Recent PFOS/PFOA Questions regarding former Pease AFB *March 14, 2018*

These topics were discussed during a meeting with Newington residents September 26, 2017.

Process

* What is the process for solving the problem of PFOS/PFOA contamination in drinking water?
* How will you be sharing this info with people who cannot attend? It is important that it be widely available.

The Air Force is committed to working in accordance with all regulatory requirements to investigate and, eventually if necessary, to remediate PFOS/PFOA in the groundwater at the former Pease AFB. The Air Force is currently conducting mitigation efforts under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) in response to an Administrative Order that was issued by the USEPA in August 2015. To date, these efforts included: collection of soil and groundwater samples; investigation regarding the presence of private drinking water wells in the vicinity of the former base and monitoring of potentially impacted wells; and providing bottled water and/or in-home treatment for consumers with drinking water above the USEPA established Health Advisory (HA) values and NHDES ambient groundwater quality standards (AGQS). The Air Force is also designing and installing two treatment systems to mitigate further migration of PFOS/PFOA in the groundwater. As we complete the work under the Administrative Order, the AF will work collaboratively with the USEPA and NHDES to continue investigation and necessary remediation activities in accordance with CERCLA.

Information regarding current investigation and mitigation activities is regularly communicated to the USEPA, the NHDES, the City of Portsmouth, and the private citizens whose drinking water wells are sampled. Reports and data transmitted to the USEPA, NHDES, and City of Portsmouth are part of the public record and are available to the public at the on-site Information Repository. Data from private drinking water well samples are communicated to the individual property owners. Information regarding discussions during public meetings (including the Restoration Advisory Board and Community Assistance Panel) is generally available in meeting minutes and records that can be obtained from those groups.

Websites for more information:

http://www.afcec.af.mil/WhatWeDo/Environment/Perfluorinated-Compounds/
http://www.afcec.af.mil/Home/BRAC/Pease
Or go to the Administrative Record:
http://afcec.publicadmin-record.us.af.mil/Search.aspx and Select "BRAC", then "Pease."

Contaminants

* Do we know what all the contaminants are?
* Are all contaminants being addressed?
* What are the current chemicals being used at Pease for runway, taxiways, airplanes, etc. (any current contamination adding to our problems)?

Past use by the Air Force resulted in releases of several industrial compounds such as chlorinated solvents (e.g. TCE), metals and petroleum-related contaminants (e.g. jet fuel and aviation gasoline). Over the past 30 years, in collaboration with EPA and NHDES, the Air Force has investigated releases in soil, groundwater, sediment and surface water at Pease extensively. These investigations followed federal and state regulatory requirements and have identified those contaminants that EPA and NHDES regulate due to environmental concerns. Where these contaminants have posed unacceptable risks to human health or the environment, the Air Force has taken actions to address them. As EPA and NHDES identify new contaminants, such as PFOS and PFOA, and then establish regulations governing them, the Air Force will investigate these contaminants in accordance with the established regulations. There are many users of the Portsmouth Airport. The Portsmouth Airport is best equipped to answer questions regarding chemical usage at the facility.

Extent

* Where does Portsmouth water come from?
* Where is the contamination? In how many wells?
* What quantity of pollutants were released into the environment? Where?
* Where is the plume? Is it moving?
* Do you trust the data?

The City of Portsmouth gets its water from several municipal supply wells throughout the City as well as from the Madbury reservoir. There are maps available from the City of Portsmouth Public Works Department that show the specific location of each supply well and the distribution systems that carry the water from the wells to various treatment plants and to customers' homes.

PFAS compounds are ubiquitous in the environment - meaning that these compounds are frequently detected at very low concentrations in samples collected from monitoring wells, municipal supply wells or surface water bodies that are not associated with a specific known release of PFAS. Relative to the former base, PFOS and PFOA have been detected in groundwater samples collected across the base and in some samples located within the town of Newington to the north and southwest of the base.

The Air Force estimates that more than 100,000 gallons of a diluted mixture of 3% percent AFFF were used to extinguish a 1990 aircraft fire. The Air Force does not have records documenting how much AFFF was used in routine fire training exercises.

The PFOS/PFOA plume at Pease consists of an area from north of the former fire training area to south of the Haven well in the Pease airfield. The Air Force monitors the PFOS/PFOA plume regularly in accordance with schedules that were approved by the USEPA. Since sampling began in 2014, concentrations have been relatively stable and data is monitored to identify trends or changes in PFOS/PFOA concentrations that could indicate migration of impacted groundwater.

All samples collected at Pease are submitted to a USEPA-certified laboratory that is held to very stringent quality control standards to ensure the data are accurate and not biased. As such, we are confident that the data are reliable and accurate.

Water Quality Testing

* Where is the AF testing?
* Can our properties be tested?
* How many wells are above the 70ppt advisory level?
* What are you testing for?
* Can we see all your data?

The Air Force conducted an inventory of properties within an approximately one-mile radius of the former base in order to identify the presence of private drinking water wells. The owner of each property where a private well was identified was given the opportunity to participate in a residential well monitoring program. There are currently approximately 40 wells in the residential drinking water program. The majority of these wells have been sampled for a list of 23 PFAS compounds (including PFOS and PFOA) on a quarterly basis for approximately two years. Of these properties, PFAS compounds have only been detected at concentrations above the HA at four locations. Specific information about the results of analysis of private drinking water samples are provided to each homeowner. The Air Force does not make this private information available to the public.

If your property is located within a one-mile radius of the former base and has a private drinking water well that has not been tested, please contact the Air Force to discuss providing access to allow collection of a sample.

Health

* Can people be tested? Who can be tested? What is the cost and who pays for this?
* How will people be tested?
* How much of my PFOS/PFOA lifetime limits am I likely to have absorbed since my first exposure via drinking water in 1995?
* Why does EPA set lifetime limits? How are they set? Why should we trust that those limits make sense?
* What are the impacts on plants, animals and other media?
* What is known about the health impacts to humans? Are there good clear

sources you can point us to with this info? Do we have a cancer cluster? Is it present in breast milk?

* Is the Air Force educating doctors in the area?

The Air Force is not conducting any blood sampling or medical testing associated with Pease. Questions related to blood testing or potential health impacts should be directed to the NH Department of Health and Human Services.

The Air Force is not involved in establishing regulatory standards for potential contaminants. Questions related to lifetime health advisory values should be directed to the United States Environmental Protection Agency.

While there are no regulatory standards for plants, animals, or other media, the Air Force is currently working with the USEPA to determine whether it is appropriate to collect samples of other media for comparison with risk screening values developed by the USEPA. To date, we have not collected samples of these media.

The Air Force is not specifically involved in educating doctors in the area. The Community Assistance Panel conducts meetings that are open to the public. During these meetings, representatives of the Agency for Toxic Substances and Disease Registry (ATSDR), a public health agency of the US Department of Health and Human Services, has shared information that can be provided to primary care physicians to educate them about PFAS compounds. This information is available on the ATSDR website.

Treatment/Clean up

* Who will pay for it?
* Where and how is water being treated?
* How much water has been treated already?
* Who makes treatment decisions?
* What other places are similar to this situation, how have they addressed their contamination, and what can we learn from them?

The Air Force is paying for PFOS/PFOA treatment activities at Pease and we are working toward installation of two separate groundwater treatment systems. One system, located in the northern portion of Pease in an area where fire-training activities were formerly conducted, is currently under construction and is expected to start operation in early 2018. The second system will treat water in the vicinity of the Haven Well. Construction of this system will begin in Spring 2018. The water will be treated using granular activated carbon and/or ion exchange resins, which are currently the two most effective ways of removing PFAS from groundwater. Recommendations regarding the treatment system designs are developed by the Air Force and their consultants, and provided to the USEPA and NHDES for approval.

In addition to these two systems, the Air Force is funding the City of Portsmouth's design and installation of a system to treat water from the Haven, Smith and Harrison wells, which are part of the municipal drinking water system for the Pease Tradeport. A "pilot" or demonstration version of this system has been in place at the Grafton Road treatment system since September 2016. The City is using data collected since this demonstration system was installed to design a permanent system that will treat water from the Smith and Harrison wells and allow the Haven Well to eventually be reactivated. Data from the City's work is posted on the City's website.

There are a number of communities with PFOS and PFOA issues similar to Pease, and all are addressing them concurrently. Therefore, there is not a lot of precedent to draw from.

Additional Questions:
Question: Is there state-level legislation that can be filed to expedite remedial efforts at Coakley Landfill Superfund site?

Response: *The Air Force has no role in proposing state-level legislation regarding Coakley Landfill. The Air Force is not involved in the Coakley Landfill Superfund site. AF use of Coakley Landfill was conducted under a contract with the City of Portsmouth from 1975-1982 that strictly limited AF use to refuse from the housing areas. Disposal of industrial waste and recyclable petroleum products were not allowed under the contract and did not go to Coakley. To our knowledge, AF only sent household waste to Coakley Landfill; laboratory analysis was not required or performed for such waste.*

Question: Where can the public access Air Force information regarding the historical use of aqueous film-forming foam (AFFF)?

Response: *The Air Force published a Preliminary Assessment Report in December 2015 that documented our research into the historical uses of AFFF at Pease. There report is available to the public on the Air Force's administrative record website.*

Question: Where can the public access information regarding materials disposed of at Coakley Landfill Superfund Site?

EPA maintains the following website:
https://cumulis.epa.gov/supercpad/cursites/csitinfo.cfm?id=0101107

Question: Will the Air Force post signs to alert the public of the potential risks of swimming or fishing in contaminated waterways?

Response: *The Air Force is not aware of potential risks associated with swimming or fishing in waterways in the vicinity of Pease, and there are no state surface water quality standards for PFOS or PFOA. EPA's lifetime health advisories only concern the human*

consumption of drinking water.

Question: Has the Air Force determined the extent of PFAS contamination in waterways originating at Pease?

Not at this time. The Air Force is currently focusing on mitigating any threats posed to drinking water supplies. Sampling planned for later in 2018 will assist in evaluating the groundwater impacts on waterways.

Question: Peter Forbes has directly stated that the RAB is not to have a say in the treatment of the drinking water supply, just the groundwater cleanup. It is up to the City of Portsmouth to decide how they will find their water supply, even though the Air Force is the one that contaminated the water supply and the RAB is established to address and provide comments on the Air Force-related remediation efforts. How does the RAB not have the authority to provide input on how the public drinking water supply should be cleaned up after it was contaminated by the Air Force's use of firefighting foam?

Response: *A Restoration Advisory Board (RAB) is a specific type of public body designed to provide interested parties with a forum to discuss and provide input on, and improve public understanding of, environmental site restoration (cleanup). The RAB process is administered by the DoD in accordance with federal regulations; the regulations are found in the Code of Federal Regulations in Title 32, Part 202. Pursuant to those regulations, the RAB at Pease is focused on the various environmental remediation efforts (PFOS and others) being conducted at Pease. Actions taken by the City of Portsmouth are outside the scope of the RAB. However, because the public has expressed interest in the City's process, the City has occasionally provided updates at a RAB meeting about the work it is doing to design systems for treatment of their municipal water supply. This information has been provided by the City for informational purposes and to reassure members of the public that progress is being made to install permanent treatment on the City of Portsmouth municipal supply wells.*

Question: If the Air Force implies that it is up to the City of Portsmouth to find clean drinking water after the Air Force contaminated it, does the City of Portsmouth have any alternative sites for drinking water that they are reviewing, rather than spend millions of dollars?

Response: *The City of Portsmouth has done extensive research regarding other potential water sources in the Portsmouth area and determined that there are limited opportunities for alternate well locations. Four comprehensive Water Supply Alternative studies have been conducted by the City of Portsmouth since 1979. A representative of the Department of Public Works presented a summary of these efforts during the July 27, 2017 RAB meeting; a copy of this presentation may be obtained by contacting the City of Portsmouth.*

Question: It was stated by Peter Forbes/Air Force representatives that EPA is requiring them to remediate the drinking water supply by fixing the existing well system (with a mechanical solution that might take decades to treat or not be as effective as planned). EPA, please provide a thorough statement in writing why this is completely necessary? Why is it not more cost effective and prudent over the next 50-100 years to seek other drinking water supplies within the largest possible watershed that services Portsmouth while the watershed is 'healing'? Would you not be wasting tax payers' money by requiring a mechanical filter system be put into place when a standard well location in another part of town or another community might better serve the purpose and need for this location in a safer manner?

Response provided above.

Question: Is there progress toward using alternative firefighting foam that doesn't have the current chemical makeup?

Response: Please see Department of Defense Aqueous Film Forming Foam Report to Congress, dated October 2017. This document is publically available at: http://www.denix.osd.mil/derp/home/documents/aqueous-film-forming-foam-report-to-congress/