

#### Naval Research Laboratory – Chesapeake Bay Detachment Restoration Advisory Board Meeting

April 23, 2025

6:00 - 7:30 p.m.

### Introductions

Community RAB Members		
David Harris, Community Co-Chair	Vivian Cawood	Pat Durbin
Blenda Eckert	Tom Eckert	Mark Fisher
Michael Gilliam	Will Hager	Kevin Britt
Robin Harris	Larry Jaworski	Brendan Lumsden
Greg Morris	Michael Rooney	Allison York
Navy Team		
Ryan Mayer NAVFAC Remedial Project Manager Navy Co-Chair	Cait Dugan NAVFAC Washington	Anna Lesichar NRL-CBD
Linda Gustafson Maryland Department of the Environment (MDE)	Alex Nawotka MDE	
Andy Bogdanski Jacobs	Windy Campbell Jacobs	Sarah-Jane O'Brien Jacobs

### Agenda

- Welcome and Introductions
  - -Meeting Structure and Guidelines
- Site 10 On-Base RI Approach
  - -Questions and Comments
- Site 11 SI Approach
  - -Questions and Comments
- Site Status Updates
  - -Questions and Comments
- Future Meeting Planning and Adjournment

### **Review of Ground Rules**

- All remarks or questions will be made in a **courteous and respectful manner**. Profanity, angry or violent outbursts, and other types of disrespectful or rude behavior will not be tolerated.
- RAB members will talk one at a time and wait to be recognized by a Co-Chair.
- RAB members will be patient when **listening to others speak** and will not interrupt.
- RAB members will avoid dominating discussion and will be cognizant of letting others speak.
- Members will **limit side comments** and will not engage in side conversations.
- Comments and questions will be limited to agenda topics except during periods on the agenda for open discussion.
- RAB members will turn cell phones off or to vibrate and will not check messages or otherwise use cell phones during a meeting except to look something up as related to the meeting. (If needed, RAB members will excuse themselves from the room to take urgent calls.)
- RAB members will discuss any concerns about the discussions or the meeting by one-on-one with a Co-Chair.



# Site 10 On-Base Remedial Investigation Approach

April 23, 2025

### **Site 10 Remedial Investigation Approach**

- Site Background
- Geology and Hydrogeology
- SI Results Summary
- RI Objectives and Approach

### Site 10 Background

- Site 10 known as the Fire Testing Area (FTA)
- Site is located on the western side of NRL-CBD and approximately 3.4 acres
- Site is used for fire suppressant testing, including use of aqueous film-forming foam (AFFF), since 1968 resulting in release of PFAS to environmental media (soil, groundwater, surface water, sediment)



# Site 10 Geology and Hydrogeology

#### Geology

- Topography slopes to the east
- Surficial geology is composed of clayey silt, poorly-graded silty sands, and silty clays underlain by silty lean-to-fat clays

#### Hydrogeology

- Underlain by two aquifers: surficial and Piney Point
  - Calvert Formation is a lean-to-fat clay that acts as a confining layer between aquifers
- Depth to surficial groundwater ranges from approx. 5 to 37 feet below ground surface
- Surficial groundwater flow radial with components to the north-northeast and south-southeast



### **SI Results Summary**

- SI Report was finalized in 2022
- PFAS detected in soil, groundwater, surface water and sediment
  - Recommended additional data collection to define the nature and extent of release in environmental media
- TPH-DRO and TPH-GRO detected in a subset of monitoring wells near the site
  - Recommended additional data collection for fuel-related constituents (VOCs and SVOCs)

### **RI Objectives and Approach - Soil**

#### **Objectives**

- Determine the nature and lateral and vertical extents of PFAS in soil
- Evaluate potential for risks to human health and ecological receptors

#### **General Approach**

- Collect surface and subsurface soil samples from 16 co-located locations
  - Surface soil (16 total) will be collected from 0 to 6 inches below ground surface (bgs)
  - Subsurface soil (up to 32 total):
    - Depth of subsurface interval(s) is dependent upon groundwater depth:
      - If depth to groundwater is shallow (<15ft bgs) collect 1 sample
      - If depth to groundwater is deeper (>15ft bgs) collect 2 samples

### **Soil Sample Locations**



## **RI Objectives and Approach - Groundwater**

#### **Objectives**

- Determine the nature and extent of PFAS and fuel-related VOCs and SVOCs in the surficial aquifer
- Evaluate temporal PFAS trends and refine groundwater flow direction in the surficial and Piney Point aquifers
- Evaluate potential for risks to human health and ecological receptors

#### **General Approach**

- Install 9 new surficial monitoring wells
- Collect groundwater samples (total 32; 9 new and 23 existing monitoring wells) from the surficial aquifer, for PFAS
- Collect groundwater samples (total 7), from 7 existing monitoring wells in the surficial aquifer, for VOCs and SVOCs
- Collect groundwater samples (total 4), from 4 existing monitoring wells in the Piney Point aquifer, for PFAS
- Conduct slug tests at 6 locations to evaluate hydraulic conductivity in the surficial aquifer

### Groundwater Sample Locations



#### **RI Objectives and Approach – Surface Water and Sediment**

#### **Objectives**

- Determine the nature and lateral extent of PFAS in surface water and sediment
- Surface water and sediment data will be used in conjunction with the groundwater and soil data to further refine the hydrologic connection to evaluate fate & transport of PFAS
- Evaluate potential for risks to human health and ecological receptors

#### <u>General Approach – North Pond Stream</u>

 Collect 8 surface water and 4 sediment samples for PFAS in vicinity of the north pond

# **Surface Water and** Sediment Sample Locations – North **Pond Stream**



Station ID

#### Legend

- Existing Surface Water Sample Location Proposed Surface Water Sample Location
- (Existing Surface Water/Sediment Sample Location) Proposed Surface Water Sample Location
- (Existing Surface Water Sample Location)
- Proposed Co-located Surface Water/Sediment Sample Location (New Location)
- Proposed Co-located Surface Water/ Sediment Sample Location (Existing Surface Water Sample Location)

### **RI Approach – Surface Water and Sediment (cont.)**

#### **General Approach – South Pond Stream**

- For PFAS, collect 12 surface water and 9 sediment samples in the vicinity of the southern pond and stream:
  - 7 co-located surface water and sediment samples will be collected at the following existing sample locations along the South Stream and associated drainage ditch
  - 2 co-located surface water and sediment samples will be collected at the following new locations within the unnamed drainage ditch
  - 3 surface water samples will be collected at the following existing sample locations

### Surface Water and Sediment Sample Locations – South Pond Stream



# **Questions and Comments**



- Open to RAB Members for discussion of "Site 10 On-Base RI Approach" presentation
- Questions from the public should be held to the end of the meeting



# Site 11 Site Inspection Approach

April 23, 2025

### **Site 11 Site Inspection Approach**

- Site Background
- Geology and Hydrogeology
- Site Assessment Results Summary
- SI Objectives and Approach

### Site Background

- Located on the western side of facility, approx. 0.26 acres
- Site history is limited; thought to be a construction debris disposal area
- Area assumed to be filled to create flat ground for equipment storage



# Site 11 Geology and Hydrogeology

#### Geology

- Site is flat with steep slopes immediately adjacent to the west and south
- Surficial geology is composed of clayey silt, poorly-graded silty sands, and silty clays underlain by silty lean-to-fat clays

### Hydrogeology

- Groundwater encountered between 22 and 28 feet bgs, consistent with surficial aquifer
- Groundwater flow presumed to flow south and southwest following topography, with broader flow component east towards Chesapeake Bay
- Surficial aquifer underlain by Calvert confining unit

### **Site Assessment Results Summary**

- Site Assessment conducted in November 2020
  - Focused on collection of soil samples to determine if a release occurred
- Fill material (debris) was encountered in subsurface borings
  - Metal, wood, coal, asphalt
- Surface soil samples detected SVOCs, pesticides, PCBs, and metals above screening criteria
- Subsurface soil samples detected PCBs and metals above screening criteria
- Soil to groundwater screening indicated that soil could be a potential source to groundwater contamination

## **SI Objective and Approach - Soil**

#### **Objectives**

- Are site-related chemicals present in soil at levels above the project action limits?
- Does exposure to site-related chemicals pose potentially unacceptable risk to human or ecological receptors?

#### **General Approach**

- Collect surface and subsurface soil samples from 16 co-located locations
  - Surface soil (16 total) will be collected from 0 to 6 inches below ground surface
  - Subsurface soil (16 total):
    - Collected from depth interval displaying evidence of contamination
    - If no evidence of contamination found, collect sample from interval immediately below debris or immediately above the water table, whichever is encountered first
  - All samples analyzed for VOCs, SVOCs including PAHs, metals, pesticides, PCBs, and pH
    - Subset of samples (8 locations) analyzed for hexavalent chromium

### **SI Objective and Approach – Groundwater**

### **Objectives**

- Are site-related chemicals present in groundwater at levels above the project action limits?
- Does exposure to site-related chemicals pose potentially unacceptable risk to human or ecological receptors?

### **General Approach**

- Install 4 new surficial monitoring wells
- Collect groundwater samples from 4 new and 1 existing monitoring well locations
  - Collected from surficial aquifer and analyzed for VOCs, SVOCs, pesticides, PCBs, total and dissolved metals
    - A subset (3 total) will be analyzed for hexavalent chromium

### **SI Sample Locations**



# **Questions and Comments**



- Open to RAB Members for discussion of "Site 11 SI Approach" presentation
- Questions from the public should be held to the end of the meeting



### **Site Status Updates**

Andy Bogdanski - Jacobs Ryan Mayer - NAVFAC Washington

#### • UXO-001 (Hypervelocity Low-pressure Gun)

- -Decision Document pending finalization
- -Remedial Action planned for award in FY25

### • AOC D (Water Tower)

- Pre-Engineering Evaluation/Cost Analysis (EE/CA) Results Tech Memo under review
- -EE/CA Report under preparation
- -Removal Action planned for award in FY25

### • Sites 3, 4, and 5 (Landfills No. 1, 2, and 3)

 –RI Report under Navy review; anticipated for regulatory review Spring 2025

### Site Status Updates (cont.)

#### Site 10 (Fire Testing Area)

#### -Remedial Investigation

- On-Base RI SAP finalized April 2025
- Off-Base RI SAP submitted for regulatory review May 2025
- Field investigation to begin late-Spring 2025

#### -Interim Action

- Construction approvals with MDE ongoing
- Action Memorandum under revision
- Construction to start Spring 2025

#### • Site 11 (Construction Waste and Rubble West Side of Bldg. 76)

- Responding to regulatory comments on Site Inspection SAP
- Fieldwork anticipated Summer 2025

### Site Status Updates (cont.)

#### Site 12 (Former Fire House)

- Sampling and Analysis Plan submitted for regulatory review March 2025
- -Fieldwork anticipated for Summer 2025

# **Questions and Comments**



- Open to RAB Members for discussion of "Site Status Updates" presentation
- Questions from the public should be held to the end of the meeting

## **Questions and Comments**



# **Future Meeting Planning**

- Per the charter, plan to meet 2 times per year
  - -Navy proposes the next meeting for October 22, 2025
  - -Wednesday evenings, 6:00-7:30 p.m.
  - -Proposing new location, Twin Beaches Library, pending availability
- RAB agenda topics
  - If there are topics you'd like us to discuss, please communicate them to the RAB Co-Chairs:

Navy Co-Chair – Cait Dugan: caitlyn.m.dugan.civ@us.navy.mil

Community Co-Chair – David Harris: <u>davidharris2nd@gmail.com</u>

### **Websites for More Information**

About RABs, including the RAB Rule Handbook:

http://www.denix.osd.mil/rab/home/

About the Navy's Environmental Restoration Program:

http://www.navfac.navy.mil/go/erb/

About the Environmental Restoration Program at NRL-CBD:

https://go.usa.gov/xSeKn (note: case-sensitive)

More about PFAS

https://www.acq.osd.mil/eie/eer/ecc/pfas/pfas101/rsl.html

https://www.navfac.navy.mil/products\_and\_services/ev/products\_and\_services/env\_restoration/pfas\_reading\_room.html

https://mde.maryland.gov/PublicHealth/Pages/PFAS-Landing-Page.aspx

www.epa.gov/pfas

https://www.atsdr.cdc.gov/pfas/index.html

### **Overview of the CERCLA Process**



### **Conceptual Site Model**

