

Air Force Installation & Mission Support Center



AFCEC BRAC Former Pease AFB RAB Meeting

Chris King – USAF
Jack Besse – WSP
Lindsey Papa – WSP
28 March 2024



Agenda



- **Site 8 Interim Mitigation System Facility Tour** – (20 Short Street, Newington NH)
- **Technical Check** – (Consensus Building Institute)
- **Technical Presentations** - (Video recording)
 - Site 8 IMS update & well installation timeline – (WSP)
- **Welcome, Introductions, RAB Business** – (Consensus Building Institute)
- **PFAS in New Hampshire Background Soils Presentation** – (USGS)
- **Additional Presentations** – (USAF, WSP, and ECC)
- **Open Discussion Time**
- **City of Portsmouth Update**
- **Public Comments**
- **Meeting Recap and Next Steps** – Consensus Building Institute
- **Adjourn**



Site 8 IMS Status Update



■ Site 8 Interim Mitigation System (IMS) Optimization Challenges

- Iron/metals fouling continues to be the primary limiting factor for treatment capacity. Operators increasing cleaning and maintenance frequency.
- Operators' efforts have yielded steady improvements in treatment flow and operational time, but treatment flow has reached maximum system capacity with current configuration.





Site 8 IMS Status Update



Site 8 IMS Optimization Plans

■ Phase I

- Treatment resin changed from regenerative resin to single use resin on 10 April 2023.
- Single use resin is same resin used at AIMS with proven performance and has now been effectively removing PFAS at Site 8 for 1 year.
- Single use resin has allowed increased flow through the treatment process.



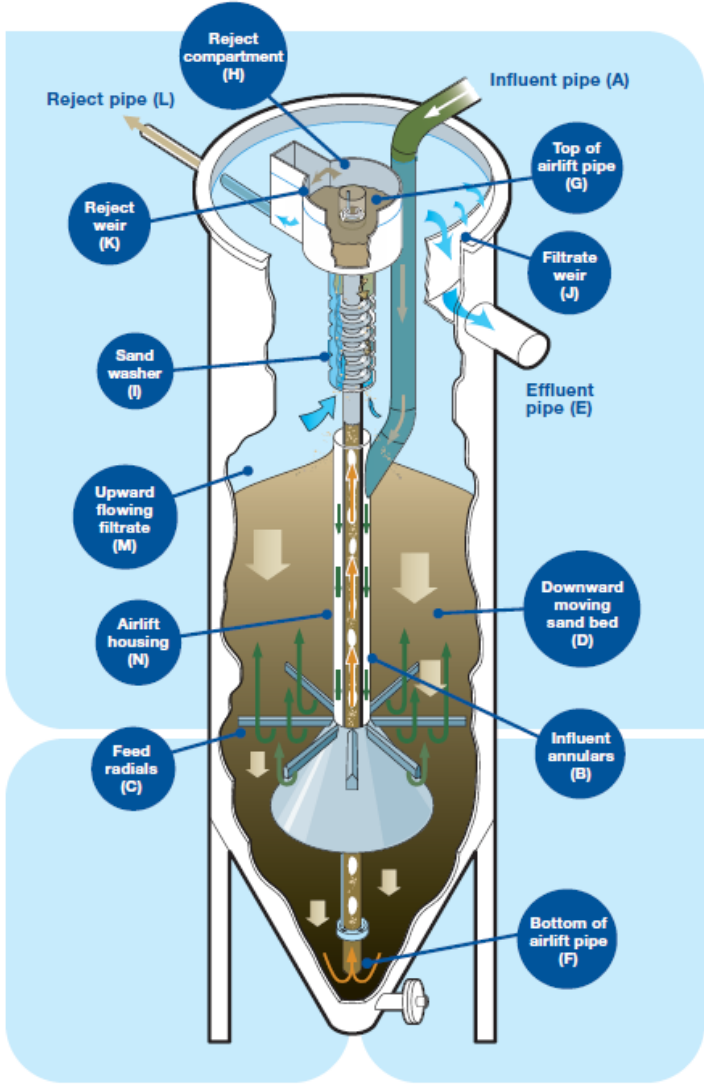
Pilot Sand Filter Rationale

Goal

- Increase solids removal of the pretreatment system
- Increase system operational time and resilience.

Design

- Up-flow single media sand filter with continuous backwash



Implementation

- Integrated as a pilot after the Lamella clarifier and before the 10-micron bag filters

Testing

- Concentration of iron, manganese and turbidity tested at the influent, effluent and backwash flow of the filter
- Filter capabilities being tested under several clarifier/pretreatment conditions



Pilot Sand Filter Testing

Testing To-Date

- Began testing with a course 1.7mm filter media, ran tests at effective flows between 2-4 gallons per minute/square foot
- Testing showed promising removals of low levels of total suspended solids (TSS) [0-5 nephelometric turbidity units (NTUs)], but became overwhelmed at higher levels.
 - Future testing will likely be limited to lower TSS levels as a result
- Lab data shows limited metals removal when clarifier is operating nominally
- Progressing to testing with fine 0.9mm filter media

Filter operating nominally



Filter operating ineffectively



Site 8 IMS Optimization Plans

■ Phase II – Future Work

- Removal of resin regeneration and distillation equipment.
- Installation of additional influent solids pre-treatment systems such as:
 - Sand filtration (pending pilot test results)
 - Larger sludge press
 - Addition of a second liquid GAC vessel
 - Upsizing of process tanks





Well Installation Timeline



- Develop a Work Plan
- Establish property access
- Mark out locations and perform utility clearance (November 2023)
- Drill boreholes for the well (November/December 2023 and January 2024)
- Install overburden and fractured bedrock wells (November/December 2023 and January 2024)



Right: A drill rig sets up to drill a borehole.

Left: Soil that has been removed from a borehole that is being drilled.



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Well Installation Timeline



- Develop wells and boreholes (December 2023 and January 2024)
- Overburden and fractured bedrock well sampling (February 2024)
- Borehole geophysics (April 2024)
- Packer sampling (April 2024)
- Deep bedrock well installation (fall 2024)
- Deep bedrock well sampling (fall 2024)
- Site restoration as needed



Left: A completed stick-up well.



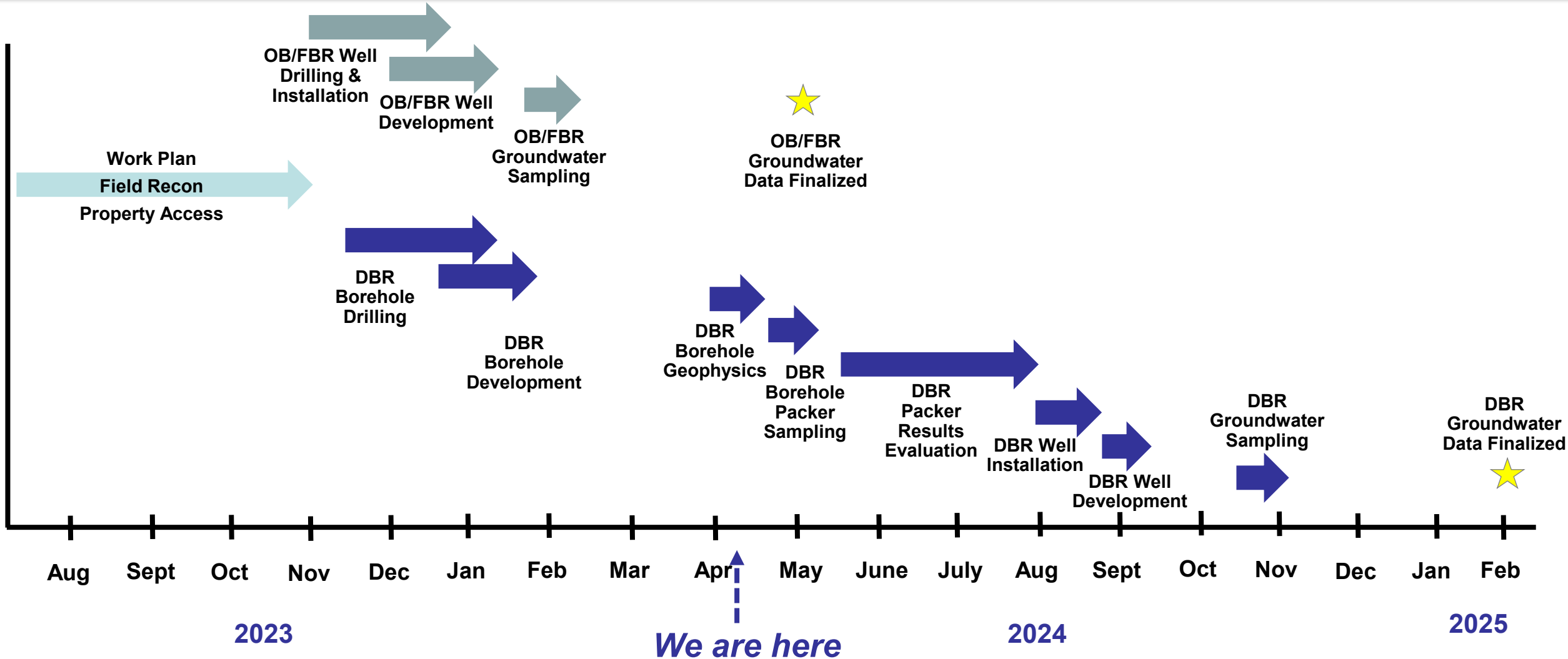
Right: A completed flushmount well.



Top: A packer sampling set up.



Well Installation Timeline





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AFCEC BRAC Former Pease AFB RAB Meeting

Chris King – USAF
Haley Plante – WSP
ECC
USGS
City of Portsmouth
09 April 2024



Agenda



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Data Sharing Update



- **DES has asked the Air Force to request private property drinking water well owners to share their data**
- **Since the last RAB Meeting in November 2023, the Air Force has sent new agreements to private well owners to request consent to share data from their wells:**
 - **37 from properties that required entirely new access agreements**
 - **18 from properties only needing a letter authorizing data sharing**
 - **1 from a new properties that changed ownership**
- **To date, 15 have been returned, all providing consent**



RAB Questions: Interim Remedial Actions: 1



- **The "Interim" term is generally defined as: a temporary or provisional arrangement; stopgap; makeshift. How long would you expect the Pease PFAS cleanup or process to be considered interim?**
 - **A1: Under CERCLA, interim actions are those taken as needed to reduce any imminent risks to human health or the environment, while long-term field investigations are being conducted or until a final remedy is selected**
 - **A2: A final remedy will be chosen in a record of decision. Some or all of the interim actions may become part of the final remedy. If an interim remedy is not part of the final remedy, it will be terminated.**

- **In this case, is the Interim status a DOD or EPA/Superfund term?**
 - **A: It is a CERCLA term**



RAB Questions: Interim Remedial Actions: 2



- **What triggers a move from Interim status? Who makes the decision to move the project status? DOD by themselves, or in concert with the regulatory agencies?**
 - **A: After the RI stage of CERCLA, a feasibility study analyzes alternatives for a final remedial action. DAF then publishes a proposed plan to solicit public input on its preferred alternative. After the public comment period, DoD evaluates public inputs and issues a record of decision (ROD), which includes DAF's responses to significant public comments. The regulatory agencies are involved in each stage of the CERCLA process, but DAF chooses the remedies.**

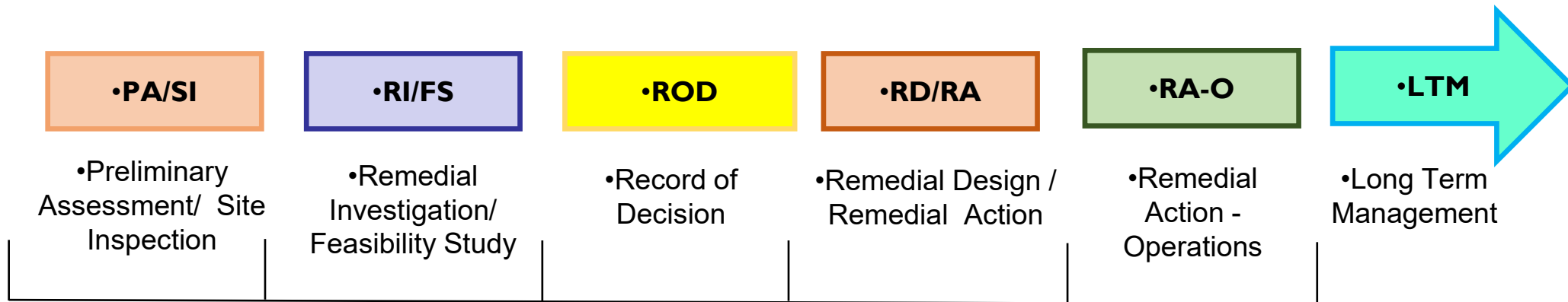
- **Does an Interim designation provide for additional funding?**
 - **A: No. Funding for interim actions is received as needed to eliminate any imminent risks to human health or the environment until a ROD**



RAB Questions: Interim Remedial Actions: 3



- If the Pease PFAS cleanup is moved from an interim status to the next status level, how does that affect the cleanup effort, schedule and budget?
 - A: After the ROD, the cleanup effort will shift to implementation of the selected remedy(ies) until site closeout.





Informational Technical Information Report (ITIR)

- Under CERCLA, there is one Remedial Investigation (RI) Report, which is not due until 2026
- Presents a summary of RI activities and results from November 2020 through May 2023 with a conceptual site model (CSM) update
- Includes 68 Figures and 12 Tables
- Data is presented using the same framework as has been used previously (i.e. source area and groundwater flow fields)

COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, & LIABILITY ACT
REMEDIAL INVESTIGATION INFORMAL TECHNICAL INFORMATION REPORT

PER- AND POLYFLUOROALKYL SUBSTANCES RESPONSE
FORMER PEASE AIR FORCE BASE
PORTSMOUTH, NEW HAMPSHIRE

Prepared for:
Air Force Civil Engineer Center
Joint Base San Antonio – Lackland, Texas



Prepared by:



WSP USA Environment & Infrastructure Inc.

Contract FA8903-16-D-0027

Task Order FA8903-20-F-1091

August 2023



Guide to the ITIR



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Guide to the ITIR



Mobilization	Source Areas/Investigation Areas (Figure 2)
CSM Refresh	<ul style="list-style-type: none"> Groundwater: <ul style="list-style-type: none"> Basewide
RI Work Plan	<ul style="list-style-type: none"> Groundwater: <ul style="list-style-type: none"> Basewide Newington Transfer Station Newington Fire Station Zone 2 Landfill 5 Landfill 6 Soil: <ul style="list-style-type: none"> FTA-2

Source Areas/Investigation Areas	Figures	Tables
Groundwater		
Basewide	Figure 20 Figure 21 Figure 15 Figure 16	Table 2 Table 3 Table 4
Newington Fire Station	Figure 22 Figure 23	Table 2 Table 4
Newington Transfer Station	Figure 24 Figure 25	Table 2
Landfill 5	Figure 26 Figure 27	
FTA-2	Figure 28 Figure 29	
Fire Department Equipment Testing Area	Figure 30 Figure 31	
Firing Range	Figure 32	



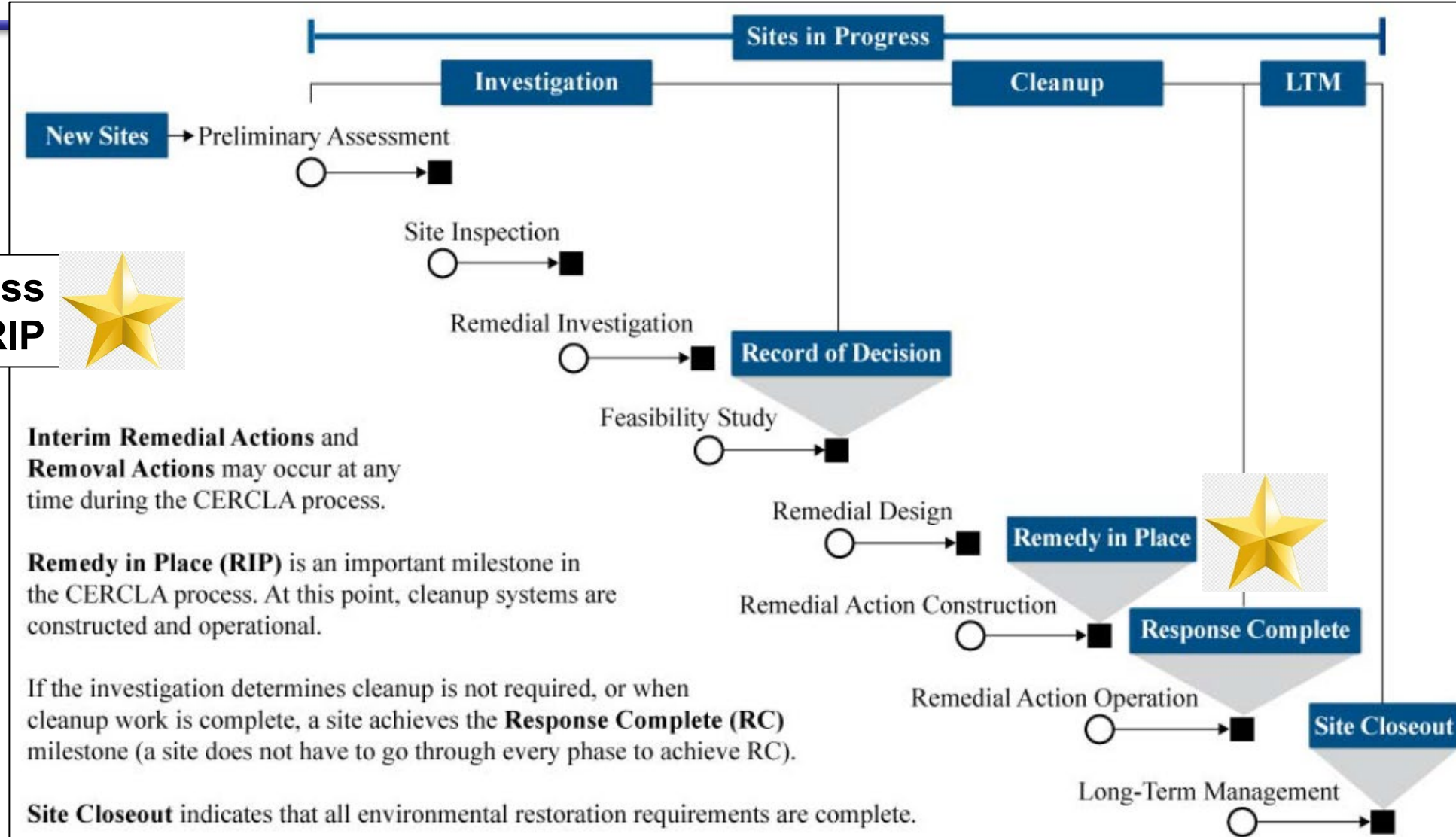


Environmental Chemical Corporation (ECC)

- ECC began working with the Air Force (AF) at Pease in September 2020 – contract continues through 2030
- Work on sites with decision documents/Records of Decision (RODs) and remedies in place
- Remaining contamination being addressed under these decision documents/RODs includes:
 - Petroleum-based – jet fuel, gasoline, oils - non-CERCLA sites
 - Other - Chlorinated solvents (cleaners, degreasers); metals; polychlorinated biphenyls (PCBs); mixed (landfills); etc. - CERCLA sites
- Currently preparing the Sixth CERCLA Five-Year Review Report (6th FYR) – includes CERCLA sites
- CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act, also known as Superfund



CERCLA Process



FYR process starts after RIP



Interim Remedial Actions and Removal Actions may occur at any time during the CERCLA process.

Remedy in Place (RIP) is an important milestone in the CERCLA process. At this point, cleanup systems are constructed and operational.

If the investigation determines cleanup is not required, or when cleanup work is complete, a site achieves the Response Complete (RC) milestone (a site does not have to go through every phase to achieve RC).

Site Closeout indicates that all environmental restoration requirements are complete.

○ Start ■ Milestone ■ Complete



What is a Five-Year Review (FYR)?



- Section 121 of CERCLA requires that remedial actions which result in any hazardous substances, pollutants, or contaminants remaining at the site be subject to a five-year review. The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) further provides that remedial actions which result in any hazardous substances, pollutants, or contaminants remaining at the site above levels that allow for unlimited use and unrestricted exposure (UU/UE) be reviewed every five years to ensure protection of human health and the environment.
- These sites have remedies in place to protect human health and the environment, including Land Use Controls (LUCs).
- The AF evaluates the implementation and performance of the remedy at each site to determine if the remedy continues to meet the requirements specified in the decision document, and remains protective of human health and the environment.
- The 5-year review includes an interview process wherein members of the public familiar with the cleanup program are interviewed regarding their knowledge of the cleanup process.
- Reports, work plans, and other information pertaining to each site or zone can be found at the on-site administrative record (Site 8), the online Air Force AR, or the NHDES OneStop site.

Source: DoDM 4715.20, March 9, 2012



What is a Five-Year Review (FYR)?



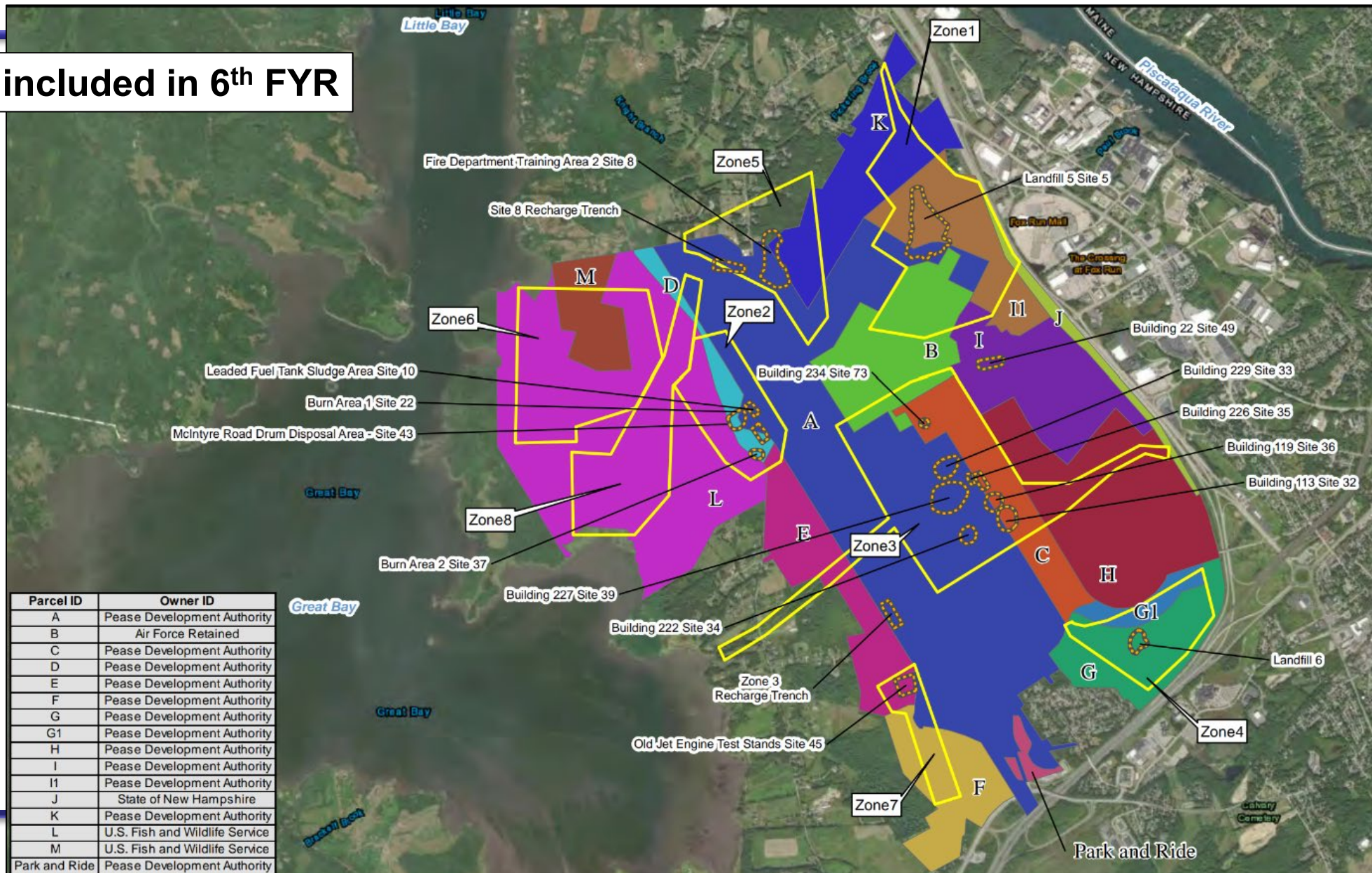
Three primary questions are considered as part of a FYR for each remedy being reviewed:

- QUESTION A: Is the remedy functioning as intended by the decision documents?
- QUESTION B: Are the exposure assumptions, toxicity data, cleanup levels, and remedial action objectives (RAOs) used at the time of the remedy selection still valid?
- QUESTION C: Has any other information come to light that could call into question the protectiveness of the remedy?



6th CERCLA FYR Site Map

20 Sites included in 6th FYR





5-Year Review Interview Process



The 5-year review includes an interview process wherein members of the public familiar with the cleanup program are interviewed regarding their knowledge of the cleanup process.

■ General Questions

- Are you familiar with the environmental cleanup program at the former Pease Air Force Base?
- Do you know about the environmental use restrictions on the property transferred from the Air Force to Pease Development Authority?
- Do you have any concerns with implementation of the land use controls?

■ Specific Questions

- Are you aware of any use or extraction of groundwater, other than as part of an investigation or remedial activities conducted by the U.S. Air Force or its contractors?
- Are you aware of any injection of water into the ground or application of surface water to the ground that could cause migration of contaminated groundwater in these areas?
- Are you aware of any changes to areas that have use restrictions for residential purposes, childcare centers, playgrounds, athletic fields, or elementary or secondary schools?
- Has any digging, excavation, or construction been conducted in these areas without the approval of USEPA, NHDES, and the U.S. Air Force, other than as part of investigative or remedial activities conducted by the U.S. Air Force or its contractors?
- Has there been any change in use of Buildings restricted by Deeds from the Air Force (ex. occupancy)?



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