



NAVAL ACTIVITY PUERTO RICO

## Restoration Advisory Board Meeting #55

November 6, 2023

### Tonight's Agenda

-----Agenda -----		
Poster Session (Accomplishments, Upcoming Activities, and Status of NAPR Cleanup Program under RCRA) <i>Sesión de afiches (Logros, Próximas Actividades y Estado del Programa de Limpieza de NAPR bajo RCRA)</i>	Navy Team Equipo de la Marina	5:00 – 6:00PM
Welcome and Introductions <i>Bienvenida y Presentaciones</i>	Jamie Butler (Navy/Marina)	6:00 – 6:05PM
Per- and Polyfluoroalkyl Substances (PFAS) Investigation Update <i>Actualización de la Investigación de Sustancias Perfluoroalquiladas y Polifluoroalquiladas (PFAS)</i>	Jamie Butler (Navy/Marina)	6:05 – 6:25PM
Questions and Comments from the Public <i>Preguntas y Comentarios del Público</i>	Members of the Public/ Miembros del Público	6:25 – 6:55PM
Adjournment <i>Clausura de la Reunión</i>	Jamie Butler (Navy/Marina)	6:55 – 7:00PM

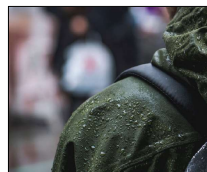
# Evaluation of Potential Per- and Polyfluoroalkyl Substances (PFAS)

*Jamie Butler*  
*Navy*

INTERNAL DELIBERATIVE - DO NOT RELEASE

## What are PFAS?

- Per- and polyfluoroalkyl substances (PFAS) are group of manufactured chemicals widely used in commercial and consumer products since the 1950s.
- Used in a variety of products:
  - Firefighting foam
  - Stain-resistant carpets and fabrics
  - Water-resistant fabrics
  - Personal care products
  - Non-stick cookware
  - Food packaging
- Found in the environment around the world (in air, water, soil, animals, plants, as well as people).



## Navy Use of PFAS

- The most common historical military use has been as a component of firefighting foam (specifically aqueous film forming foam, or AFFF).
- The Navy historically used AFFF for testing, training, firefighting, and other life-saving emergency responses.
- The Navy no longer uses AFFF for training



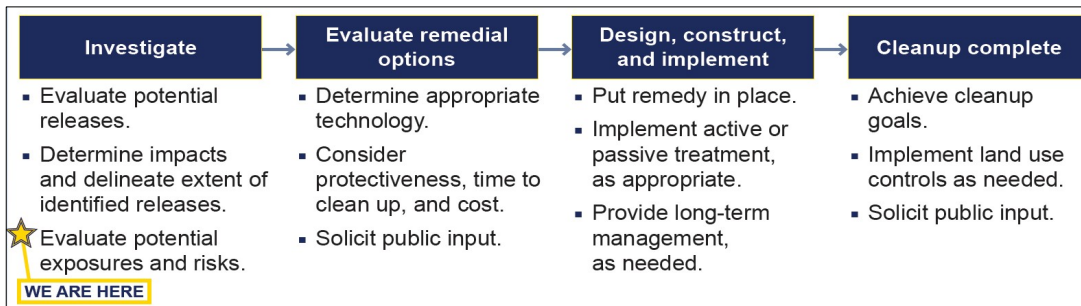
Example photos of firefighting training activities at past DoD facilities within the US (not Naval Activity Puerto Rico)

5

FES0212201002VBO

## Investigating PFAS at NAPR

- Structured regulatory process (shown below), is being used to identify and clean up past environmental releases at NAPR.
- The Puerto Rico Department of Natural and Environmental Resources and the U.S Environmental Protection Agency (EPA) are working closely with the Navy and are providing oversight at every step of the process.
- Public input is welcomed throughout the process and is formally solicited at certain points.
- From beginning to end, this process may be lengthy.

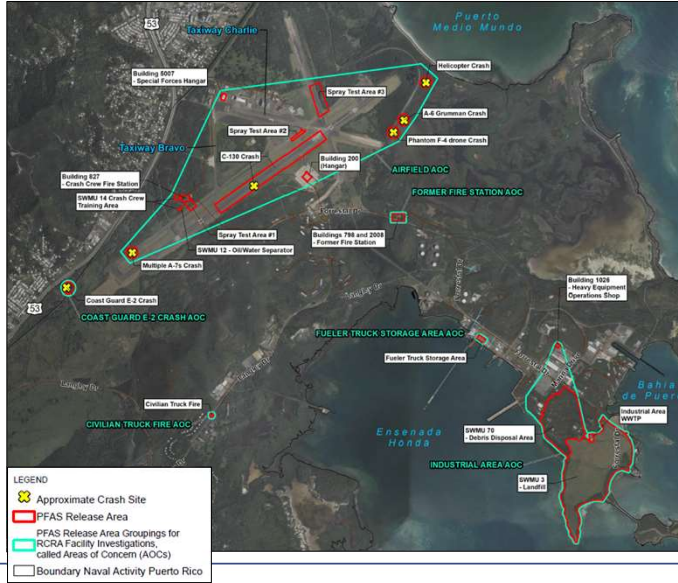


6

FES0212201002VBO

# NAPR PFAS Release Areas

- To evaluate if historical Navy operations had resulted in PFAS releases to the environment, preliminary investigations collected groundwater, soil, sediment and/or surface water samples at potential PFAS release areas, based on site history
- Based on preliminary investigations, 20 PFAS release areas have been identified on NAPR associated with Navy activities
- Types of PFAS release areas on NAPR include:
  - Runways
  - Hangars
  - Fire training areas
  - Fire stations
  - Wastewater treatment plants
  - Sludge disposal
  - Landfills
  - Emergency response areas
  - Spray test sites
  - Other chemical release areas



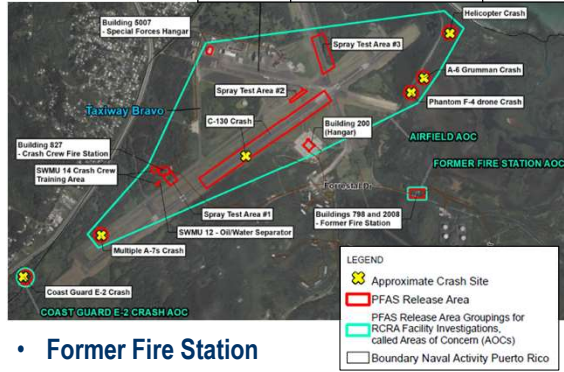
7

FES0212201002V80

# NAPR PFAS Release Areas

PFAS Screening Criteria	Groundwater and Surface Water Screening Criteria (ng/L)	Soil and Sediment Screening Criteria (ng/g)
PFOA	6	19
PFOS	4	13

- Airfield Area of Concern – 14 PFAS Release Areas**
  - 25 soil sampling locations
    - Max concentration at Crash Crew Fire Station (2,540 ng/g PFOS)
  - 5 sediment sampling locations
    - Max concentration at the SWMU 14 area (1,209 ng/g PFOS)
  - 1 surface water sampling location (co-located with a sediment sample location)
    - Max concentration 20.7 ng/L PFOS
  - 29 groundwater sampling locations
    - Max concentration at Crash Crew Fire station (2,360,000 ng/L PFOA)
- Coast Guard E-2 Crash Area of Concern – 1 PFAS Release Area**
  - 1 groundwater sampling location
    - Max concentration 15.7 ng/L PFOS



- Former Fire Station**
  - 2 soil sample locations
    - Max concentration 168 ng/g PFOS
  - 2 groundwater sample locations
    - Max concentration 30,000 ng/L PFOA

Abbreviations  
 PFOS – perfluorooctanesulfonic acid  
 PFOA - perfluorooctanoic acid  
 ng/g – nanogram per gram  
 ng/L – nanogram per liter

8

FES0212201002V80

# NAPR PFAS Release Areas

## Industrial Area AOC – 4 PFAS Release Areas

### – 4 soil sampling locations

- Max concentration at Building 1026 (43.3 ng/g PFOS)

### – 12 groundwater sampling locations

- Max concentration at Building 1026 (2,880 ng/L PFOS)

## Fueler Truck Storage Area

### – 1 soil sample location

- Max concentration 4.08 ng/g PFOS

### – 1 groundwater sample location

- Max concentration 736 ng/L PFOS

PFAS Screening Criteria	Groundwater and Surface Water Screening Criteria (ng/L)	Soil and Sediment Screening Criteria (ng/g)
PFOA	6	19
PFOS	4	13



## Civilian Truck Fire

### – 1 soil sample location

- Max concentration 0.366 ng/g PFOS

### – 1 groundwater sample location

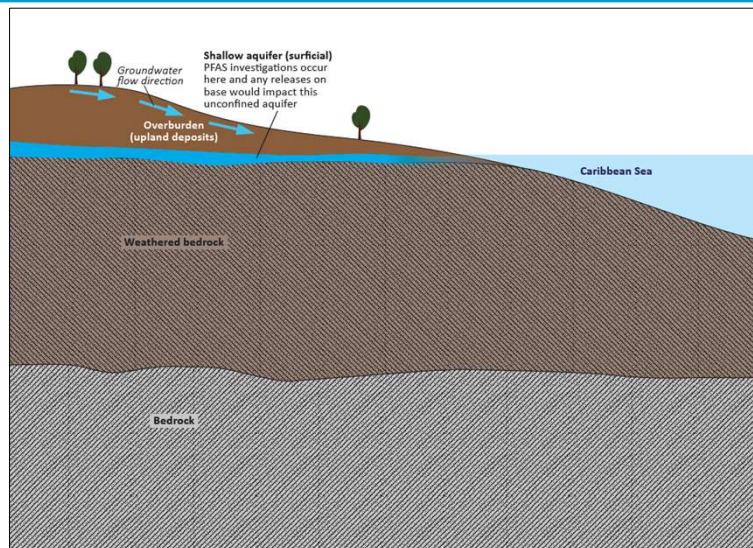
- Max concentration 21.8 ng/L PFOS

Abbreviations  
 PFOS – perfluorooctanesulfonic acid  
 PFOA - perfluorooctanoic acid  
 ng/g – nanogram per gram  
 ng/L – nanogram per liter

# NAPR PFAS Investigation Results and Conceptual Site Model

- All 20 PFAS release areas were shown to have groundwater PFAS concentrations greater than screening criteria. Soil, sediment and surface water impacts greater than screening criteria were also found at some areas.

- Each area will be evaluated further to assess the extent of impacts and to evaluate risk to human and ecological health. (Further evaluations will be conducted as RCRA Facility Investigations)



## Path Forward

---

- The RFA Report summarized the initial results and recommended path forward.
  - Finalized in September 2023
- RCRA Facility Investigations planning is in progress.



## Questions/Comments from the Public

# Thanks for your participation!

Next RAB meeting date is May 2024?

## If you are interested in:

- Becoming a Vieques Restoration Advisory Board member, or
- Receiving more information about the cleanup, join our mailing list



Talk to one of the Navy representatives available at tonight's meeting or contact them by email.

## Contact:

### Jamie Butler

BRAC Environmental Coordinator

Email o Correo Electrónico:

[jamie.c.butler.civ@us.navy.mil](mailto:jamie.c.butler.civ@us.navy.mil)

### Maria Danois

Local Site Manager

Email:

[maria.m.danois.civ@us.navy.mil](mailto:maria.m.danois.civ@us.navy.mil)

## Navy's Administrative Record



NAVFAC Search Administrative Records

From Date To Date

2464 Records Found

Filter By

Record Type

- ANALYTICAL DATA
- CORRESPONDENCE
- FACT SHEET
- GUIDANCE
- MINUTES
- OTHER
- PUBLIC NOTICE
- REPORT

Sort by Date

TRANSMITTAL LETTER FOR FINAL 2022 ANNUAL LAND USE CONTROL (LUC) STATUS REPORT FOR SOLID WASTE MANAGEMENT UNIT 79 (SWMU 79) CABRAS ISLAND NAVAL ACTIVITY PUERTO RICO Site(s): SWMU 00079	NAVFAC BRAC PMO SE 7/17/2023 CORRESPONDENCE Record#: 003368 View Document
TRANSMITTAL LETTER FOR FINAL TARGET SELECTION AND GEOPHYSICAL INVESTIGATION REPORT FOR ADDITIONAL DATA COLLECTION FOR CORRECTIVE MEASURES STUDY AT SITE UNEXPLODED ORDNANCE 1 (UO 1) SOLID WASTE MANAGEMENT UNIT 77 (SWMU 77) SMALL ARMS RANGE NAVAL ACTIVITY PUERTO RICO Site(s): UO 00001	CH2M HILL, INC. 6/29/2023 CORRESPONDENCE Record#: 003370 View Document
TECHNICAL MEMORANDUM REGARDING RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) PROGRESS	CH2M HILL, INC.

The NAPR Administrative Record contains all the public documents related to the cleanup and restoration activities.

**Get informed and share!**



NAPR Administrative Record Documents Available at:

<https://www.bracpmo.navy.mil/>

(Click on Puerto Rico in the map & follow links to Roosevelt Roads)