

**Former Pease Air Force Base (Pease)
Restoration Advisory Board (RAB) Meeting
Wednesday, 26 June 2019 – 6:00-9:30 p.m.**

New Hampshire Department of Environmental Services Building
222 International Drive, Suite 175, Portsmouth, New Hampshire

Meeting Summary

RAB members present: Andrea Amico (community member), Susan Chamberlin (community member), Ted Connors (community member), Mike Daly (appointed member: USEPA), Peggy Lamson (community member), Dennis Malloy (community member), Mark Mattson (community member), Kim McNamara (appointed member: City of Portsmouth), Mindi Messmer (community member), Jameson Paine (community member and Community Co-Chair), Lulu Pickering (community member), Col. John Pogorek (appointed member: ANG), Al Pratt (in for Brian Goetz, appointed member: City of Portsmouth), Peter Sandin (appointed member: NHDES), Gene Schrager (community member), Maria Stowell (appointed member: Pease Redevelopment Authority), Roger Walton (appointed member: AFCEC, DoD Chair).

Meeting support staff present: Ona Ferguson (Consensus Building Institute, RAB Facilitator), Linda Geissinger, Dante Gulle (AFCEC, Public Affairs), Rob Singer (Wood), Lauren Tierney (Wood).

Others attending: Karen Anderson (community), James Belanger (community), Doris Brock (community), Matt Brock (community), Patrick Carroll (Rep. Pappas' office), Peter Clark (Sen. Shaheen's office), Mike Donahue (community), Kelsey Dumville (USEPA), Nancy Ester (community), Kyle Hay (City of Portsmouth), Kerry Holmes (Sen Hassan Office), Margaret McCarthy (City of Portsmouth), Ann McCurry (community), Robin Mongeon (NHDES), Melissa Paly (Conservation Law Foundation), Mike Quinlin (APTIM), Jared Sheehan (PDA).

Next meeting: September 18, 2019 at Great Bay Community College.

Action items: See spreadsheet.

Video: The video recording of this meetings is available on the City of Portsmouth You Tube channel <https://www.youtube.com/user/CityofPortsmouth>

Welcome, Introductions, RAB Business – Ona Ferguson (Consensus Building Institute)

- Welcome from Roger Walton. Roger Walton handed out CDs to each RAB member containing data including laboratory summaries from:
 - 2017 Supplemental Remedial Design Investigation groundwater data;
 - Private Well sampling data with sample IDs redacted; 2018 Sentry Well Monitoring groundwater data;
 - Site 8 Performance Monitoring groundwater data from the Startup, Optimization & Monitoring Report;
 - Inspection (ESI, formerly Supplemental Site Inspection report) surface water, sediment, groundwater, estuarine sediment, estuarine surface water, and shellfish tissue data (report document still under review).

This is public data that can be shared by RAB members with the community. The ESI report is in draft stage being reviewed by the regulators, and once the report is final it will become public. Roger Walton offered to arrange a meeting on the ESI report to provide RAB members a detailed walk through of the report.

- Ona Ferguson reviewed new practices implemented during this RAB
 - Video recording the meetings thanks to city support
 - Starting at 6:00 instead of 6:30
 - Working towards a Quarterly Schedule, the next RAB will be held on 19 September 2019
 - Methodical action item tracking
 - Updates from Roger to the RAB in non-RAB months on restoration activities
- The RAB approved the summary from the March 2019 RAB Meeting.
- Lulu Pickering requests that action item tracking be converted to a word document for easier readability. Ona agreed to discuss with Lulu offline the best format.
- Linda Geissinger (AFCEC Public Affairs) reminded the group about the purpose of the RAB and operating procedures. The goals of the RAB and operating procedures are outlined in the DoD RAB Rule Handbook
 - Purpose – community involvement in the **restoration** at Pease
 - Focus – facilitate decision making in **restoration** process
 - General discussion about open seats on the RAB board. The RAB is accepting applications through the end of 2019 and will be making decisions in early 2020. RAB members how many seats are available (3 community seats available) and how a community can start a RAB. Roger and Linda described the DOD RAB Handbook and its chapter on how to form a RAB and the conditions required. They will share the handbook with the RAB.

Open Discussion

- Peggy Lamson asked about the status of an action item from the March RAB to convey data collected on private property during the 2018 ESI to the property owners. Roger Walton's responded that the action item was open awaiting Peggy's identification of the specific property owner.
- Kim McNamara asked about the Air National Guard's plans to prevent additional environmental impacts from firefighting foam, specifically plans to replace similar PFAS compounds in the foam or if a mechanism to contain the foam after it is discharged would be possible. Mindi Messmer inquired if there are training programs in place to emphasize minimizing use of firefighting foam.
 - Colonel John Pogorek responded that the Air Force is working on a replacement to the firefighting foam, but the current benefits outweigh environmental impact and the decision on using the foam during emergencies is made by the on-scene fire chief for their territory. There is no mechanism for containing the foam after it is used, but attempts are made to stop the foam from reaching sewer systems. He is unaware of any training programs for minimizing the use of firefighting foam.
 - Peter Sandin mentioned that the State of New Hampshire maintains a self-reporting online system for the use of firefighting foam to facilitate potential investigations or impacts. Andrea Amico and Jaime Payne asked if this program can be made mandatory or if is tracked spatially in software like GIS. Peter Sandin agreed to provide contact information for the State party tracking the program.
- Andrea Amico updated the RAB on the Testing for Pease non-target PFAS compounds project with Dr. John Higgins of Colorado School of Mines and Dr Loretta Hernandez of Northeastern. The first samples were collected in March and the first half of results should be available in two weeks. Sampling will continue through July 2019. Testing for Pease hopes to receive funding to continue sampling once the Town of Portsmouth renovations of the Grafton Road Treatment building is complete.
- Andrea Amico updated the RAB on the national PFAS conference held at Northeastern in Boston by Testing for Pease. The conference lasted 3 days, had 60 speakers from various industries throughout the country and some international, 285 attendees, and had to turn away over 100 people due to lack of space. Andrea will share a link to the conference website for videos and slides. Testing for Pease is planning another conference for 2021 that will be even larger.

- Andrea Amico initiated discussion about how the Air Force will respond to new MCLs proposed by the NHDES.
 - Roger Walton stated that changes to the NHAGQS will be immediately considered as part of the restoration program – specifically because both the Site 8 and AIMS treatment plants are reinjecting or reinfiltrating treated water into the ground and the Air Force will not contribute water to the groundwater that exceeds state values.
- Mindi Messmer asked if community members and RAB members can attend BRAC Cleanup Team meetings. Roger Walton suggested that this be discussed at a later time.
- Lulu Pickering initiated a discussion on the limitations and focus of RAB meetings outlined in the RAB objective’s slides presented by Linda Geissinger. She said the definition of “restoration” inhibits discussion from other actions related to the cleanup in the town including local government issues, easements and access, blood sampling, human health, and others.
 - Linda Geissinger and Roger Walton reminded the Board that RAB meetings are under the authority of the DoD. Despite restrictions set by DoD, the Air Force recognizes the need for other forums to address community concerns not applicable in RAB meetings. Roger Walton recognized the importance of these town issues and welcomed Lulu Pickering and other RAB members to ask questions that require further discussion outside RAB meetings in order to determine the proper avenue to explore them.
 - Mindi Messmer initiated a discussion about what the appropriate venues to talk about health aspects might be. Roger suggested that questions pertaining to human health be discussed at CAP meetings with ATSDR, and reiterated the Air Force does not conduct blood testing and cannot legally make formal requests of ATSDR. Andrea Amico said the CAP discusses Pease workers, not community members, but will put the RAB in touch with the epidemiologists from the CAP team.
 - Peter Sandin discussed the utility development project in the Town of Newington (which is not an Air Force project) and explained that as it will not interfere with or impact the Site 8 treatment system the Air Force is not involved in the process. The Watershed Management Division of NHDES is handling this project, and Peter will provide contact information so the RAB can express concerns and request public information. Similarly, the dam removal project on Peverly Brook in the Wildlife Refuge is being managed by the Dam Bureau of the NHDES and Peter Sandin will provide contact information for that department as well.
 - Roger Walton reiterated that the Air Force does not intend to limit the ability to bring outside issues to the RAB meetings as they are a good forum for questions to be asked in order to direct community members to the proper resources to answer them. Conversations can start during RAB meetings and follow up can occur in other meetings/forums.

Air Force Clean Up Update – Roger Walton (AFCEC)

- 5-Year Review Report is scheduled to be finished before 30 September 2019 and will be delivered to EPA from the Air Force soon. Once it is available, the RAB will receive a copy.
- The AIMS open house and tour took place earlier this afternoon (26 June 2019).
- Site 8 and the AIMS treatment plants have ongoing Performance Monitoring activities.
- Mike Daly recommends adding someone from Newington to the CAP as a representative and Jaime Payne requested that the EPA also be represented in the CAP.
- Mindi Messmer initiated a discussion about avenues for RAB members to ask questions between now and the September 2019 RAB meeting. Jaime Payne suggests that questions could be asked during monthly update meetings. Roger Walton said he would prefer if RAB members have discrete questions that they direct them to him personally.
- Mindi Messmer initiated a discussion about her hope that signs be installed to warn the public about potential shellfish contamination. This became an action item for state and federal regulators to investigate options and processes for signage.

- Andrea Amico initiated a discussion on the status of expanded wildlife testing for PFAS.
 - Roger Walton said the Air Force has responded to state regulator requests for further investigation. This next phase of investigation will happen under CERCLA. An evaluation of what samples would be collected is scheduled to begin in September 2020. If there are conclusions in the ESI that other pathways need to be investigated, that will be involved in the next investigation.
 - Peter Sandin stated NHDES is evaluating the community's request for signage about potentially contaminated game in the area.
 - Ted Connors said the state will be conducting a PFAS study on deer and turkey and will be sending samples to University of Connecticut for tissue analysis.
 - Mike Daly described the complexity of developing screening levels for animals, including deer, when human health screening levels are still being researched.
- Lulu Pickering requested an action item to connect Newington residents that have concerns about food gardens, hunting on their property, etc. with the forum to provide advice.

Public Comment

- A community member stated her concern that environmental sites at Pease were not closed prior to the transfer to Portsmouth. Roger Walton and Mike Daly explained she has her facts mixed up and some 25+ years of remediation activities have been conducted at Pease with 43 Sites in various stages of remediation, excluding PFAS which is a new emergent contaminant not identified at the time of the transfer. Mike Daly requested that the community member discuss her concerns with him in more detail after the RAB meeting.
- Alayna Davis (Testing for Pease, CAP member) informed the RAB of an online survey to determine eligibility of Newington residents to participate in blood testing. Alayna Davis also brought to the Air Force and RAB's attention the AFCEC Pease RAB website has several links that are not working. An action item to perform maintenance on the website was created.
- Herb Speck of Greenland, New Hampshire remarked that RAB meeting attendance seemed low and advised that more be done to publicize the meetings.

Site 8 and AIMS Performance Monitoring Update

- Rob Singer (Wood Environment & Infrastructure Solutions [Wood]) provided an update on the Air Force's restoration activities at Pease. Construction of the second groundwater extraction treatment system for the Airfield Interim Mitigation system (AIMS) has been completed and is now online.
- The Site 8 Interim Mitigation System (IMS) which was toured by the RAB a year ago, is located on the north end of Pease at the former fire training area. This treatment system currently extracts groundwater from 3 extraction wells, treats the water with granulated activated carbon (GAC) and cation exchange resin to levels below the detection limit or NHAGQS, and re-infiltrates that water back into the aquifer.
 - Performance monitoring of the Site 8 IMS conducted monthly includes hydraulic monitoring of 75 monitoring wells. This data helps to determine how to manipulate plant operations and allows Wood to draw potentiometric groundwater surface maps to understand what the aquifer is doing, where the capture zone of the extraction wells is, and the boundary line that indicates what parts of the aquifer are under the IMS control. Groundwater and surface water monitoring is conducted twice a year and the analytical data from 2018 are on the CD provided to the RAB and posted to the New Hampshire One Stop <http://www4.des.state.nh.us//DESONestop/PRSDetail.aspx?ID=0034346&Type=PRS> .
 - The Air Force is designing an iron and manganese remedy that will be implemented to allow for further plant optimization, but even at current operation the IMS is influencing the aquifer and removing PFAS. Once the iron and manganese treatment is added to the Site 8 IMS, iron sludge waste will be produced and will be sent offsite for incineration.

- There has been a steady decline in PFOS and PFOA into the groundwater coming into the plant and all water that is being re-infiltrated is below the detection limit of 15 ppt.
- So far, the Site 8 IMS has removed 2,000-grams (~4.5 lbs.) of combined PFOS and PFOA and processed ~ 18.5 million gallons of water.
- Colonel Pogorek inquired what Wood attributes the decline in PFAS concentrations in the influent to. Rob Singer said he believed it to be an effect of flushing out the area by pumping.
- Mindi Messmer asked if reinjecting clean water could have a diluting effect on the aquifer causing lower concentrations in the influent. Rob Singer said the more likely the impact of re-infiltrating clean water into the injection trenches up-gradient of the extraction network would cause slugs of residual contamination from the former fire training pits to be moved into the extraction network and influent concentrations would increase.
- Mindi Messmer asked about a systematic cycling schedule of turning the IMS on and off to optimize capture. Rob Singer stated that at this time it is too early to tell what effect that would have or how long this plant may run for.
- Gene Schraeger asked if iron was a known problem in the area. Rob Singer said the previous Site 8 treatment system had an iron mitigation process, but the extraction wells of the IMS are located in a different area. During the design of the IMS 3 pilot borings were completed that indicated iron would not be a problem. The remaining 7 extraction wells that were installed after are all high in iron.
- Gene Schraeger asked why the Site 8 treatment system has GAC treatment before resin treatment. Rob said that the Site 8 IMS was designed with potential other contaminants in mind and by running water through GAC before the resin; all other potential contaminants are stripped prior to the resin. Rob cannot speculate as to why the city has resin first.
- Andrea Amico asked how many PFAS compounds are being tested for and if all of those compounds were non-detect prior to re-infiltration. Rob Singer answered that the Site 8 IMS monitors for the Pease 13 PFAS list and that one of those PFAS is above the detection limit. Andrea Amico requested as an action item that the Air Force show all PFAS compounds, not just PFOS and PFOA.
- Gene Schraeger inquired about the spent resin and GAC, both of which are regenerated.
- The AIMS extracts groundwater from a network of 5 wells on the taxiway E parking apron and just east of the airfield. The Interim Mitigation Well (IMW) was installed in the area of the Haven well and will be online in the coming weeks. Injection wells are located in two areas, on the taxiway H apron, and south of the Haven well in the southern infield of the airfield.
 - Performance monitoring of the AIMS conducted monthly includes hydraulic monitoring of 151 monitoring wells. This data helps to determine how to manipulate plant operations and allows us to draw potentiometric groundwater surface maps to understand what the aquifer is doing, where the capture zone of the extraction wells is, and the boundary line that indicates what parts of the aquifer are under the AIMS control. Groundwater and storm water outfall monitoring is conducted 4 times a year. Groundwater is analyzed for PFAS and also other contaminants to see if the AIMS pumping regime will impact other contaminants associated with other cleanup sites. The AIMS monitoring program is now taking over and encompassing the Sentry Well monitoring program and Wood continues to sample the town production wells every month. Water that migrates south from the old fire training area will be intercepted by the AIMS extraction wells.
 - Andrea Amico asked if lab practices would change if the NHAGQS is lowered. Roger Walton replies that yes; the Air Force would have to contract a lab that is able to detect below the NHAGQS in order to confirm that concentrations are below the NHAGQS. Maxxam Analytical/Bureau Veritas, the current lab used by the Air Force, is capable of reporting to lower detection limits.

Portsmouth Water Treatment – Al Pratt (City of Portsmouth)

- Al Pratt provided an update on the construction project at the Harrison and Smith well treatment facility on Grafton Road. Construction began in April and is on track to be completed in 2 years, as scheduled. So far work has been primarily demolition. The city estimates that new residents will be online in January 2021.
- On 18 November 2018 the city changed out the carbon vessels. The city samples for PFAS throughout the treatment process and this data is posted to city website.
- The city has started to see some breakthrough in top carbon vessels of shorter chained PFAS compounds.
- The City continues to work with Testing for Pease and sends split samples to Colorado School of Mines
- The City is currently using the lowest detection limits offered by Maxxam Analytical. Every year the lab goes through a quality control process to determine new detection limits. In June, the city switched to a lower detection limit of 2 ppt, but in order to do this 4 per-fluoro PFAS compounds that have never had detections in the past were removed from the analyte list. The city is still determining the sampling schedule for once the construction is complete, but it will be rigorous, especially in the startup phase.
- Al Pratt said that the city has designed this treatment facility to primarily treat PFAS, therefore water is treated with resin before GAC.
- Mindi Messmer asked if water from the Pease network ever or has ever gone to the Portsmouth system. Al Pratt states that there are no records of this ever occurring.
- Andrea Amico asked about the potential for tap sampling at Pease, and who would perform this sampling, but Al Pratt states that with there being so many other potential sources of PFAS that are not tied to groundwater he thinks it is unlikely.
- Gene Schraeger initiated a conversation with Al Pratt about the differences between the Resin used in the Site 8 IMS and AIMS and the resin used at the City treatment facility. The City conducted a pilot study on resin with water from the Haven well to determine which resin to use. The City and the AIMS both use similar single pass cation exchange resin that is proven at removing long and short chain PFAS.
- Lulu Pickering asked if there is a known source for the 0.9 – 4 ppt concentrations of PFAS in the Portsmouth water district. Al Pratt is unaware of the potential sources but does know that there are some background levels. Lulu remarked how she was surprised at the extent of the plume in Newington and suggested that southward migration should be addressed.

Open Discussion

- The RAB discusses uncertainties in the communities surrounding land use and what practices are safe, ex: gardening, cattle, and other livestock. A study regarding eggs in Australia was referenced. It was suggested that there are several independent groups looking into these issues around Pease and that they should be contacted.
- Jaime Payne asks how the Superfund boundary has changed as a result of PFAS as an emergent contaminant. Mike Daly added defining the Superfund “boundary” as an action item.



U.S. AIR FORCE

Pease Restoration Advisory Board (RAB) Meeting

Wednesday June 26, 2019 – 6:00 p.m.

New Hampshire Department of Environmental Services Building
222 International Drive, Suite 175, Portsmouth, New Hampshire

Agenda

- 6:00 Welcome, Introductions, RAB Business – *Ona Ferguson (Consensus Building Institute)***
- Approve summary from March 2019 RAB meeting
 - Quick update on RAB practices – videotaping, start time
 - Reminder of RAB focus – *Linda Geissinger (Air Force)*
- 6:20 Open Discussion Time**
- Opportunity for RAB members to share thoughts, questions and concerns related to the cleanup.
- 6:50 Air Force Clean Up Update – *Roger Walton (Air Force)***
- AIMS site open house report out
 - Site 8 and AIMS treatment plants performance monitoring
- 7:30 Portsmouth Water Treatment – *Al Pratt (City of Portsmouth)***
- Brief update on water treatment activities.
- 7:45 Public Comments**
- Members of the general public may request up to 3 minutes to speak.
- 8:00 Open Discussion**
- Opportunity for RAB members to discuss final thoughts and questions.
- 8:20 Meeting Recap and Next Steps, Upcoming Meeting Dates – *Ona Ferguson***
- 8:30 Adjourn**