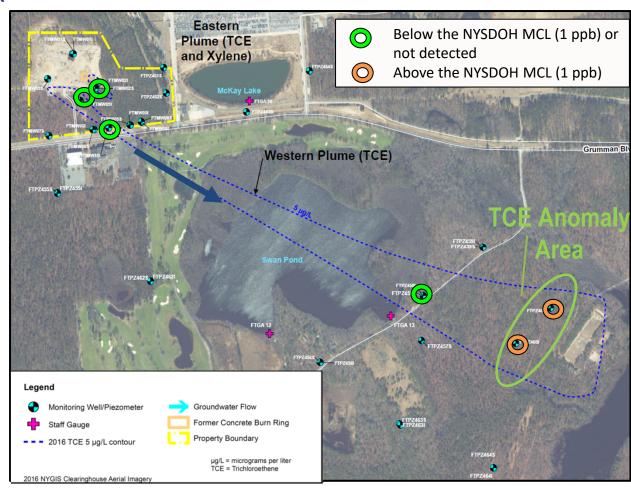
- VOCs were detected in 4 on property monitoring wells at concentrations below their respective New York State maximum contaminant levels (MCLs)
- VOCs detected in 2 of 4 off-property monitoring wells above the MCL
- VOCs exceed MCLs in the TCE Anomaly Area
- 1994: Maximum detection of TCE on-property = 94 ppb
 - 2012: Maximum detection of TCE = 600 ppb
 - 2013: Further investigation west of the anomaly did not identify a source
 - 2021: Maximum detection of TCE = 82 ppb
 - Decreasing results and degradation (breakdown) compounds (dichloroethane [DCE] and dichloroethane [DCA]) indicate that TCE is degrading



2021 1,4-Dioxane Results Site 2 Former Fire Training Area



- 1,4-dioxane detected in groundwater at 1 of 4 monitoring wells on-property but the results were below the MCL
- 1,4-dioxane detected in 2 of 4 offproperty monitoring wells above MCL
 - Two monitoring wells in the anomaly area; maximum detection= 15 ppb

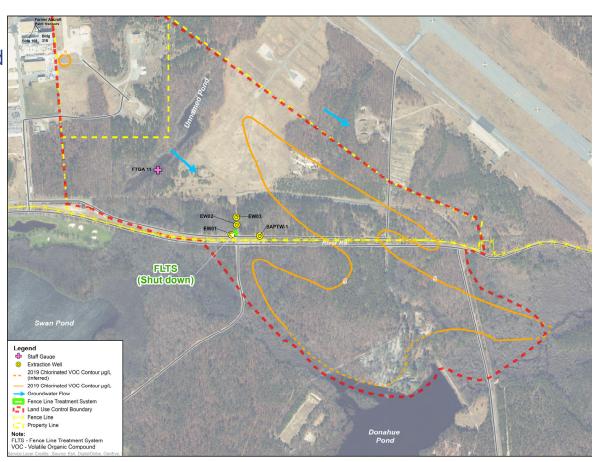


Site 6A – Southern Area and Plume Boundary



History

- 1950's to 1996:
 Site 6A Former Fuel Calibration Area used for the testing aircraft fuel and engine systems
- Frequent, small fuel and solvents likely spilled during use at the Site
- Site 6A Southern Area:
 VOC groundwater plume
- Interim Actions (excavation and bio-study)
- 2012: Record of Decision (ROD)
- October 2013 to March 2019:
 Fence Line Treatment System (FLTS)
 operated; air stripping reduced the concentration of VOCs in groundwater
- Biannual Long-Term Monitoring (LTM)
 - Spring and Fall: Porewater and surface water sampling at the Peconic River
 - Fall only: Groundwater sampling

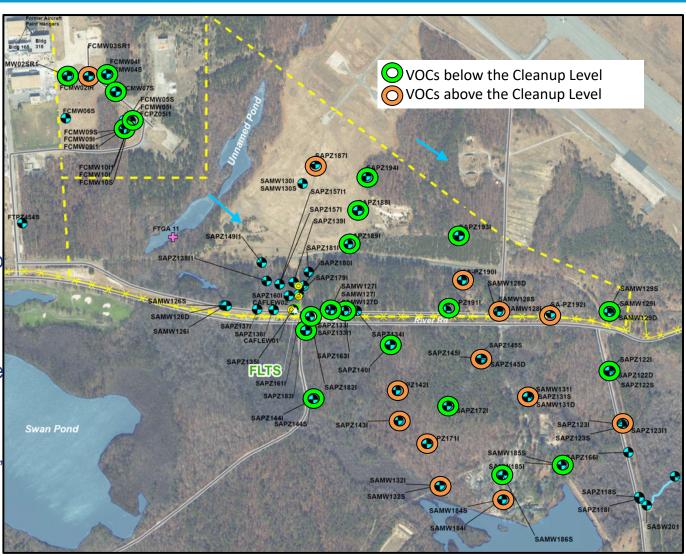


VOC Plume

Fall 2021 VOC Results Site 6A - Southern Area



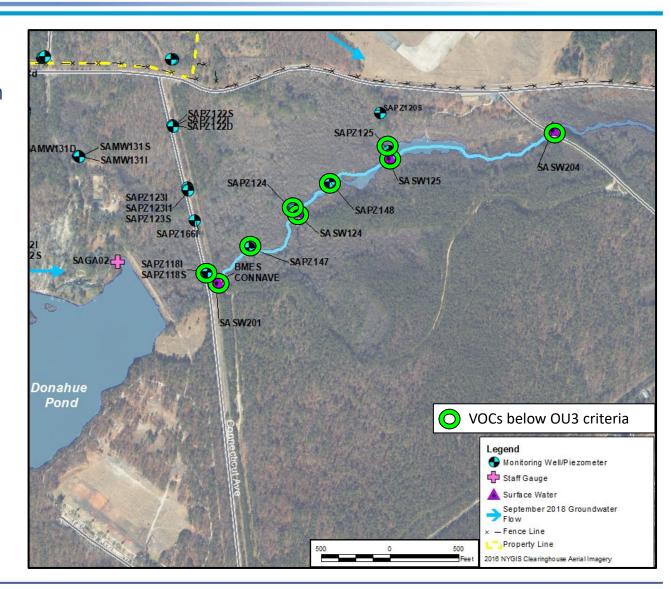
- Results at 13 of the 46 wells exceed ROD cleanup levels
 - 5 on-property wells
 - 8 off-property wells
- Residual fuels and dichlorobenzene remain above cleanup levels in one Fuel Calibration Area well
- DCA remains above the cleanup level in 4 on-property southern area monitoring wells
- VOCs in wells just south of the FLTS have decreased below the cleanup level
- Off-property VOCs that exceeded the MCLs: TCA, DCA, DCE, chloroethane



Spring and Fall 2021 VOC Results- Peconic River Site 6A – Southern Area



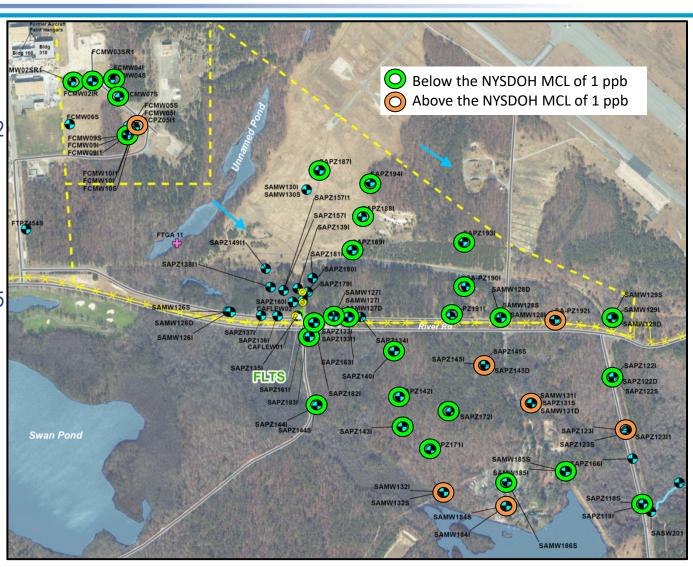
- VOCs were below the cleanup levels at the two Peconic River Area monitoring wells during both events
- VOCs in pore water (wells along edge of Peconic River) and surface water were below the Operable Unit (OU) 3 ecological surface water and pore water benchmarks:
 - DCA = 3,000 ppb
 - DCE = 210 ppb
 - Dichlorobenzenes = 5 ppb
 - Isopropyl benzene = 2.6 ppb



Fall 2021 1,4-Dioxane Results Site 6A - Southern Area



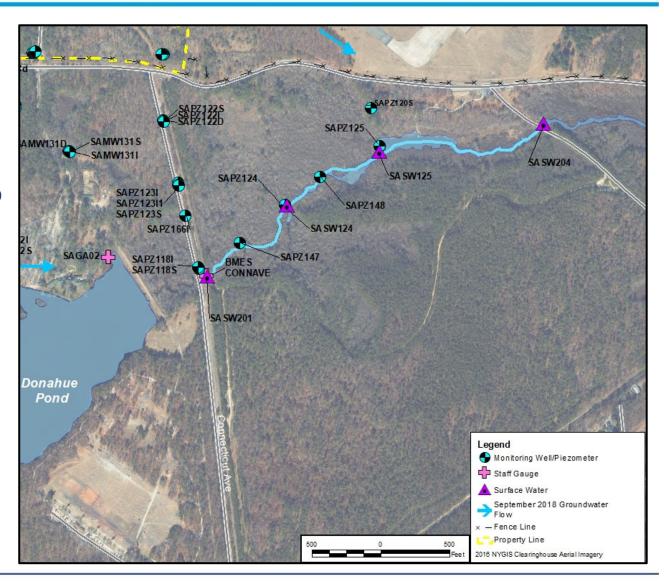
- 1,4-dioxane detected in groundwater at 9 of 25 wells on-property
 - Exceedances of MCL at 2 wells at maximum of 1.4 ppb
- 1,4-dioxane detected in groundwater at 14 of 21 monitoring wells off-property
 - Exceedances of MCL at 5 wells at a maximum of 4.2 ppb



Fall 2021 1,4-Dioxane Results- Peconic River Site 6A – Southern Area



- Result for 1,4-dioxane in monitoring wells along the Peconic River (pore water) ranged from not detected to 1.30 ppb.
- Results for 1,4-dioxane in surface water ranged from not detected to 0.21 ppb
- NYSDEC has issued proposed guidance values for 1,4-dioxane in groundwater and surface water but these are not yet promulgated





QUESTIONS?



Per- and Polyfluoroalkyl Substances (PFAS) Update

Presented by: Tetra Tech, Inc NAVFAC Mid-Atlantic 9 November 2021

Field Update

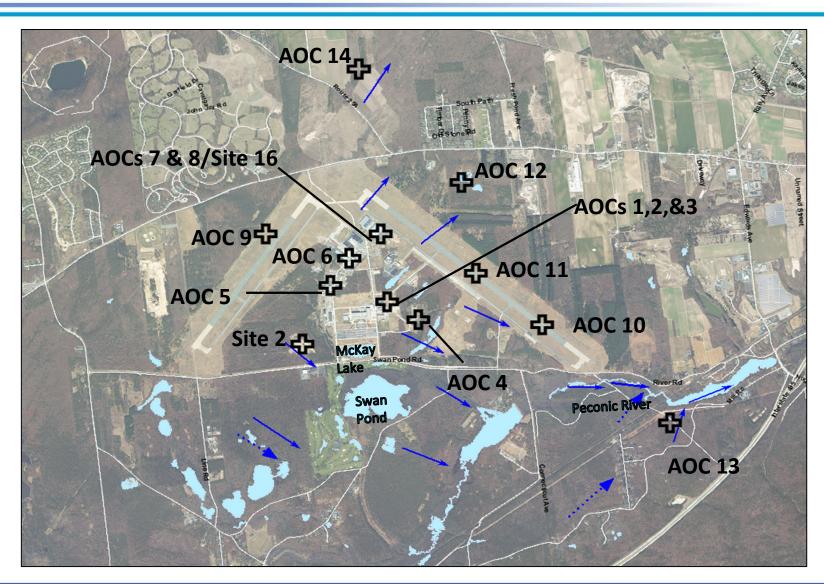


- **2016:** Initial investigations began at:
 - Site 2 and Aircraft Paint Hangars
- 2018: Preliminary Assessment initiated
- **2019:** Site Inspection began or continued at:
 - Site 2
 - Areas of Concern (AOCs) 01 through 12
- 2020 and 2021:
 - PA finalized.
 - Investigations completed at Site 2
 - Investigations completed at AOCs 01 through 09
 - Investigations initiated and completed at AOCs 13 and 14
 - Investigations ongoing at AOCs 10 and 11
 - Remedial Investigation initiated at Site 16 (AOCs 7 and 8)



Location Map and Direction of Groundwater Flow

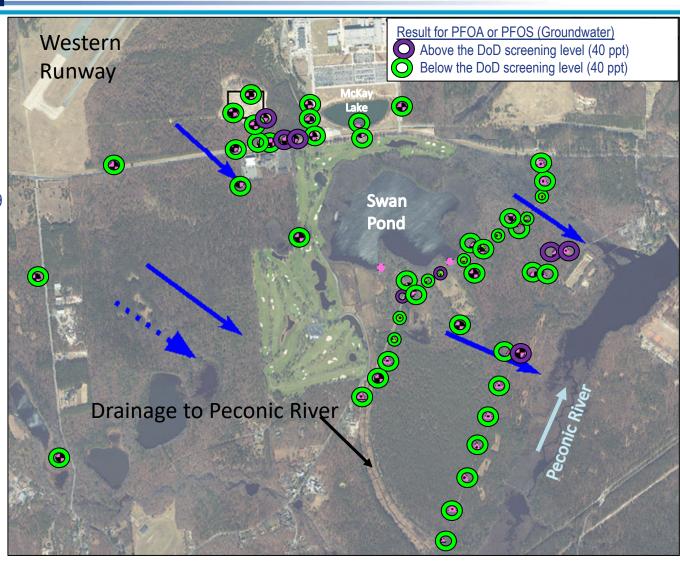




Site 2 Former Fire Training Area 2019 through April 2021 Results for PFOA and PFOS



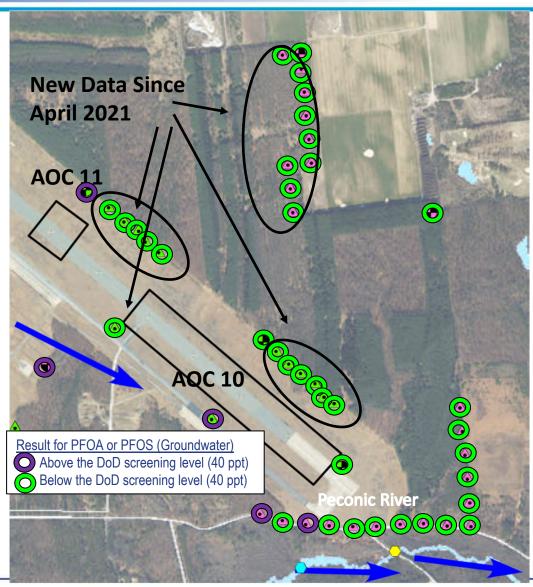
- Site currently in Remedial Investigation
- Western Runway: results for all 3 groundwater samples are below DoD screening level
- Site 2 Groundwater:
 - PFOA and PFOS ranged from not detected to 1,367 ppt
 - Results at 42 of 51 monitoring wells below DoD screening level; 7 of the 9 wells with exceedances are onproperty
 - Maximum result off property = 54.8 ppt
 - Results for 183 samples at 37 vertical profile boring locations were below DoD screening level
 - PFOA and PFOS present at levels above DoD screening Level
- Discharge at McKay Lake: PFOA and PFOS range from not detected to 4.92 ppt
- Surface Water: PFOA and PFOS ranged from not detect to 36.5 ppt
- Sediment: PFOA and PFOS ranged from not detect to 0.3 ppt in Swan Pond and McCay Lake



AOC 10 and 11 Crash Sites 2020 and 2021 Results for PFOA and PFOS



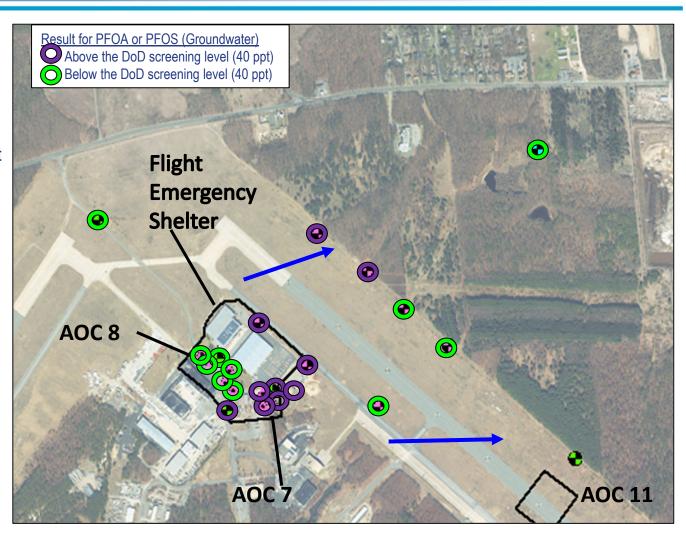
- AOC 10:
 - Groundwater flows to the south east
 - PFOA and PFOS ranged from not detected to 134 ppt; except for one detection of 1,290 ppt
 - Results at 6 of 8 monitoring wells are below the DoD screening level
 - Results for 140 of 143 groundwater samples from 25 vertical profile borings below DoD screening level
- AOC 11:
 - Groundwater flows to the east, south east
 - Results available for 5 wells only
 - PFOA and PFOS ranged from not detected to 116 ppt
 - Results at 3 of 5 wells are below the DoD screening level
 - Results for 85 of 86 groundwater samples from 16 vertical profile borings below DoD screening level
 - PFOA and PFOS both present at levels above the DoD screening level
- Path Forward: Installation of additional monitoring wells to characterize AOCs



Site 16 - Flight Emergency Shelter 2020 / 2021 Groundwater Results for PFOA and PFOS



- Groundwater flows to the northeast
- Flight Emergency Shelter (AOC-07 and AOC-08) groundwater:
 - PFOA and PFOS ranged from not detected to 5,408 ppt
 - Results at 21 of 29 wells below DoD screening level
 - Results for 29 of 44 samples at 15 vertical profile boring locations were below DoD screening level
 - PFOA and PFOS both present at levels above the DoD screening level
- Path Forward: AOCs 7 and 8 designated as Site 16.
 Remedial Investigation initiated.

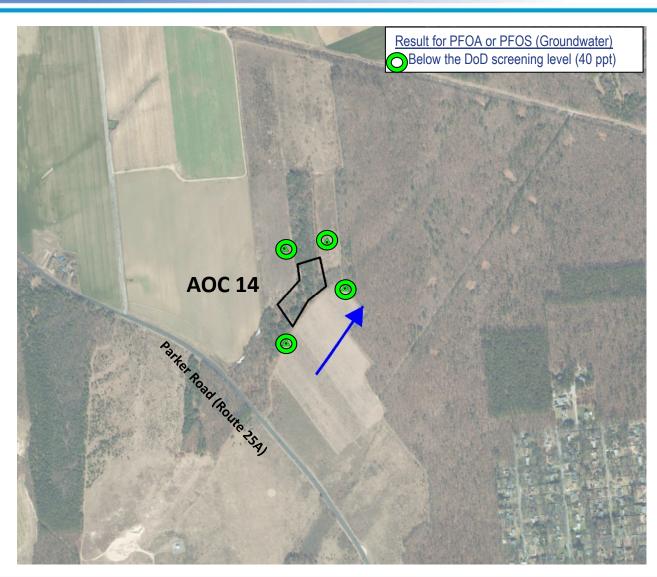


AOC 14

1.5 Acre Leased Parcel



- AOC 14 was added to the Site Inspection at the request of NYSDEC.
- Groundwater flow anticipated to the northeast
- April 2021: Groundwater samples collected for PFAS analysis
 - PFOA and PFOS in groundwater ranged from not detected to 4.49 ppt
 - Results for all 12 groundwater grab samples from 4 locations below DoD screening level

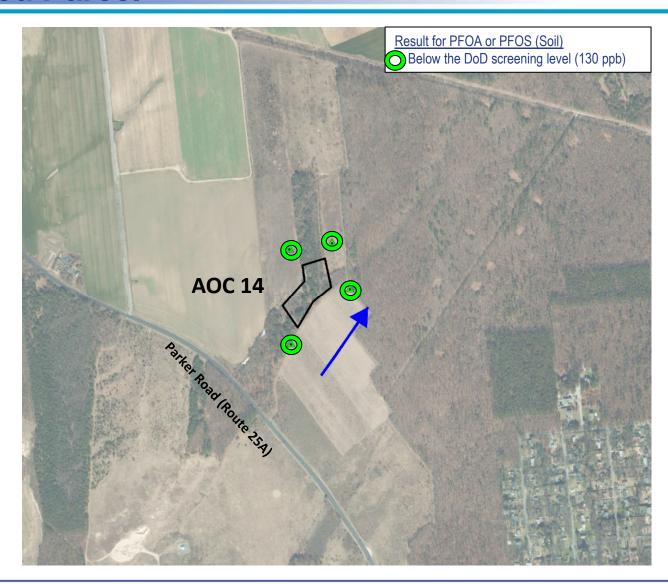


AOC 14

1.5 Acre Leased Parcel



- April 2021: Soil samples collected for PFAS analysis
 - PFOA and PFOS in soil ranged from 0.08 to 0.64 ppt
 - Results for all 4 soil samples from 4 locations below DoD screening level
- Path Forward: Results all below criteria therefore No Further Action is recommended.



Path Forward



- Summer and Fall 2021:
 Sampling at Site 2 monitoring wells complete
- Fall 2021:

Remedial Investigation initiated at Site 16

• Fall 2021/Winter 2022:

Installation of additional monitoring wells at AOCs 10 and 11

- Reports
 - Site 2 Remedial Investigation report in preparation and will include the recommendations for the path forward
 - Site Inspection Reports for 14 AOCs in preparation and will include the recommendations for the path forward



QUESTIONS?



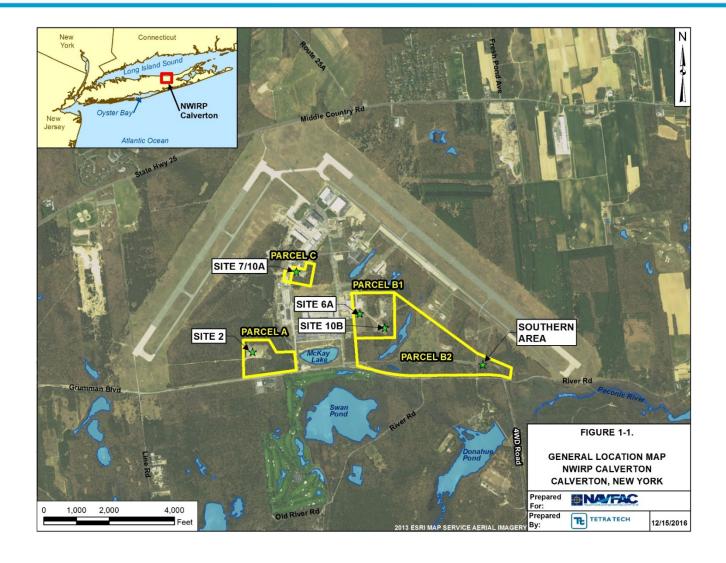
SITE 7 – FUEL DEPOT BIOSPARGE PILOT UPDATE

November 2021 Restoration Advisory Board

NWIRP CALVERTON, NEW YORK

Site Location



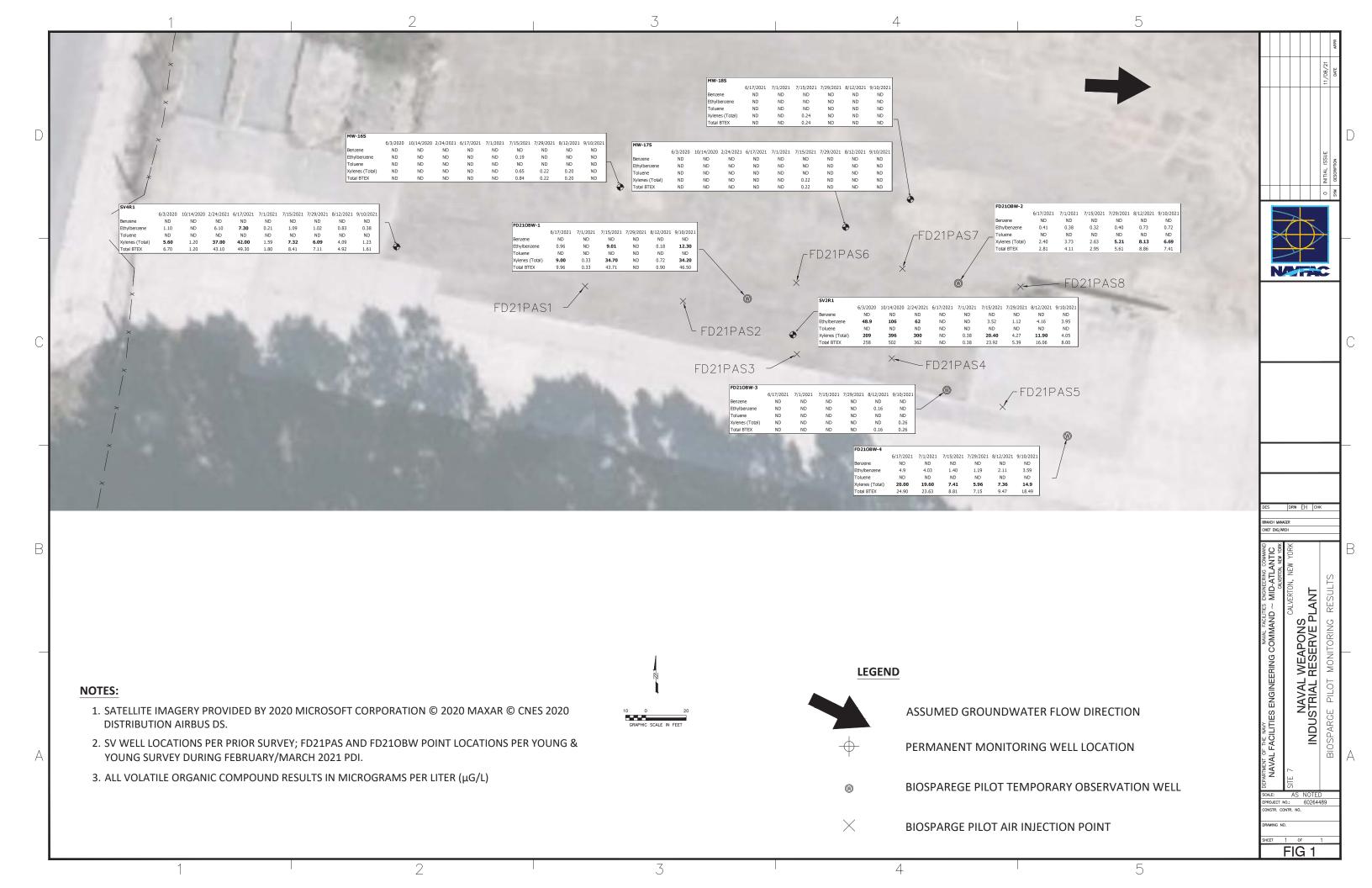


Site 7 Remedial History



- Late 90's Underground tanks removed
- 2006 to 2013 Air Sparge (AS) / Soil Vapor Extraction (SVE) system operated.
- 2016 Observation of NAPL during LTM sampling event:
 - Fingerprinting identified NAPL as weathered fuel
 - Conclusion was NAPL was retained in a "smear zone" and the Targeted AS or AS/SVE was constrained by the buried slab.
- 2019 Excavation of Buried Slab
 - Impacted materials removed (1,090 CY of soil, 206.11 tons of concrete)
- 2020 LTM sampling event
 - Xylene MCL exceeded at three locations: SV2 (209 μg/L), SV4 (5.6 μg/L) and SV13 (7.6 μg/L)
 - Ethylbenzene MCL exceeded at SV2 (49 μg/L)
 - No detections at MW07S/07I, MW08S, MW09S, MW16S & SV15
 - No MCL exceedances at SV11
- 2021 Mobilization/Installation of temporary air sparge equipment for three month (Biosparge Pilot Test)
 - Target six to eight air injection points in the vicinity of SV2
 - Nov 2021 completed an additional 2 months air sparge.
 - system has been removed from the site and samples have been sent to the lab.





Q&A



QUESTIONS/ANSWERS

Q&A OPTIONS



1. Ask a question by typing it in the Q&A box.

Click three white dots "More Options" icon in bottom right of screen to open the Q&A box.



Raise your hand to be recognized and have your microphone unmuted.

Raise Hand 🐧 in the Participants panel to signal a question

3. Phone-only attendees can dial *3 to raise their hand and have the opportunity to ask a question.

2 4/14/2021

POST MEETING



- Questions can be submitted after the RAB until November 15, 2021
- Submit question to the Navy PAO (NAVFAC_ML_PAO@navy.mil) or leave a message at 757-341-1410/11
- Similar questions will be combined
- The post meeting Q&A will be available at the Navy's website and captured in the RAB meeting minutes
- The Navy's website: https://go.usa.gov/x78Ya