#### **PARTICIPANTS:**

<u>Panelists</u> <u>Representing</u>

Maritza Montegross Naval Facilities Engineering Command (NAVFAC) Remedial Project

Manager

Jeffrey Doepp NAVFAC Public Affairs Office

Mike Daly U.S. Environmental Protection Agency (EPA)

Lisa Stone Sovereign Consulting

Robert Davis Tetra Tech Leanne Hawn Tetra Tech Jacqueline Boltz Tetra Tech

**Attendees** 

Bopha Malone Heidi Porter

Cameron Heller Jeff

Caroline Fedele Jennifer Boles
Charles Lindberg Margot Fleischman

Chris Boles Meeta M

David Manugian Mike Rosenberg

Diane Baxter Sarah Stanton (Town Manager)

Emily Mitchell Susan Schwartz

**Heather Oliver** 

#### **ATTACHMENTS:**

- Meeting Announcement (published in the 10/21/21 editions of the Bedford Minuteman and the Lexington Minuteman newspapers; uploaded to the Town of Bedford website and Bedford Citizen; emailed to current RAB members)
- Presentation Slides

#### **MINUTES/NOTES:**

7:02 PM –Ms. Montegross started the meeting. Ms. Montegross introduced herself. Ms. Boltz covered the WEBEX information regarding the virtual meeting and how to ask or submit questions. Ms. Montegross:

- Introduced the members of the NWIRP Bedford Team that includes the regulators and Navy contractors
- Introduced the Bedford RAB Co-chair, provided information on the RAB and how to become a member.
- Provided an introduction of the environmental restoration sites at NWIRP Bedford

- Provided a site overview and presented ongoing cleanup actions.
- Summarized land use controls in place and the five-year review process.
- Described the conclusions and recommendations of the previous five-year review reports from 2014 and 2019.
- Provided details on groundwater treatment and extraction system at Site 3 and the longterm monitoring that is conducted each year.
- Provided details on the modifications that were made to the groundwater treatment plant to treat 1,4-dioxane, an emerging chemical that was identified during the five-year review.
- Described additional Post-ROD investigations that are being conducted or planned.

The presentation slides are attached.

7:15 PM – Question #1 was asked and addressed during the site overview and ongoing cleanup actions portion of the presentation.

7:42 PM – The presentation was completed and the floor was opened to questions from the audience that were written in during the presentation. A summary of the questions and responses are provided below.

8:06 PM – Asked for any additional questions to be submitted to the PAO by November 5. Provided info on the online Administration Record available through the Bedford Public Website.

8:10 PM — No additional questions and Ms. Montegross thanked the audience and adjourned the RAB meeting. Anticipate next RAB meeting in October 2022.

#### **ATTENDEE QUESTIONS:**

1. For sites 1 and 2, was "No Further Action" based on testing results - when were the tests published?

Ms. Montegross answered that sampling data was collected and all the documentation of the investigations is provided in the Administrative Record. The Record of Decision would be the most useful document to review regarding these sites. Details on accessing the Administrative Record will be provided at the end of the presentation. Mr. Daly added that the sites had underground storage tanks and closure activities included tank and soil removal.

2. Why are Sites 1 & 2 more focused areas vs Site 3 is broader and basically encompasses the entire property. Why is that the case?

Ms. Montegross indicated that it is a result of the nature of the contaminant (trichloroethene [TCE]) present at Site 3.

3. When a site that is still under remediation is sold to another party, what constraints does the developer have as part of the deal?

Ms. Montegross stated that the Deed Restriction identifies the land use controls that are required. The land use controls will indicate whether the area can be used for industrial or residential development and other restrictions because of issues such as vapor intrusion.

Follow-up question: With regards to the property on the southern side, does that mean that industrial use and construction is allowed? And are any kinds of restrictions with regards to even the industrial use? And is the development being monitoring in case it's at odds with the remediation effort?

Ms. Montegross answered that the Navy is in communication with the property owner. Land use controls are monitored for compliance. Use is restricted to industrial use, primarily based on its location by the airfield. There is no restriction based on vapor intrusion.

Ms. Stanton, Town Manager, added that the parcel is zoned industrial/commercial, not residential. Residential would require a zoning change at Annual Town Meeting.

4. What specifically are the emerging contaminants being evaluated?

Ms. Montegross answered that the emerging chemicals being investigated are 1,4-dioxane and PFAS.

5. Is that groundwater extracted, treated and pumped back in?

Ms. Montegross answered that the groundwater is extracted and treated and discharged onto the ground.

6. Does ground water extraction system have any effect on eastern part of Site 3 or Site 4?

Ms. Montegross answered that it does but not significantly. The Navy is planning to extend the system due to flow to the east. Primary focus is the 1,4-dioxane that is flowing towards Elm Brook.

- 7. How close is the newly discovered eastern expansion of site 3 plume to Hartwell Road residential properties? Is 2022 construction soon enough?
  - Ms. Montegross answered that construction will take some time. The plume has not extended past the NWIRP Bedford property boundary.
- 8. How many additional wells are being installed and where exactly?
  - Mr. Davis answered that 12 wells were installed this summer to address data daps on the eastern side of the Navy property and south of the components building.
- 9. Are the additional mitigation measures for Site 3 likely to move up the expected date for total clean up from 2090?
  - Ms. Montegross answer that she does not expect the timeframe to change.
- 10. Has PFAS only been identified at SFTA and not on the north side of Hartwell?
  - Ms. Montegross answered that the investigation was still in progress so that she couldn't address the question yet.
- 11. Is the treatment system effluent being tested for PFAS?
  - Ms. Montegross answered that the PFAS investigation is in progress; however, the Navy does not anticipate PFAS within the northern tract.
- 12. Are local kids still getting into the buildings?
  - Ms. Montegross answered that the Navy has installed a video surveillance system.
  - Ms. Stanton, Town Manager, added that there have not been break-ins in months. Bedford Police Department continues to monitor the site.
- 13. When was the last time interior of buildings were inspected?
  - Ms. Montegross indicated that there are no plans to inspect or salvage the buildings.
- 14. Sounds like the SFTA developer is keeping you informed as they do their work. Is there anything you can share with us since we do not have any visibility otherwise?

Ms. Montegross indicated that the property owner is required to alert the Navy and there has been no action for some time. The Navy has been in communication with the property owner and does yearly land use control inspections.

- 15. Where is the treated groundwater discharged?
  - Ms. Montegross indicated on a figure that the location is on MassPort property, which the Navy has an easement for and it is within its land use control boundary. The discharge is close to the groundwater treatment facility.
- 16. How many homes or businesses are within the 100' TCE plume front vapor intrusion safety buffer zone?
  - Ms. Montegross indicated that buildings are present, but that the information is private and it is being investigated, but the TCE plume has not extended past the Navy property, but the Navy is investigating the potential for vapor intrusion.
  - Ms. Stanton, Town Manager, added that the town administration is fully aware of these properties, and that information is not for public distribution.
- 17. Can you remind us if any of the plumes include the area of the decommissioned Hartwell Road wells (Town wells)?
  - Ms. Montegross indicated that those wells are northwest beyond Elm Brook. The Navy contamination has not gone past Elm Brook.
- 18. But is dioxane from site 3 entering Elm Brook?
  - Ms. Montegross indicated it was.
- 19. Where is the old ammunition bunker located?
  - Ms. Montegross indicated that she did not know of an ammunition bunker at NWIRP Bedford. But that the preliminary assessment was conducted in the 1980s and that's the kind of thing they look into. The report is very thorough and the CERCLA process requires a lot of record searches and interviews, which were done at the time the base was active. We have no concerns related to an old ammunition bunker.
- 20. What is the pump house? Where is it located?

Ms. Montegross pointed out the pump house on the figure and showed the general location of the planned northern extraction wells.

21. A comment -- I am very concerned about the new eastward spread of plume - seems to merit more urgent action.

Ms. Montegross indicated that is why the Navy is keeping an eye on it and working on the investigation. Work plans are required to plan the location of the wells, which are then reviewed, and time is needed to install wells. The first round has been completed which indicated that more data points are needed. Land use controls are in place that provide protection.

#### RESTORATION ADVISORY BOARD (RAB) PUBLIC MEETING FORMER NAVAL WEAPONS INDUSTRIAL RESERVE PLANT (NWIRP) BEDFORD, MA

Regarding: Status of Navy's Continuing Cleanup Actions

The Navy will hold a virtual RAB meeting on Wednesday, October 27, 2021, from 7:00 to 9:00 p.m. The meeting is being held online due to COVID-19 social distancing safety requirements. The meeting is open to the public.

VIRTUAL MEETING INFORMATION
Wednesday, October 27, 2021, 7:00 P.M. – 9:00 P.M.
Meeting Link: https://tinyurl.com/RAB27OCT
Join by phone: 1-408-418-9388
Access code: 2630 427 3456

**Event Password: OCTRAB (628722 from phones)** 

The meeting will include a presentation specific to the ongoing environmental cleanup activities for the Environmental Restoration sites at former NWIRP Bedford consisting of Site 3 (Chlorinated Solvent Groundwater Plume), and Site 4 (Benzene, Toluene, Ethylbenzene, and Xylenes Groundwater Plume). The environmental cleanups at former NWIRP Bedford are being conducted under the federal Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), also known as "Superfund". The meeting will include a summary of the current status of the ongoing remedial actions implemented at the environmental restoration sites. Representatives from the U.S. Navy, USEPA, and MassDEP will be available to answer questions during the meeting.

Reports on environmental actions are made available to the public through the Navy's Administrative Record (AR) File for former NWIRP Bedford. The AR File contains data and documentation supporting past site decisions regarding the Navy's environmental restoration cleanup of former NWIRP Bedford. The AR File for former NWIRP Bedford is available electronically at: <a href="https://go.usa.gov/x6Ksr">https://go.usa.gov/x6Ksr</a>. For those with no internet and/or computer access, a copy of the AR File was placed in a binder (called the AR File CD Binder) that is updated yearly and is available at the Bedford Public Library (located at 7 Mudge Way, Bedford, MA 01730). For more information on the Administrative Record or about this public meeting, please contact NAVFAC Mid-Atlantic Public Affairs at (757) 341-1410/11 or email NAVFAC\_ML\_PAO@navy.mil.



### Welcome to the RAB Meeting!



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

The meeting will begin at 7:00 p.m.

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





# Restoration Advisory Board (RAB) October 27, 2021

Naval Weapons Industrial Reserve Plant (NWIRP) Bedford, Massachusetts

Maritza Montegross – NAVFAC Mid-Atlantic

#### **WEBEX TOOLS**



CC

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#### 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



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



### **Q&A Options**

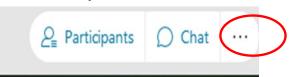


1) Raise your hand to be recognized and have your microphone unmuted.

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 will be recorded but recording will not be made public. 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.

### RAB Meeting Agenda



7:00 pm Meeting begins; Welcome

7:00 pm Introductions of NWIRP Bedford Team and RAB Purpose

7:10 pm Navy Environmental Restoration Presentation

- Site Overview, Ongoing Cleanup Actions, Land Use Controls, and Five-Year Reviews
- Groundwater Treatment and Long-Term Monitoring
- Additional Post-ROD Investigations Preliminary Assessment & Site Inspection, 1,4-dioxane Groundwater Investigation, Vapor Intrusion Evaluation, Additional Extraction Well Design and Installation
- Future Plans

8:30 pm Final comments/questions

9:00 pm End of Meeting

### NWIRP BEDFORD TEAM



- Maritza Montegross Navy RPM
  - Lisa Stone Sovereign
  - Robert Davis Tetra Tech
- Michael Daly USEPA Region 1
- Randi Augustine MassDEP
- Don Corey RAB Co-Chair
- Jacqueline Boltz WebEx Host

## RESTORATION ADVISORY BOARD PURPOSE



- A Restoration Advisory Board (RAB) is a stakeholder group that meets to discuss environmental restoration at a specific property that is either currently or was formerly owned by Department of Defense (DoD), but where DoD oversees the environmental restoration process.
- RABs enable people interested in the environmental cleanup at a specific installation to exchange information with representatives of regulatory agencies, the installation, and the community. RABs may only address issues associated with environmental restoration activities.

Source DoD RAB Rule Handbook

## RAB Membership & Contact Information



If you would like to be added to our electronic mailing list or become a RAB member please contact:

NAVFAC Mid-Atlantic Public

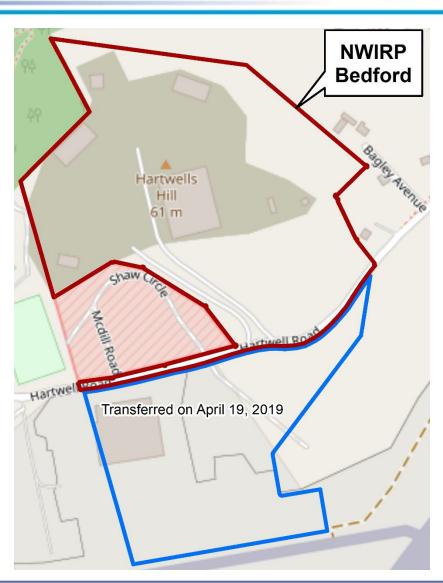
Affairs

email
 NAVFAC\_ML\_PAO@navy.mil

## Technical Presentation Topics



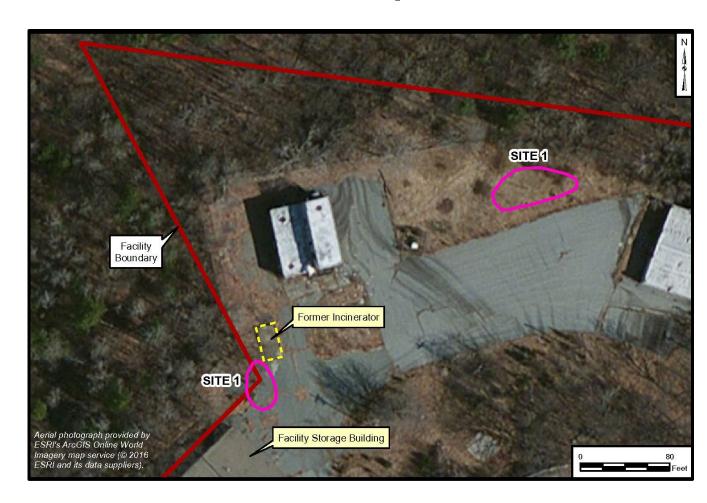
- Site Overview, Ongoing Cleanup Actions, Land Use Controls, & Five-Year Reviews
- Groundwater Treatment and Long-Term Monitoring
- Additional Post-Record of Decision (ROD) Investigations
- Future Plans
- Questions and Answers





### Site 1 - Old Incinerator Ash Disposal Area

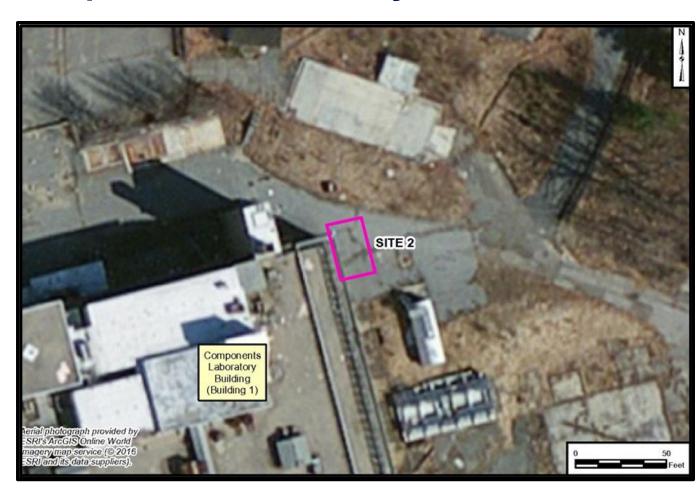
- Record of Decision (ROD) in 2000
- No Further Action





### Site 2 – Components Laboratory Fuel Tank

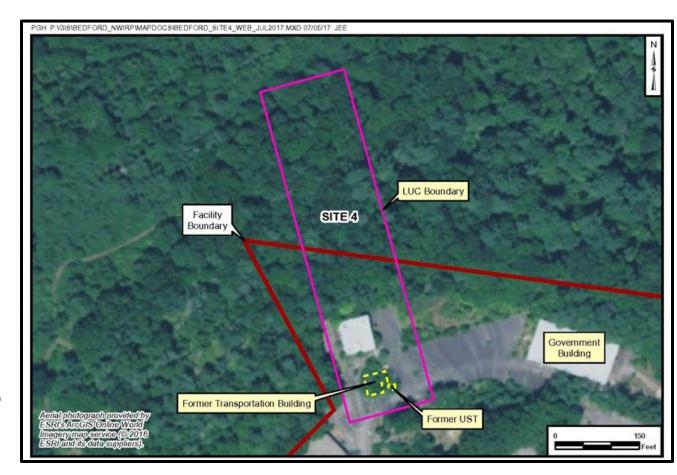
- Record of Decision (ROD) in 2000
- No Further Action





## Site 4 – Benzene, Toluene, Ethylbenzene & Xylene Plume

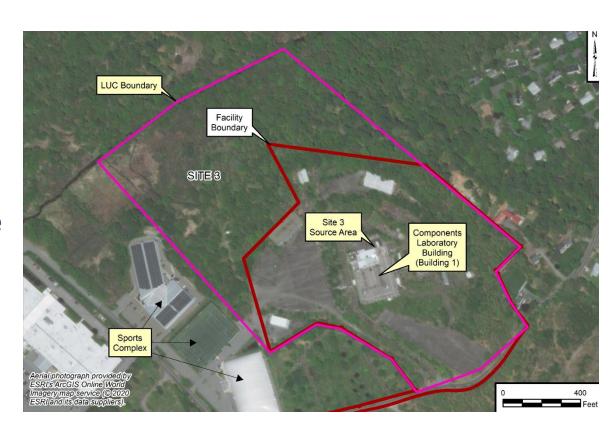
- Record of Decision (ROD) in 2009
- Monitored Natural Attenuation
- Land Use Controls
- Five-Year Reviews
- Cleanup expected in 2018 but 10 more years added





## Site 3 – Chlorinated Solvent Groundwater Northern Plume

- Record of Decision (ROD) in 2010
- Groundwater Extraction
   & Treatment (GWETS) to
   Contain Plume
- In-situ Enhanced
   Bioremediation in Source
   Area
- Semi-Annual Monitored
   Natural Attenuation
- Land Use Controls
- Five-Year Reviews
- Cleanup by 2090





### **Southern Flight Test Area (SFTA)**

- Explanation of Significant Differences in 2014
- Semi-Annual Monitored Natural Attenuation
- Land Use Controls
- Five-Year Reviews
- Cleanup by 2028
- Transferred on April 19, 2019



## LAND USE CONTROLS (LUCs)



- Applies to Site 4, SFTA, and Site 3
- Easements and deed restrictions when the property is transferred
  - Prevent Residential Development
  - Prevent Groundwater Use
  - SFTA Deed Restrictions & MA Notice of Activity and Use Limitation (NAUL) is in place
- Maintain monitoring wells and fences
- Conduct annual inspections

### **FIVE-YEAR REVIEWS**



## <u>Purpose</u>

- Review sites every five years where contaminants remain above levels for unrestricted use.
- The five-year review identifies deficiencies and recommends steps to correct them.
- Three key questions
  - Is the remedy functioning as intended?
  - Are exposure assumptions, toxicity data, cleanup levels, and remedial action objectives still valid?
  - Has any other information come to light that could call into question the protectiveness of the remedy?

## FIVE-YEAR REVIEWS (cont.)



- First Five-Year Review Completed in September 2014
  - Sites 3, 4, and SFTA were reviewed and found to be protective
  - Recommended to evaluate for potential emerging chemicals basewide
  - With LUCs in place, if emerging chemicals are present the remedy is protective
- Second Five-Year Review Completed in September 2019
  - Sites 3, 4, and SFTA were reviewed and found to be protective; however, the Site 3 remedy in the long term may not be effective and must be investigated
  - Evaluate vapor intrusion
  - Optimize the LTM monitoring network for Sites 3 and 4
  - Revise LUC Remedial Design to indicate no unacceptable risks associated with soil exposure
- Next Five-Year Review will be completed by September 2024

## Groundwater Treatment – Site 3 Groundwater Extraction System

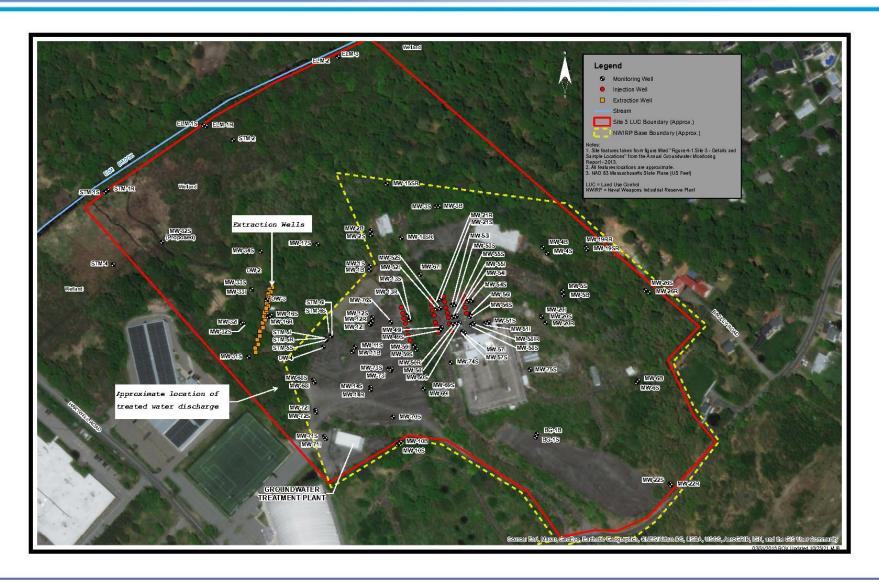


- System operation began in 1997 to contain contaminant plume.
- Pump groundwater from 23 extraction wells off-site on the western side of NWIRP through carbon at an average of 14 gpm.
- As of September 2021, approximately 171.88 pounds of VOCs removed (<1lb/month).</li>



## Groundwater Treatment – Site 3 Groundwater Extraction System





### **Groundwater Treatment – Site 3**





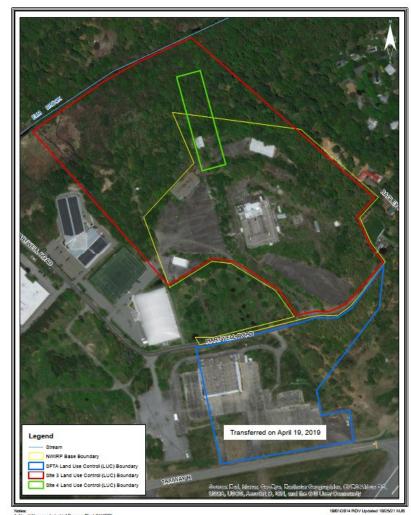
- AOP Modifications completed in August 2021.
- Hydrogen peroxide and ultraviolet light added to remove 1,4-dioxane.
- Operation and Maintenance minimum 2-3 times per week.



## Long-Term Monitoring Site 4, SFTA, and Site 3



- Annual Land Use Control Inspection (Site 4, SFTA, and Site 3) conducted 8/24/2021, report issued 10/14/2021.
- Performance groundwater monitoring events conducted annually at Site 4 and semi-annually at SFTA and Site 3.



10/01/2014 ROV Updated 10/25/21 N

## Long-Term Monitoring Site 4



- Annual Groundwater Sampling conducted 6/2/2021, report issued 7/27/2021
- Gauge and sample 7 monitoring wells for benzene



## Long-Term Monitoring SFTA



- Semi-annual Groundwater Sampling conducted
   9/20/2021, report pending
- Gauge 12 monitoring wells
- Sample 6 monitoring wells for TCE
- Sample 10 monitoring wells for PFAS
- Monitored natural attenuation parameters analysis at 5 monitoring wells



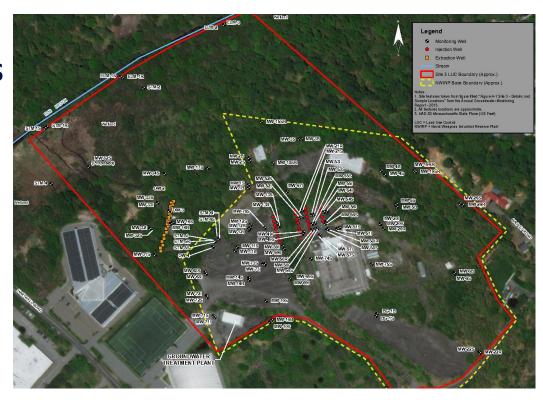
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10/20/21 MJ

## Long-Term Monitoring Site 3



- Semi-annual Groundwater Sampling conducted 9/21-9/24/2021, report pending
- Gauge 54 monitoring wells
- Sample 21 monitoring wells for TCE
- Sample 4 monitoring wells for 1,4-dioxane
- Sample 4 surface water locations for 1,4-dioxane
- Monitored natural attenuation parameters analysis at 3 monitoring wells



### ADDITIONAL POST-ROD WORK

## NAME OF

### Preliminary Assessment & Site Inspection

- Formally documents the potential or actual emerging chemicals (PFAS & 1,4-dioxane) sources at NWIRP Bedford following latest Navy guidelines
- Preliminary Assessment consisted of
  - Document searches for keywords
  - Public database searches
  - Interviews with personnel familiar with NWIRP Bedford
- Site Inspection consisted of
  - Summarizing the results of the 2014 and 2015 1,4-dioxane groundwater investigation at Site 3 and SFTA
  - Summarizing the results of the 2014 and 2015 PFAS groundwater investigation at SFTA
- Report is draft final and being revised based on regulator review comments. Final report anticipated by the end of the year

## ADDITIONAL POST-ROD WORK (cont.)





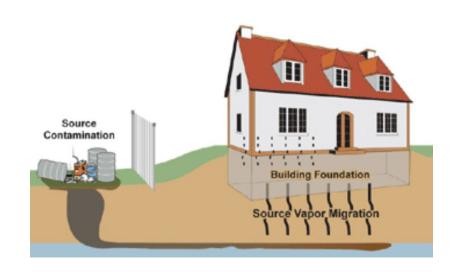
- Emerging chemical Site Inspection for 1,4-dioxane was completed in 2014 and 2015 and it was detected at Site 3.
   Additional sampling was conducted in early 2020 (1st round)
- Additional groundwater investigation currently underway to determine nature & extent of 1,4-dioxane and trichloroethene (TCE) at Site 3
- Focus of the groundwater investigation is to the north, east and south of NWIRP Bedford
- Additional groundwater monitoring wells are being installed in areas identified as data gaps by Navy, USEPA, and MassDEP.
   The wells will be sampled later this year
- Groundwater modeling is also being conducted with the well installation and laboratory data information
- Report will be prepared. Anticipated the end of 2022

### ADDITIONAL POST-ROD WORK (cont.)

### Vapor Intrusion (VI) Evaluation



- Groundwater plume of TCE a volatile organic compound
- Volatile chemicals may move from the groundwater plume into enclosed structures
- Vapor intrusion evaluation for future use of the property



- Navy Property Preliminary evaluation indicates potential VI if structures are constructed on NWIRP Bedford. These structures will require mitigation of the VI when constructed, similar to radon systems
- Off-Site Properties Navy will evaluate potential VI for structures within 100 feet of the TCE groundwater plume
- Draft report is being prepared. Final report in 2022

## ADDITIONAL POST-ROD WORK (cont.)

### Additional Extraction System

- t.)
- Design includes 28 additional extraction wells to the north of the existing extraction system to improve the capture of the 1,4-dioxane and TCE plume. These additional extraction wells will also pull-back the eastward TCE expansion
- 2 rows of additional extraction wells similar to the existing extraction wells
- Extraction wells will discharge to the existing wet well and will be pumped to the GWETS for treatment
- The GWETS is designed to treat up to 40 gallons per minute and can accommodate the new extraction wells
- 85% design is being revised based on Navy and regulator review comments. Final report anticipated in the 1st quarter of 2022. Construction expected to begin in 2022.

### **FUTURE PLANS**



- Continue to conduct annual LUC inspections and Five-Year Reviews
- Continue to sample and monitor groundwater wells for Sites 3, 4, and SFTA until cleanup goals are achieved
- Review Site 4 monitoring results and watch for cleanup goals being achieved; if cleanup is not achieved by 2023 then consider other cleanup options
- Continue operating Site 3 GWETS to contain TCE & 1,4-dioxane plumes
- Continue in-situ enhanced biodegradation injection every 5 years to augment natural attenuation of TCE in the Site 3 source area – next injection is planned in 2022 or 2023
- Site 3 additional extraction system construction was awarded in late
   2021. Construction expected to begin in 2022
- Additional cleanup technologies may need to be installed to address 1,4dioxane and TCE sources.
- An Operating Properly & Successfully/Interim Remedial Action Closeout Report for Site 3 will be issued once all remedial actions have been implemented (required for excessing the northern tract)

### **Q&A Options**

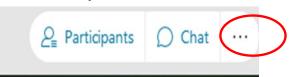


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3) **Phone-only** attendees can dial \*3 to request to have their microphone unmuted and have the opportunity to ask a question.

## Additional Questions



If you have additional questions after the RAB meeting please send them by the end of day November 5<sup>th</sup> to: NAVFAC Mid-Atlantic Public Affairs

email
 NAVFAC\_ML\_PAO@navy.mil

### Resources



## **Documents are Available**

- Bedford Public Library –
   Administrative Record CD Binder
- On-line NWIRP Bedford Public Web Site
  - https://go.usa.gov/x6Ksr
- On-line Public Administrative Record is a tab on the NWIRP Bedford Public Web Site

### THANK YOU FOR ATTENDING



## NWIRP Bedford Restoration Advisory Board October 27, 2021

Meeting notes will be available in the Administrative Record

Next meeting: To Be Determined



# Thank you for joining the Restoration Advisory Board (RAB) meeting for the Naval Weapons Industrial Reserve Plant (NWIRP) Bedford.

The meeting has concluded.