



## **Pease Restoration Advisory Board (RAB) Meeting**

Wednesday, December 11, 2024 – 5:00-8:00 p.m.

In person meeting with virtual option

### **Meeting Summary**

#### **Meeting in Brief**

This RAB meeting focused on updates related to the ecological sampling for risk assessment, improvements to treatment facilities, and treatment plans for private wells that exceed new PFAS Maximum Contaminant Levels (MCLs). The meeting also included a presentation on emerging PFAS treatment technologies. The meeting had virtual and in-person options, with most RAB members and members of the public attending in person. Thirteen RAB members, including those representing the EPA and Air Force, attended in person. The meeting closed with public comment. The next RAB meeting date has not yet been scheduled.

**Meeting materials:** Presentation slides and meeting materials can be found at:

<https://www.afcec.af.mil/Home/BRAC/Pease-Archives/>

**Video:** A recording of the meeting can be found at:

<https://www.youtube.com/watch?v=BHALkcKXLvU>

#### **Update on Ecological Sampling for Risk Assessment**

Tony Rodolakis (WSP) provided an update on the Ecological Sampling for Risk Assessment. This assessment builds on the 2022 assessment and technical memorandum that identified PFOS as the primary risk driver at Pease. Current work focuses on PFAS movement through the food chain. Using data collected since 2015, researchers have mapped out areas of concern and identified zones where PFAS concentrations have dropped to safe levels. A field study in fall 2023 collected tissue samples from plants, invertebrates, and small animals to develop site-specific food chain models. The study screens for 9 compounds of concern. Results will inform a Tier II Baseline Ecological Risk Assessment (BERA), incorporating recent Argonne Laboratory and EPA screening values. While preliminary review suggests these new values won't significantly change previous findings, a full analysis is underway to confirm this conclusion.

**RAB members asked several clarifying questions, which are summarized below:**

**Q:** Why focus on only 9 of 40 tested PFAS compounds?

**A:** Currently, screening values exist for 9 of the 40 PFAS compounds being analyzed as part of the RI. The remaining compounds without screening values appear very rarely (approximately 1 in 600 samples)

**Q:** Why focus on lower food chain organisms rather than larger mammals?

**A:** The study focuses on ingestion rates rather than bioaccumulation following EPA guidance and existing reference values. Larger wildlife also face more regulatory restrictions for testing.

**Q:** What mechanisms influence PFAS concentration and uptake?

**A:** Scientific uncertainty exists about specific mechanisms. The study measures effects rather than mechanisms, noting that typical factors like organic carbon may not affect PFAS movement.

**Q:** What are the next steps and opportunities for input on the work plan?

**A:** The community will see the final BERA work plan but cannot provide prior input. Skeo is welcome to review the Technical Memorandum regarding the new screening levels' impact. WSP noted that new screening levels from Argonne Lab do not substantially change previous findings. PFOS remains the primary concern, with PFHXS showing reduced toxicity concerns.

## Update on Plants

Tom Gerhardt (WSP) provided updates on Pease Treatment Systems. AIMS is operating at ~325 gpm and Site 8 is operating between ~35 gpm and ~45 gpm. The water processing ability at Site 8 continues to be limited by iron and manganese solids. Upgrades are currently underway for Site 8 to increase solids removal and sludge handling capabilities. These upgrades are planned for Spring 2025 and include upsizing the clarifier and sludge filter, and installing a post-clarifier sand filter. At AIMS, WSP is in the process of installing a new injection field which will allow for more water to be processed during wet weather events.

RAB members requested to see regular (i.e. monthly or quarterly) updates on the performance of AIMS and Site 8, with comparisons across time. In these updates, RAB members noted that it would be helpful to be presented with consistent metrics from one report to the next.

### **RAB members asked several clarifying questions, which are summarized below:**

**Q:** Is the particulate formation of manganese and iron purely a chemical process or is bacteria involved?

**A:** We don't have problems with bacteria. The iron drops with a chemical addition.

**Q:** WSP mentioned expanding the concrete pads. Does this mean that the building will be increasing in size, too?

**A:** No, the footprint of the building will stay the same.

**Q:** Do the solids, with the Iron and Manganese, also go to the landfill?

**A:** Yes.

## Administrative Record and NHDES One Stop

Lauren Hoagland (WSP) provided an orientation to the Air Force Administrative Record (<https://ar.cce.af.mil/>) and the New Hampshire Department of Environmental Services OneStop

Database (<https://www4.des.state.nh.us/DESONestop/BasicSearch.aspx>). Both websites hold a repository of final documents related to the treatment plant, remedial investigation, and other documentation from consultants. The Onestop database is organized by site numbers. The NHDES site number for Pease is 198404025, the PFAS Project number is 34346. Entering these numbers into the basic search (link above) will access PFAS-related Pease submittals to NHDES. The Air Force Administrative Record (<https://ar.cce.af.mil/Search>) is filterable by Pease and keywords.

RAB members requested a handout which provides instructions for how to navigate these websites. This would be particularly helpful for the orientation of new RAB members.

## Updates on Non-USAF PFAS Releases

Chris King (Air Force) conducted interviews with NH Air National Guard (ANG), Pease Development Authority (PDA) and the Portsmouth and Newington Fire Chiefs to confirm if there has been any PFAS releases since 2015. These interviews confirmed that there have not been releases of PFAS since 2015. ANG and PDA confirmed that PFAS foam fire suppression systems are no longer in operation. There has been no deployment of foam fire suppression systems since 2015. The Portsmouth and Newington Fire Departments are not using Aqueous Film Forming Foam (AFFF).

### **RAB members asked several clarifying questions, which are summarized below:**

**Q:** Brunswick, Maine had a significant release of AFFF in August. This caused concern amongst community members in Portsmouth that a similar event could happen here. What makes Portsmouth different from Brunswick?

**A:** In Brunswick, one of the hangers had legacy foam that was released. At Pease, there is no longer legacy foam. Pease has moved towards a fluorine-free foam.

**Q:** In the instance of a spill of fluorine-free foam, do the same testing and clean up procedures still apply? Would a spill of fluorine-free foam still need to be reported?

**A:** The same precautions would still be taken. Notification to NHDES is required for uses and releases of Class B foam. *Meeting participants were not sure if newly developed fluorine-free foam will require the same notification. New Hampshire DES indicated they would look into this matter.*

**Q:** Is there a good understanding of the human health and environmental impacts of the foam options that are replacing AFFF?

**A:** There's not a clear answer to this. Many fire departments, including Portsmouth, are limiting the use of any type of foam, partly because of this uncertainty.

**Q:** Are there any fire suppression systems on the trade port that are not part of the Air National Guard or the Fire Departments?

**A:** There are three hangars that have fire suppression systems with high expansion, fluorine-free foam.

## Status of PFAS Treatment Technologies

Kent Glover (Air Force) gave a presentation on the status of PFAS treatment technologies. Most market-ready technologies are separation technologies, such as carbon filtration or ion exchange. Effective remediation of PFAS requires connecting several different treatments, with the goal of minimizing undesirable endpoints (e.g. leaving PFAS waste in landfills). Innovative destruction and degradation technologies are an emerging category of treatment, but they are incredibly energy intensive with varying levels of success. The Air Force is making substantial investments in research and trials of these technologies.

### **RAB members asked several clarifying questions, which are summarized below**

**Q:** When destruction technologies break the carbon-fluorine bond, is there a worry about this bond recombining at some point?

**A:** Yes this is a concern. The goal is to mineralize it and isolate the fluorine. By-products such as acids are also a concern. These concerns are central to current research. It will likely be at least a few years before destruction technologies are consistently effective.

**Q:** How does the Department of Defense verify the effectiveness of the technology?

**A:** DoD is not doing independent testing of technologies developed by vendors. DoD requires vendors to do their own quality assurance of technologies that are being presented for use.

**Q:** Why has there been no funding from Congress in FY24 for research?

**A:** Funding for remedial investigation is consistently prioritized over research advancement.

## Private Drinking Water Wells

In September of this year, the Department of Defense (DoD) issued a memo regarding implementation of EPA's drinking water maximum contaminant levels (MCLs) for PFAS. The memo prioritizes treatment for wells with PFAS levels 3 times above MCLs. Andrea Amico worked with other community members to send a letter to Assistant Undersecretary Brenden Owens to ask for further clarification on the memo, including a public engagement session. This session was held on November 19th, with over 500 people in attendance. Ms. Amico reported on this session, noting a strong community push for DoD to implement treatment on all wells. At Pease, there are 21 private wells exceeding EPA MCLs, with 5 wells at or above the 3x threshold. The Air Force received funding to address these 5 priority wells this fiscal year, with plans to connect them to municipal water where possible. The Air Force is awaiting a contract vehicle expected in January to begin work. For the Portsmouth public water system, the Harrison Smith Wells are at MCL levels, and the city needs to initiate legal processes with the Air Force to address treatment.

### **RAB members asked several clarifying questions, which are summarized below:**

**Q:** When will all 21 well owners be notified that their levels exceed EPA standards?

**A:** The Air Force will notify all well owners whose levels exceed EPA standards. Exact timing for this communication has not been specified.

**Q:** What messaging will be provided to the 16 well owners not prioritized for immediate treatment?

**A:** The Air Force acknowledged this is a challenging communication issue and agreed to form a small working group to develop appropriate messaging.

**Q:** Can private well owners install their own treatment and get reimbursed?

**A:** No, if homeowners act independently without Air Force agreement, they cannot get reimbursed. However, NH DES has a \$5,000 rebate program for private well treatment.

**Q:** Will there be delays in Portsmouth getting treatment systems installed by the 2029 deadline?

**A:** The Air Force doesn't anticipate delays. The Air Force has established an Environmental Services Cooperative Agreement (ESCA) with the City of Portsmouth that streamlines the process of installing treatment systems by allowing for quick authorization and reimbursement. This should allow for the City of Portsmouth to complete the installation of treatment systems by 2029.

Andrea Amico also provided updates on the University of New Hampshire's foam sampling project in Great Bay and local waterways. Two sampling events have occurred so far, and samples have been sent for analysis. Results are pending.

## Municipal Water Update

The Pease water treatment plant is treating 540 gallons per minute and achieving non-detect levels for regulated PFAS compounds.

## Public Comments

**There was one public comment and response, summarized below.**

**Q:** Why didn't the 2024 Five Year Review mention the 21 wells above MCLs?

**A:** The Five-Year Review had a data cutoff date of April 2024, and only deals with responses to currently implemented measures. The updates to the MCLs were instituted after this cutoff date.

## Final Thoughts

Toby Berkman (CBI) summarized the action items emerging from the meeting. These action items include:

- **USAF:** In its updates to the RAB, USAF will begin sharing month-to-month or quarterly data on Site 8 performance over time, using consistent metrics/language
- **USAF:** Develop brief handout with instructions for accessing the AR and NHDES one-stop, for inclusion in RAB orientation/welcome packet
- **NHDES:** Clarify if fluorine-free firefighting foam usage or spills still require notification to NHDES.

- **USAF:** Convene small group meeting with RAB members on messaging to homeowners with well water exceeding MCLs who will not qualify for near-term USAF remediation support
- **EPA:** Provide RAB with links to the Great Lakes presentation
- **WSP:** Develop and share additional information on how feedback on the ITIR from the August 2024 RAB has been considered/addressed, per questions received during the 11 Dec RAB
- **CBI:** Consider questions on meeting summary format and/or enable future discussion on the issue
- **RAB members:** Email Chris King (USAF) if they are interested in being interviewed for the updated Community Involvement Plan (CIP)

## Meeting Attendees

**RAB Members Present:** Andrea Amico (community member and co-chair), Sam Beam (community member), Bradford Connolly (community member), Mike Daly (appointed member: US EPA), Michael Donahue (community member), Keith Girouard (appointed member: NH Air National Guard), Ben Johnson (community member), Christopher King (appointed member: Air Force Civil Engineer Center, DoD Chair), Mark Mattson (community member), William McQuillan (community member), Tim Green (standing in for Al Pratt, appointed member: City of Portsmouth Public Works), Paul Roy (community member), Peter Sandin (appointed member: NHDES).

**Meeting Support Staff Present:** Toby Berkman (Consensus Building Institute, RAB Meeting Facilitator), Anika Reynar (Consensus Building Institute Support), Dante Gulle (Ageiss) Hank Andolsek (WSP), Thomas Gerhard (WSP), Lauren Hoagland (WSP), Haley Plante (WSP), Tony Rodolakis (WSP), Brandon Shaw (WSP), Grant Austin (WSP).

**Others Staff Present via Zoom:** Karmen King (Skeo), Claire Marcussen (Skeo), Brian Younkin (Skeo), David Harris (Ageiss), Amy Quintin (WSP).