

3225 MAIN STREET • P.O. BOX 226
BARNSTABLE, MASSACHUSETTS 02630

(508) 362-3828 • Fax (508) 362-3136 • www.capecodcommission.org



CAPE COD
COMMISSION

January 16, 2018

Angela Gallagher
Site Remediation Section
Southeast Regional Office
Department of Environmental Protection
20 Riverside Drive
Lakeville, MA 02347

Re: WSA-4-26179
Immediate Response Action
PFOS/PFOA in Groundwater

Dear Ms. Gallagher:

This is the 13th IRA monthly remedial monitoring and status report for the IRA approved by the Department in a letter dated November 10, 2016. This report includes a status report on the pump and treat system for the month of December 2017.

Pump and Treat System

The pump and treat system operated continuously throughout the month except for normal backwash and operations. Two sample rounds were collected. The influent PFOS and PFOA concentrations for this month was 1,600-1,700 ng/l (PFOS) and 64 ng/l to below the MRL for PFOA. The PFOS influent concentration is the lowest sustained concentration observed since PFAS recovery began. This is due to a combination of lower concentrations in groundwater being captured, and potentially a lower pump rate which has dropped below 30 gpm. The mid-vessel PFOS concentration was 780 and 470 ng/l and the lag vessel effluent had a detection of 11ng/l

BFTA

1

Immediate Response Action
January 16, 2018

PFOS in the initial round and below the MRL for the second round. The PFOA concentrations in effluent from the lag vessel was below the MRL for PFOA for both sampling rounds. The decrease of mid-vessel PFOS concentration combined with the low temperature (which delays iron bacteria growth) and continued vessel clean-outs has delayed the expected breakthrough in the lag vessel. The monthly pumped volume was 1.12 Million Gallons with an estimated removal of .007 kilograms of PFOS, which is the lowest monthly amount removed. I have recommended that the County clean the force mains to increase the pumping rate and for optimization assessment of the treatment system.

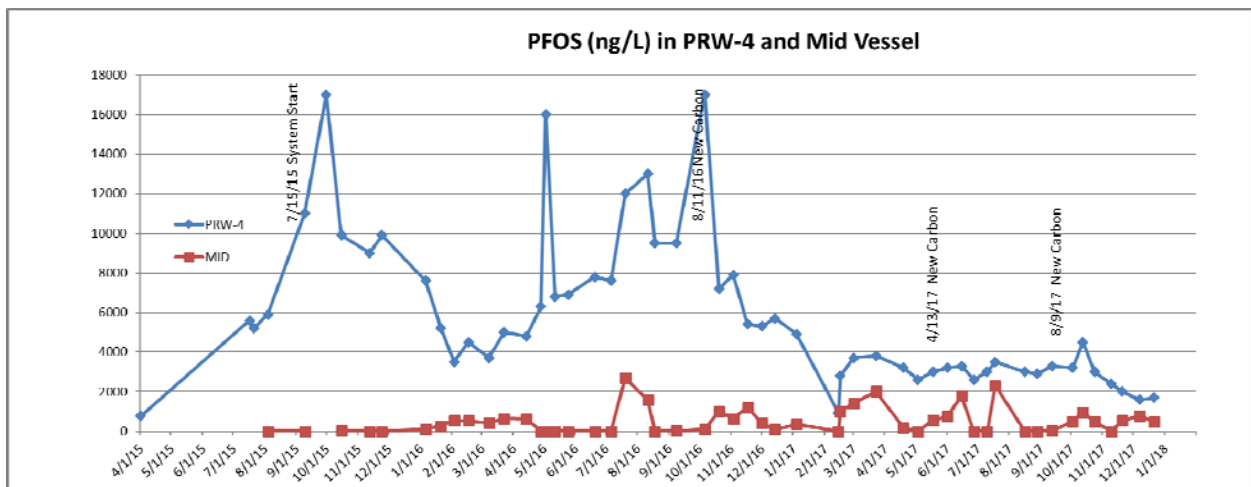


Figure 1 PFOS (ng/l) in PRW-4 and the Mid-Vessel

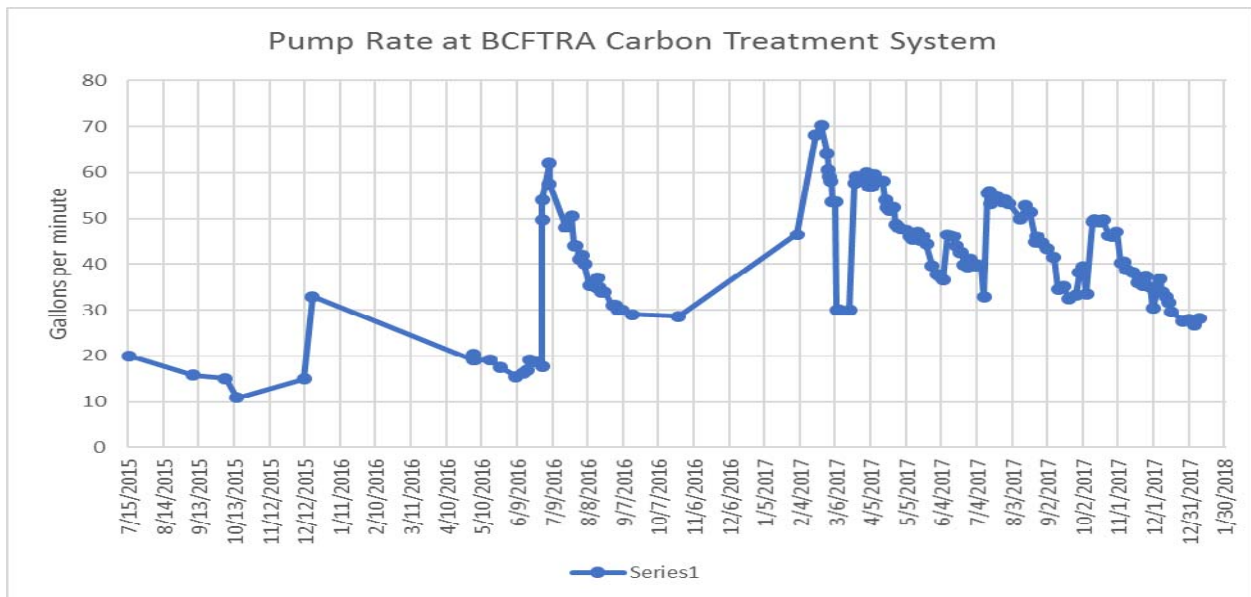


Figure 2 Pump Rate of the PRW-4 Recovery Well

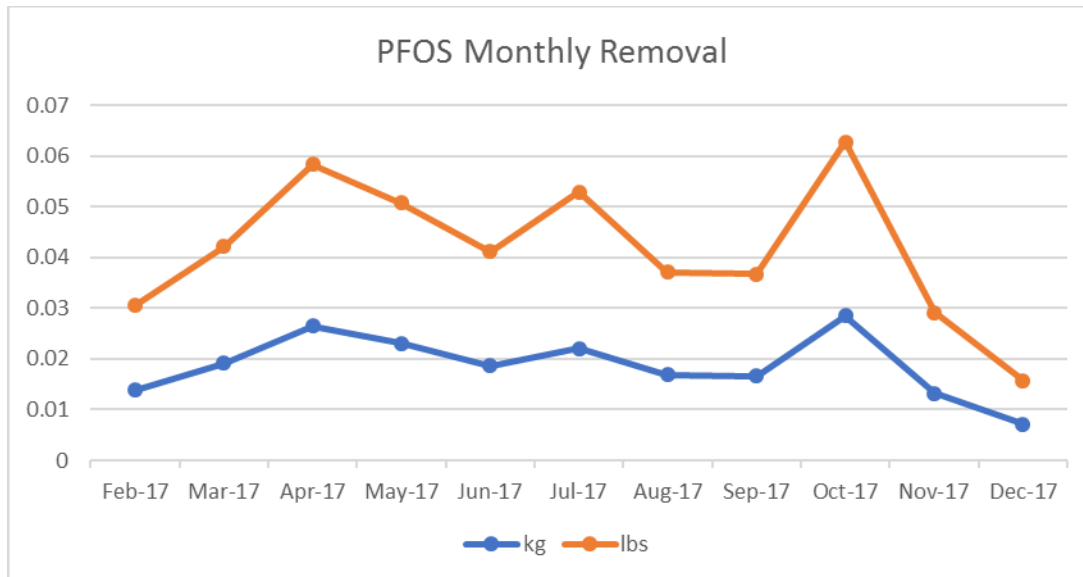


Figure 3 PFOS Monthly Removal in Kg

Soil Removal, Hot Spot Monitoring, Flintrock Pond and other Hot Spots

Staff are working with the County Administration to budget for cleaning the force mains, piloting at the Hot Spot, assessment of Flintrock Pond, and peer review of the containment system. A snap-shot sampling of the Hot Spot plume to evaluate downward trending PFAS concentrations in the containment system will be scheduled for later this winter. Last week I received approval to contract vendors for cleaning the lines.

Mary Dunn Wells

A major remedial immediate response action includes the carbon treatment of the Mary Dunn Wells to address the Imminent Health Hazard to the Hyannis community. The Settlement Agreement between the Town of Barnstable and the County requires that the County pay for its share of the capital infrastructure cost and the system's maintenance and operation. The County also must reserve amount for up to two carbon exchanges per year. The settlement agreement requires the Town to provide pumping and performance data to the County to verify and report on the Immediate Response Action.

The monthly Immediate Response Status reports will now include the carbon filter performance of the Mary Dunn Wellfield treatment system. The Hyannis Water Division has contracted with Suez Inc to perform the operation and maintenance and sampling for the treatment system. I have received performance data on the Mary Dunn Well field up to August of 2017. Therefore, I can only report on the effectiveness of the County's extended Immediate Response Action through to August of 2017. Presently, I only receive summaries of the lab data. The average influent concentration for Mary Dunn Wells was 115 ng/l for MD1, 236 ng/l for MD2 and 99 ng/l for MD3. All effluent concentrations for were below the reporting limit for PFOS and PFOA for these sampling rounds. Based on information reported to me, the Mary Dunn Wellfield treatment system is removing the PFAS compounds from the water supply and is addressing the Imminent Health Hazard by eliminating the exposure route to the community.

Table 1 PFOS (ng/l) in Mary Dunn Wells (Jan to August 2017)

	MD1	MD2	MD3
1/31/2017	130	210	ns
2/14/2017	100	210	ns
5/2/2017	140	ns	72
6/13/2017	ns	200	ns
6/19/2017	82	ns	ns
6/26/2017	ns	ns	72
7/12/2017	140	270	92
8/18/2017	98	290	160
Average (2017)	115	236	99

Please contact me if you have any questions on this submittal.

Sincerely,

Tom Cambareri
 Technical Services Director for Water Resources
 LSP #3788

Cc: Gerard Martin, DEP-SERO
 Jack Yunits, County Administrator

BFTA

Immediate Response Action

January 16, 2018