

**Former Pease Air Force Base (Pease)
Restoration Advisory Board (RAB) Meeting
Wednesday September 18, 2019 – 6:00 p.m.**
Great Bay Community College, Room 122
320 Corporate Drive, Portsmouth, NH 03801

Meeting Minutes

RAB members present: Andrea Amico (community member), Susan Chamberlin (community member), Mike Daly (appointed member: USEPA), Brian Goetz (appointed member: City of Portsmouth), Peggy Lamson (community member), Mindi Messmer (community member), Lulu Pickering (community member), Peter Sandin (appointed member: NHDES), Maria Stowell (appointed member: Pease Redevelopment Authority), Roger Walton (appointed member: Air Force Civil Engineer Center, DoD Chair).

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

Others attending: Doris Brock (community), Matt Brock (community), Matthew Casey (Pease Air National Guard), Peter Clark (Senator Shaheen's Office), Mike Donahue (community), Nancy Ester (community), Scott Hilton (community), Kerry Holmes (Senator Hasan's Office), Blake Martin (community), Victoria Martin (community), Margaret McCarthy (City of Portsmouth), Jeff McMenemy (Seacoastonline.com Reporter), Al Pratt (City of Portsmouth), Mike Quinlan (APTIM).

Next meeting: December 5, 2019 at New Hampshire Department of Environmental Services Building (5:00-8:00pm, meeting time updated in October 2019).

Action items: See spreadsheet.

Meeting Materials: Pease RAB meeting presentation slides are available at:
<https://www.afcec.af.mil/Home/BRAC/Pease-Archives/>

Video: The video recording of this meeting is available on the City of Portsmouth You Tube channel:
<https://www.youtube.com/user/CityofPortsmouth>
<https://www.youtube.com/watch?v=gmp3Q9baxJ4>
<https://www.youtube.com/watch?v=051ne3WSm18>

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

- Ona Ferguson welcomes participants, reviews the meeting agenda, and reviews the public comment process. The RAB approves the June 2019 RAB meeting summary, and attendees introduce themselves.
- This meeting was recorded by the City of Portsmouth and is available on their YouTube Channel.

Air Force Update – Roger Walton (Air Force)

- Roger Walton (AFCEC) welcomes all attendees and provides an update since the last meeting RAB meeting in June.
- Roger Walton informs the RAB that data from the shellfish sampling event that took place in August 2019 were received yesterday. During the preliminary data review, no significant changes were observed between data from the first collection. The Air Force is unable to talk to specific numbers prior to validation of the data. Once the data is validated, it will be distributed in the same format as the data deliverable handed out at the June 2019 RAB meeting. Data will be distributed to all parties that received data in June 2019.
 - A community member asks where the data distributed in June 2019 are located.
 - Roger Walton replies that the data are too big for the RAB website right now, therefore it has just been distributed on CDs to RAB members. Once the Expanded Site Inspection (ESI) Report is final, the Report and all data included in it will be uploaded to the Administrative Record and a link can be provided at the next RAB meeting in December.
 - Mindi Messmer asks if the Air Force is still looking into the presence of the PFAS compound PFPeA, and Roger Walton responds that the Air Force’s consulting chemists are still reviewing the data, including any presence of PFPeA.
 - Andrea Amico asks if Roger Walton would inform the audience why the Air Force has collected more shellfish data this August.
 - Roger Walton explains that during the ESI Report review, the Air Force discovered that the contracted laboratory responsible for performing the PFAS analysis on shellfish collected in November and December 2018 had not properly homogenized the shellfish samples prior to analysis. Shellfish was resampled, from the same locations in as close to the same quantity as was possible, in August 2019 to accurately assess the PFAS concentrations in shellfish at the given study locations.
 - Andrea Amico asks when the RAB can expect to see the new data. Roger Walton replies that data validation will take a couple of weeks.
- Roger Walton updates the RAB on the status of the upcoming Five-Year Review Report. This Report will provide a review of all previously selected remedies. Many “older” Sites at Pease have been reviewed as part of this Five-Year Review. The Five-Year Review will be a primary topic for the December RAB meeting.
 - Susan Chamberlin asks whether Pease is on the same schedule as other bases? Roger Walton explains that the schedule of Five-Year reviews is triggered by the first remediation implementation, therefore other bases keep their own schedules. This is the 5th Five-Year Review at Pease.
 - Susan Chamberlin asks if PFAS specifically in Pease’s Five-Year Review can be compared to other bases, to which Roger Walton replies that very few other bases have PFAS-related content included in their Five-Year Reviews.
 - Andrea Amico asked about the schedule of the Five-Year Review Report. Roger Walton replied that the Report will be finalized next week (the week of 23 September 2019) and then the Report will be put on the Administrative Record. It is

- a very large file which therefore cannot be emailed and the Department of Defense (DoD) does not share files on any commercial file sharing platform.
- Lulu Pickering states that having access to the Five-Year Review Report before discussing it would be critical, specifically on how it impacts Newington residents. Roger Walton says that it can be accessed from the Administrative Record later this month (September) when it is finalized. It can then be looked at by the RAB and public prior to the December RAB meeting.
 - Lulu Pickering states that some of the data files provided via the DoD file sharing site would not download due to their size.
 - Mindi Messmer asks about how the resampling of shellfish has delayed the ESI Report completion. Roger Walton replies that no final date or schedule for the ESI Report has been set as of now, this is pending validation.
- Roger Walton provides an update on the Department of Defense review of the NH Ambient Groundwater Quality Standards (AGQS). The DoD Office of General Counsel is tasked with reviewing State laws and determining how they will apply to DoD. Roger Walton was told by his Air Force attorney that the General Counsel will make their decision prior to 30 September 2019. UPDATE – This information was incorrect and as of 30 Sept 19, the Office of General Counsel has not reviewed the new AGQS.
 - Brian Goetz (City of Portsmouth) reviews the Pease and Portsmouth water systems. They are two separate systems but are connected through a booster. During the June RAB when Brian Goetz was absent there were questions regarding the water transferred between the two systems. Brian Goetz clarifies that water from the Portsmouth System is brought into the Pease System with the booster to supplement water supply, but the metrics on how much water or how often was not historically tracked. There are more water resources in the Portsmouth System than the Pease System and the Pease System requires more frequent maintenance, so the majority of water passing between the Systems is from Portsmouth to Pease. Water has moved through the valve from Pease to Portsmouth only on occasion during emergency situations, but those metrics are not tracked either.
 - Brian Goetz reviews the status of the filter demonstration that has been in effect since September 2016 at the Grafton Road Treatment Plant. The filters were last changed this past March and are expected to be changed this November when demand is low. After this, the permanent filters will be installed. Filter information is published on the City's website.
 - Brian Goetz reminds the RAB that they continue to work with Testing For Pease and the Colorado School of Mines to test for non-target PFAS compounds.
 - Brian Goetz reminds the RAB that the City is using 2 parts per trillion (ppt) reportable limit for PFAS analysis at the Grafton Road treatment building in preparation to meet the new New Hampshire Rules.
 - Brian Goetz informs the RAB that product details and descriptions of the Granulated Activated Carbon (GAC) and Resin used at the Grafton Road treatment building are available on the City's website, as are the rationale for the decision to choose each type and combination. Also available on the City's website are updated graphics of what the facility will look like. As of right now, the construction remains on schedule.

- Lulu Pickering raises her concerns about potential AFFF compounds that we don't know about and asks how we might determine what was in the foams that were used at Pease and which exact foams were purchased for use at Pease.
 - Mike Daly (USEPA) – At this stage we are limited by our analytical methods, but this links to what Andrea Amico and Testing for Pease are doing with the Colorado School of Mines.
 - Lulu Pickering wonders if it is possible to analyze foams available on the market today and to run them through treatment systems to see if they are successful at removing all the foam.
 - Andrea Amico asks if the Air Force ever asked their suppliers for AFFF contents? Roger Walton replies that to his knowledge the Air Force has not asked their suppliers for a complete list of chemicals in the AFFF and Andrea Amico requests this become an action item.
- Mindi Messmer asks if the City of Portsmouth has any records of historic use of water swapping between the two Systems. Brian Goetz summarizes that in the 1990's when the City took over operation of the Pease system, very little water was used, there were a lot of leaks in the system, and most water went towards irrigation. The daily records kept by operators were not summarized in any reports, therefore the daily interchange between Systems is not tallied up. Only anecdotal information from operators is available prior to May 2014 to show that water moved mostly from Portsmouth the Pease. The water demand in Portsmouth would decrease over the weekends, during which time water would be moved into the Pease System. No water has moved from Pease to Portsmouth since May 2014.
- Andrea Amico asks when the Haven Well is expected to be turned back on.
 - Brian Goetz responds that the resin is scheduled to be online around the beginning of 2021. They will work with the resin for the summer to make sure everything is working correctly before turning on the Haven Well. Brian Goetz expects the earliest would be 1.5 years from now. The City will be tracking the AIMS system closely, hoping in two years that the Haven Well will have lower PFAS concentrations when it is turned on. Once turned on, it will be run through the resin and carbon at the Grafton Road facility.
 - Andrea Amico expresses that turning the Haven Well on makes her nervous and asks if Brian Goetz anticipates that the Haven Well will continue to supply 46% of Pease water. Brian Goetz states that their intent is to gain confidence in the treatment slowly before ramping up contributions from the Haven Well.
- Peggy Lamson expresses her thanks to Brian Goetz for his work and presentation. Peggy Lamson inquires as to the reason for removing a section of the Town of Newington from the Madbury system and putting them onto the Pease System several years ago and would like to know if that switch can be reversed.
 - Brian Goetz replied that the switch was made to solve a pressure problem for the Newington Residents and notifications went out in the mail to all

residents changed over and discussions were had with the Town board of selectmen. Both the Madbury System and the Pease System are approved drinking water systems. Brian Goetz agrees to follow up with Peggy on this.

- Peggy Lamson inquires about the Greenland well, which supplies all residents in southern Newington, and any PFAS data associated with that well. Brian Goetz replies that all the Portsmouth Water System wells have been tested for PFAS and there are detections in some of the Portsmouth System wells, including the Greenland well. This data is available on the City's website. The Greenland well itself has had a lot of work done to it recently including replacing the well, constructing a new pump house, and it is now blended into the Portsmouth System and performing very well.

Open Discussion

- Andrea Amico asks if there will be an opportunity for the public to comment on the Five-Year Review Report. Roger Walton replies that there is no public comment for this report.
- Andrea Amico asks Roger Walton about the General Counsel's process for reviewing the NH MCLs and DoD's response. Roger Walton replies that he doesn't know the process but Air Force has asked the General Counsel how the NH MCLs will apply to all of DoD. Roger Walton has no way to reach into that group directly while discussion is ongoing. The prior AGQS was vetted and accepted by the group previously in 2018 and the same group is going through the same process now and will provide their answer before the deadline. UPDATE – As of 30 Sept 19, OGC has not evaluated the new MCLs/AGQS
- Andrea Amico provides an update to the RAB on Testing for Pease activities.
 - Working with the Colorado School of Mines to test the Pease System Public Water for non-target PFAS compounds. Testing for Pease has received the results for the target list of PFAS (same as the Air Force and the City) but is still waiting on non-target compound data. The lab is currently very backlogged and having a hard time meeting their schedule.
 - A formal health study at Pease has officially been approved and they will be looking to recruit participants for that soon.
 - Testing for Pease is going to conduct tap water sampling in the City of Portsmouth starting next month. This will consist of four taps being sampled four times a year. Bureau Veritas Laboratories will be used to analyze these samples.
- Lulu Pickering inquires about the status of deer testing and whether or not it is in the budget or needs to be added to a budget.
 - Roger Walton replies that investigation into any other potential exposure pathways, such as consumption of deer tissue, would be performed during the Remedial Investigation (RI). The RI can begin after the finalization of the ESI Report, which has currently been delayed due to the shellfish resampling event in August 2019. The first step of the RI is to hold an RI Scoping Meeting to determine the exposure pathways that will be further investigated during the RI and what sampling should take place. This will determine the budget requirements. At this time, the Air Force cannot speculate as to whether deer testing will or will not be required as part of the RI.

- Lulu Pickering thanked the NHDES for taking deer issue seriously but posed her concern that the EPA hasn't provided screening levels for comparison.
 - Peter Sandin (NHDES) replied that the environmental health program is developing screening levels and has asked for EPA review. Mike Daly (EPA) is not able to provide a progress update as the EPA just recently received them, but will share information with the State to aid in the development of these screening levels wherever possible. Mike Daly also states that the EPA would not have to approve any screening levels that the State creates, they can still be implemented on a State level.
 - Lulu Pickering asked what the NHDES would do with their data at the conclusion of the deer sampling? Would educational pamphlets or signs be created?
 - Peter Sandin clarifies that the NH Fish and Game Department is conducting the study on the Wildlife Refuge and that he doesn't know the design of the study or what actions might be taken, but once the NHDES has that data it will be part of the RI Scoping process.
- Lulu Pickering asked if an agricultural evaluation, farming, gardening, livestock, would be included in the RI Scope or other exposure pathways that might be in the remedial investigation.
 - Roger Walton replies that completion of the ESI Report must occur before the RI scoping phase can begin. The RI Scoping process will assess where there is adequate versus inadequate data and frame the need for further data collection. But before that time, no other exposure pathway evaluation can be conducted. It is determined that an Agenda Topic for the next RAB may be an explanation of the CERCLA Process and RI Scoping process.
- Mindi Messmer extends her appreciation to NH Fish and Game for conducting shellfish sampling and asked Peter Sandin if he had an update on the Fish and Game's plan. Peter Sandin responded that he hasn't received any information but will work to getting an update by the December RAB and will request a representative from Fish and Game to attend the December meeting to update the RAB. Mindi Messmer requests that signs be put up in the interim relaying the potential for exposure.

Expanded Site Investigation Overview – Roger Walton (Air Force)

- Roger Walton Reviews the ESI Table of Contents and defines Conceptual Site Model (CSM). The purpose of this segment of the meeting is to help everyone gain common ground on how things happen at Pease. Because the shellfish data has delayed the report, Roger Walton asked Wood to focus on this piece of the Report to show how the Air Force has structured the work that has been performed. In 2016 the Site Investigation Report looked at drinking water, groundwater, soil, and limited surface water. The Expanded Site Inspection included more exposure pathways brought up by NHDES and EPA. This section will review the physical side of the CSM and how it fits with the Exposure CSM. Roger Walton introduces Hank Andolsek, hydrogeologist from Wood who has been working on the project since 2014.
- Hank Andolsek explains how CSMs are primarily used as a planning tool. They help decide where to place borings, what depths to drill wells to, etc. and with every new piece of data that we collect, the CSM is revised, it is a living document. Hank Andolsek reviews the topography and hydrology, geology, and hydrogeology of the Pease peninsula. For more details, the CSM Presentation takes place between time stamp 1:05 and 2:03 of the City of Portsmouth Recording.
<https://www.youtube.com/watch?v=gmp3Q9baxJ4>.

- At the conclusions of the presentation, Lulu Pickering asked if the surface water and springs in Newington are the secondary migration pathway leading away from Site 8, with water moving through the bedrock trough being the primary migration pathway, would the surface water and springs ever get cleaned up?
 - Hank Andolsek responds that the Site 8 Interim Mitigation System (IMS) focuses on extracting the groundwater that is moving through the bedrock trough. As it pulls groundwater out of the trough, it prevents the downward gradient into the bedrock. If the Site 8 IMS can stop migration of contamination downward into the bedrock, it should prevent that water from discharging to the spring.
- Andrea Amico asks what areas of the current CSM still need refinement and how much time does he estimate that to take?
 - Hank Andolsek responds that some monitoring wells define the plume boundary, but other areas aren't well defined. These areas are depicted in the ESI Report as dashed lines in the figures which were provided to the RAB at the last meeting.
- Mindi Messmer asks if there is contamination beyond the capture zone that will not make it to a treatment system.
 - Hank Andolsek responds that the treatment systems will cut off the source of the contamination and flush the area with clean water.

Public Comments

- Mike Donahue thanks Hank Andolsek for his presentation and asks about Pickering Brook specifically and how it is downgradient of the Site 8 bedrock trough and it flows in the same direction as the trough before joining Flagstone Brook and discharging into Tricky's cove. Mike Donahue asks if there is a direct outlet out of the trough into Pickering Brook.
 - Hank Andolsek replies that the downgradient end of the trough shallows out in the same place that Pickering Brook trajectory shifts. The CSM shows that the overburden may be forced up by the ending of the bedrock trough and the groundwater in the trough discharges into the Brook at this bend. The Brook starts as a spring further upgradient, but at that bend where the bedrock trough ends, concentrations in the pore water of the Brook increased, then decline again downstream, which indicates there is no new source of contamination, and clean water is diluting in from the sides of Pickering Brook downstream. The Site 8 IMS pumping network will prevent further offsite migration of PFAS compounds, so eventually overburden groundwater discharging at that bend in the Brook will be clean water.

Open Discussion

- Andrea Amico asks about the meeting that will be held tomorrow (Sept. 19, 2019). Roger Walton responds that originally it would have been a cover to cover review of the ESI Report, but without the shellfish data, they will be focusing on other data on the disk provided to RAB members at the June meeting and more detailed questions related to the CSM. A more detailed review of the ESI Report will be rescheduled once the shellfish data has been validated and the ESI Report has been updated.
- Andrea Amico asks for an update on the Site 8 IMS iron treatment. Rob Singer of Wood states that Site 8 is currently operating four out of its ten extraction wells, pumping roughly 36 gallons per minute

(gpm), and operating at roughly 35% capacity. The Air Force is in the process of developing the contract with Wood to install the iron remediation system in early 2020.

- Andrea Amico asks if those same iron issues are expected to arise at the AIMS. Roger Walton responds that with all the water that the AIMS has moved, if iron was going to present an issue it would have by now. All test borings drilled at Site 8 had low iron content, but the remaining wells installed after the plant was designed are located in higher iron deposits. The AIMS is running at 600 gpm, the Interim Mitigation Well (IMW) is online and in the process of being ramped up with target routine operations of 650-700 gpm. No challenges have been encountered at this time and the treatment plant is running as expected. Iron at Site 8 is present in naturally occurring deposits.
- Andrea Amico updates the RAB that ATSDR invited Karen Anderson from Newington to be part of the CAP at the last CAP meeting.
- Mindi Messmer asks Peter Sandin for an update on signage for potential exposure pathways. Peter Sandin responded that NHDES, Fish and Game, and the State Veterinarian, are all looking at the signage process for game in the Town of Newington.
- Lulu Pickering asks about an action item from the last meeting to define “Site boundary” and what the purpose of that was. Mike Daly responds that a Site boundary changes over the decades of the investigation to include anywhere that contamination is found or might be found. We are not stopping the investigation at any artificial boundary. The PFAS contamination is having us look further than previous investigations have looked.
- Roger Walton explains that the Federal Facilities Agreement (FFA) was signed when Pease was put on the National Priorities List, which lays out State and Federal responsibilities with regard to clean-up. The FFA triggers at the onset of the Remedial Investigation stage. The FFA presumes that the SI stage at Pease has already been done. The Air Force has gone through all of the CERCLA process on a lot of sites at Pease, but PFAS has made them step outside the routine process. When the PFAS RI starts, those Federal and State Obligations and enforceable schedules will kick back in.
- Lulu Pickering asks if something can be done, such as channelization, to prevent Newington springs and brooks from expanding. Roger Walton responds that there would have to be a defined risk to trigger an accelerated removal action. A formal removal action is different from the full CERCLA remedial action process and can occur at any time if a situation is encountered that presents an unacceptable/ immediate risk to human health or the environment. The Air Force will make it an action item to define the remedial investigation schedule.
- Lulu Pickering asks Mike Daly if there is anything the EPA can do to prevent the expansion of contaminated brooks in Newington. Mike Daly responds that the Site 8 IMS is designed not just to treat groundwater, but its connection to the springs that feed the brooks as well. EPA is waiting on more toxicity information to clearly define the risks before action might be taken. There are no standards for PFAS in surface water the way there are standards for other contaminants in surface water.
- Mindi Messmer states that she is concerned about the connection between shellfish and sediment and the impact of contaminated sediment in the Bay where recreational shellfish harvesting exists. A discussion between Mindi Messmer and Roger Walton regarding a Michigan DHHS PFAS fish consumption advisory ensued. Roger Walton clarifies that the Michigan unrestricted consumption is very similar to the EPA Screening Levels for Pease. Roger Walton will share this document with Mindi

Messmer after the meeting. Mindi Messmer is concerned about the non-target PFAS compounds found in some oyster samples and would like to hear an update on signage before the next RAB meeting in December.

- Mindi Messmer asks if there are private residents in Newington that are drinking water that exceeds the new New Hampshire MCLs. Roger Walton replies that yes, there are five residents in Newington whose residential wells are between the new and current MCLs. Roger Walton is waiting for direction from DoD as to how the Air Force will respond once the new MCLs are in place.

Meeting Recap and Next Steps, Upcoming Meeting Dates – Ona Ferguson

- Ona Ferguson announces that the next RAB meeting will be held on December 5th, 2019, Thursday, at the New Hampshire Department of Environmental Services Building and reviews the action items from tonight's meeting.



U.S. AIR FORCE

Pease Restoration Advisory Board (RAB) Meeting

Wednesday September 18, 2019 – 6:00 p.m.

Great Bay Community College, Room 122 (First Floor)

320 Corporate Drive, Portsmouth, NH 03801

Agenda

- 6:00 Welcome, Introductions, RAB Business – *Ona Ferguson (Consensus Building Institute)***
- Approve summary from June 2019 RAB meeting
- 6:10 Air Force Clean Up Update – *Roger Walton (Air Force)***
- Shellfish data update
 - Five year review status
 - Update on Department of Defense review of NH MCLs and Ambient Groundwater Quality Standards
- 6:20 Portsmouth Water Treatment – *Brian Goetz (City of Portsmouth)***
- Brief update on water treatment activities.
- 6:30 Open Discussion Time**
- Opportunity for RAB members to share thoughts, questions and concerns related to the clean up.
- 6:50 Expanded Site Investigation Overview**
- Layout of ESI report
 - Presentation of the conceptual site model (CSM)
 - Geology
 - Hydrology
 - PFOS/PFOA in the Environment
 - Discussion
- 8:00 Break**
- 8:20 Public Comments**
- Members of the general public may request up to 3 minutes to speak.
- 8:30 Open Discussion**
- Opportunity for RAB members to discuss final thoughts and questions.
- 8:50 Meeting Recap and Next Steps, Upcoming Meeting Dates – *Ona Ferguson***
- 9:00 Adjourn**