From:	Martinson, Mathew
To:	Molloy, Jennifer; Vakoc, Misha
Cc:	Zobrist, Marcus; Poulsom, Susan; Seyfried, Erin; Weber, Courtney; MacIntyre, Mark
Subject:	FW: WNAS Stormwater Discharges
Date:	Thursday, November 14, 2019 2:26:01 PM
Attachments:	20181023 Routine maintenance reveals toxic firefighting foam in base stormwater Whidbey News-Times copy.pdf CLOVER CREEK SAMPLES TO SEPT 2019 copy.xlsx.pdf

Jennifer, Misha,

I have information I want to share following my conversation with Mr. Richard Abraham, resident of Whidbey Island. I returned his call today at about 12:30 pm.

Mr. Abraham conveyed several concerns on the phone and then transmitted them via email below. His primary issue seems to be that he believes the Navy has sampled stormwater and detected things that they're not disclosing or sharing with anyone, including EPA. He made reference to two rounds of stormwater sampling in 2018 that he believes involves detection of pollutants that we ought to know about.

In the conversations, he pressed me on what EPA knew when. I framed my responses by letting him know the scope of this Branch relative to issues at Whidbey. I explained that you, Misha and I are not in a position to answer for the Agency when questions about the whole Agency are posed via phone. I also explained for him that we are managing a narrow issue, specifically, the development and issuance of a stormwater permit, and we're adhering to a process. He indicated that he didn't view government comment and response efforts as anything that would affect an outcome, and in response to that statement, I assured him that we are reviewing and responding to comments, and that any new information that is germane to the issuance of the MS4 permit will be considered carefully. I encouraged him to submit his concerns in writing through the comment process, which is open through today.

He also indicated that he understood that we were reissuing both the industrial stormwater and the MS4. Obviously, that indicates there is a miscommunication or misunderstanding occurring somewhere (no blame implied).

Thanks for your perseverance and teamwork on this permit. I know you have put a lot into it, and the new information is probably discouraging.

Regards,
Mat

Mathew J. Martinson, P.E., BCEE
CAPT, USPHS
Branch Chief, Permitting, Drinking Water and Infrastructure Branch
U.S. EPA, Region 10
Phone: 206-553-6334 (Direct)

From: Richard Abraham <(b) (6) >

Sent: Thursday, November 14, 2019 1:13 PM
To: Martinson.mathew@Epamail.epa.gov
Subject: WNAS Stormwater Discharges

Mr. Martinson,

This follows our phone call today. Thank you for taking the time to hear my concerns.

According to WNAS statements in the attached news article, the discovery of unexpected odors in a storm drain resulted in it being "resampled" in August of 2018. PFAS where not likely to be the cause of odors and PFASs weren't expected to be found. It is possible, if not likely, that other contaminants were tested for during the sampling in August of 2018 and prior to August 2018. Contaminants that might have been found would be in the discharges governed by the permit.

The Navy has only posted results of PFAS found in monthly sampling which began in September of 2018. (Results below). They have been repeatedly asked for the results of earlier sampling but have not made them available.

According to WNAS, the PFASs found in Clover Creek Water may come from contaminated groundwater entering the stormwater system. In addition to PFASs, 1,4-dioxane, trichloroethene and vinyl chloride are known to be in groundwater beneath portions of WNAS.

Rick Abraham

Rick Abraham

SAMPLE RESULTS FRON NAVY WEBSITE - POSTED OCTOBER 2019

Analyte - CAS Number - Conc. (ng/L) - DL - LOD - LOQ - Qualifiers - Batch - Extracted - Samp Size - Ana

PFBS 375-73-5 8.93 3.01 4.39 8.78 B8J0009 02-Oct-18 0.114 L 04-Oct-18 20:05 1 **Sep-18**
PFHxA 307-24-4 23.5 3.01 4.39 8.78 B8J0009 02-Oct-18 0.114 L 04-Oct-18 20:05 1
PFHpA 375-85-9 7.45 3.01 4.39 8.78 J B8J0009 02-Oct-18 0.114 L 04-Oct-18 20:05 1
PFHxS 355-46-4 46.7 3.01 4.39 8.78 B8J0009 02-Oct-18 0.114 L 04-Oct-18 20:05 1
PFOA 335-67-1 28.7 3.01 4.39 8.78 B8J0009 02-Oct-18 0.114 L 04-Oct-18 20:05 1
PFNA 375-95-1 ND 3.01 4.39 8.78 B8J0009 02-Oct-18 0.114 L 04-Oct-18 20:05 1
PFOS 1763-23-1 143 3.01 4.39 8.78 B8J0009 02-Oct-18 0.114 L 04-Oct-18 20:05 1

PFBS 375-73-5 10.5 2.92 4.27 8.52 B8K0215 02-Dec-18 0.117 L 04-Dec-18 18:02 1 **Nov-18**
PFHxA 307-24-4 27.9 2.92 4.27 8.52 B8K0215 02-Dec-18 0.117 L 04-Dec-18 18:02 1
PFHpA 375-85-9 11.2 2.92 4.27 8.52 B8K0215 02-Dec-18 0.117 L 04-Dec-18 18:02 1
PFHxS 355-46-4 56.5 2.92 4.27 8.52 B8K0215 02-Dec-18 0.117 L 04-Dec-18 18:02 1
PFOA 335-67-1 31.6 2.92 4.27 8.52 B8K0215 02-Dec-18 0.117 L 04-Dec-18 18:02 1
PFNA 375-95-1 ND 2.92 4.27 8.52 B8K0215 02-Dec-18 0.117 L 04-Dec-18 18:02 1
PFOS 1763-23-1 124 2.92 4.27 8.52 B8K0215 02-Dec-18 0.117 L 04-Dec-18 18:02 1

PFBS 375-73-5 10.5 2.92 4.27 8.52 B8K0215 02-Dec-18 0.117 L 04-Dec-18 18:02 1 **Dec-18**
PFHxA 307-24-4 19.0 3.09 4.50 9.03 B8L0181 27-Dec-18 0.111 L 30-Dec-18 01:43 1
PFHpA 375-85-9 8.28 3.09 4.50 9.03 J B8L0181 27-Dec-18 0.111 L 30-Dec-18 01:43 1
PFHxS 355-46-4 57.0 3.09 4.50 9.03 B8L0181 27-Dec-18 0.111 L 30-Dec-18 01:43 1
PFOA 335-67-1 22.4 3.09 4.50 9.03 B8L0181 27-Dec-18 0.111 L 30-Dec-18 01:43 1
PFNA 375-95-1 ND 3.09 4.50 9.03 B8L0181 27-Dec-18 0.111 L 30-Dec-18 01:43 1
PFOS 1763-23-1 68.1 3.09 4.50 9.03 B8L0181 27-Dec-18 0.111 L 30-Dec-18 01:43 1

PFBS 375-73-5 13.8 3.02 4.42 8.82 B9A0086 11-Jan-19 0.113 L 14-Jan-19 23:31 1
PFHxA 307-24-4 25.1 3.02 4.42 8.82 B9A0086 11-Jan-19 0.113 L 14-Jan-19 23:31 1 **Jan-19**
PFHpA 375-85-9 9.78 3.02 4.42 8.82 B9A0086 11-Jan-19 0.113 L 14-Jan-19 23:31 1
PFHxS 355-46-4 79.4 3.02 4.42 8.82 B9A0086 11-Jan-19 0.113 L 14-Jan-19 23:31 1
PFOA 335-67-1 31.2 3.02 4.42 8.82 B9A0086 11-Jan-19 0.113 L 14-Jan-19 23:31 1
PFNA 375-95-1 ND 3.02 4.42 8.82 B9A0086 11-Jan-19 0.113 L 14-Jan-19 23:31 1
PFOS 1763-23-1 81.9 3.02 4.42 8.82 B9A0086 11-Jan-19 0.113 L 14-Jan-19 23:31

PFBS 375-73-5 14.5 3.06 4.46 8.93 B9C0010 04-Mar-19 0.112 L 05-Mar-19 18:49 1 **Feb-19**
PFHxA 307-24-4 23.6 3.06 4.46 8.93 B9C0010 04-Mar-19 0.112 L 05-Mar-19 18:49 1
PFHpA 375-85-9 11.4 3.06 4.46 8.93 B9C0010 04-Mar-19 0.112 L 05-Mar-19 18:49 1
PFHxS 355-46-4 90.8 3.06 4.46 8.93 B9C0010 04-Mar-19 0.112 L 05-Mar-19 18:49 1
PFOA 335-67-1 30.9 3.06 4.46 8.93 B9C0010 04-Mar-19 0.112 L 05-Mar-19 18:49 1
PFNA 375-95-1 ND 3.06 4.46 8.93 B9C0010 04-Mar-19 0.112 L 05-Mar-19 18:49 1
PFOS 1763-23-1 95.5 3.06 4.46 8.93 B9C0010 04-Mar-19 0.112 L 05-Mar-19 18:49 1

PFBS 375-73-5 **11.6** 3.00 4.39 8.77 B9C0141 21-Mar-19 0.114 L 22-Mar-19 23:26 1 Mar-19
PFHxA 307-24-4 26.0 3.00 4.39 8.77 B9C0141 21-Mar-19 0.114 L 22-Mar-19 23:26 1
PFHpA 375-85-9 10.5 3.00 4.39 8.77 B9C0141 21-Mar-19 0.114 L 22-Mar-19 23:26 1
PFHxS 355-46-4 76.2 3.00 4.39 8.77 B9C0141 21-Mar-19 0.114 L 22-Mar-19 23:26 1
PFOA 335-67-1 36.5 3.00 4.39 8.77 B9C0141 21-Mar-19 0.114 L 22-Mar-19 23:26 1
PFNA 375-95-1 ND 3.00 4.39 8.77 B9C0141 21-Mar-19 0.114 L 22-Mar-19 23:26 1
PFOS 1763-23-1 89.5 3.00 4.39 8.77 B9C0141 21-Mar-19 0.114 L 22-Mar-19 23:26 1

PFBS 375-73-5 7.72 3.03 4.42 8.86 J B9D0164 19-Apr-19 0.113 L 22-Apr-19 22:22 1 **Apr-19**
PFHxA 307-24-4 21.1 3.03 4.42 8.86 B9D0164 19-Apr-19 0.113 L 22-Apr-19 22:22 1
PFHpA 375-85-9 7.81 3.03 4.42 8.86 J, Q B9D0164 19-Apr-19 0.113 L 22-Apr-19 22:22 1
PFHxS 355-46-4 52.3 3.03 4.42 8.86 B9D0164 19-Apr-19 0.113 L 22-Apr-19 22:22 1
PFOA 335-67-1 25.1 3.03 4.42 8.86 B9D0164 19-Apr-19 0.113 L 22-Apr-19 22:22 1
PFNA 375-95-1 ND 3.03 4.42 8.86 B9D0164 19-Apr-19 0.113 L 22-Apr-19 22:22 1
PFOS 1763-23-1 60.9 3.03 4.42 8.86 B9D0164 19-Apr-19 0.113 L 22-Apr-19 22:22 1

PFBS 375-73-5 9.79 2.95 4.31 8.60 B9E0080 10-May-19 0.116 L 13-May-19 18:08 1 **May-19**
PFHxA 307-24-4 26.9 2.95 4.31 8.60 B9E0080 10-May-19 0.116 L 13-May-19 18:08 1
PFHpA 375-85-9 8.44 2.95 4.31 8.60 J B9E0080 10-May-19 0.116 L 13-May-19 18:08 1
PFHxS 355-46-4 66.8 2.95 4.31 8.60 B9E0080 10-May-19 0.116 L 13-May-19 18:08 1
PFOA 335-67-1 38.8 2.95 4.31 8.60 B9E0080 10-May-19 0.116 L 13-May-19 18:08 1
PFNA 375-95-1 ND 2.95 4.31 8.60 B9E0080 10-May-19 0.116 L 13-May-19 18:08 1

PFOS 1763-23-1 79.7 2.95 4.31 8.60 B9E0080 10-May-19 0.116 L 13-May-19 18:08 1

Jun-19

PFBS 375-73-5 7.81 2.99 4.39 8.74 J B9F0133 17-Jun-19 0.114 L 18-Jun-19 23:39 1
PFHxA 307-24-4 18.0 2.99 4.39 8.74 B9F0133 17-Jun-19 0.114 L 18-Jun-19 23:39 1
PFHpA 375-85-9 6.17 2.99 4.39 8.74 J B9F0133 17-Jun-19 0.114 L 18-Jun-19 23:39 1
PFHxS 355-46-4 46.4 2.99 4.39 8.74 B9F0133 17-Jun-19 0.114 L 18-Jun-19 23:39 1
PFOA 335-67-1 23.1 2.99 4.39 8.74 B9F0133 17-Jun-19 0.114 L 18-Jun-19 23:39 1
PFNA 375-95-1 ND 2.99 4.39 8.74 B9F0133 17-Jun-19 0.114 L 18-Jun-19 23:39 1
PFOS 1763-23-1 57.8 2.99 4.39 8.74 B9F0133 17-Jun-19 0.114 L 18-Jun-19 23:39 1

Jul-19

PFBS 375-73-5 7.95 2.97 4.35 8.66 J B9G0126 13-Jul-19 0.115 L 17-Jul-19 17:00 1
PFHxA 307-24-4 21.4 2.97 4.35 8.66 B9G0126 13-Jul-19 0.115 L 17-Jul-19 17:00 1
PFHpA 375-85-9 5.74 2.97 4.35 8.66 J B9G0126 13-Jul-19 0.115 L 17-Jul-19 17:00 1
PFHxS 355-46-4 47.2 2.97 4.35 8.66 B9G0126 13-Jul-19 0.115 L 17-Jul-19 17:00 1
PFOA 335-67-1 23.0 2.97 4.35 8.66 B9G0126 13-Jul-19 0.115 L 17-Jul-19 17:00 1
PFNA 375-95-1 ND 2.97 4.35 8.66 B9G0126 13-Jul-19 0.115 L 17-Jul-19 17:00 1
PFOS 1763-23-1 58.3 2.97 4.35 8.66 B9G0126 13-Jul-19 0.115 L 17-Jul-19 17:00 1

Aug-19

PFHxA 307-24-4 19.9 3.14 4.59 9.17 B9H0347 30-Aug-19 0.109 L 04-Sep-19 20:03 1
PFHpA 375-85-9 5.43 3.14 4.59 9.17 J B9H0347 30-Aug-19 0.109 L 04-Sep-19 20:03 1
PFHxS 355-46-4 44.3 3.14 4.59 9.17 B9H0347 30-Aug-19 0.109 L 04-Sep-19 20:03 1
PFOA 335-67-1 39.3 3.14 4.59 9.17 B9H0347 30-Aug-19 0.109 L 04-Sep-19 20:03 1
PFNA 375-95-1 ND 3.14 4.59 9.17 B9H0347 30-Aug-19 0.109 L 04-Sep-19 20:03 1
PFOS 1763-23-1 76.5 3.14 4.59 9.17 B9H0347 30-Aug-19 0.109 L 04-Sep-19 20:03 1

Sep-19

PFBS 375-73-5 3.39 3.05 4.46 8.90 J B9I0195 23-Sep-19 0.112 L 24-Sep-19 19:24 1
PFHxA 307-24-4 14.1 3.05 4.46 8.90 B9I0195 23-Sep-19 0.112 L 24-Sep-19 19:24 1
PFHpA 375-85-9 5.46 3.05 4.46 8.90 J B9I0195 23-Sep-19 0.112 L 24-Sep-19 19:24 1
PFHxS 355-46-4 36.7 3.05 4.46 8.90 B9I0195 23-Sep-19 0.112 L 24-Sep-19 19:24 1
PFOA 335-67-1 20.3 3.05 4.46 8.90 B9I0195 23-Sep-19 0.112 L 24-Sep-19 19:24 1
PFNA 375-95-1 ND 3.05 4.46 8.90 B9I0195 23-Sep-19 0.112 L 24-Sep-19 19:24 1
PFOS 1763-23-1 50.4 3.05 4.46 8.90 B9I0195 23-Sep-19 0.112 L 24-Sep-19 19:24 1

alyzed Dilution

PFBS	8.93
PFHxA	23.5
PFHpA	7.45
PFHxS	46.7
PFOA	28.7
PFNA	
PFOS	143
TOTAL	258.28

PFBS	**10.5**	Sample ID: PFC-AF-01-03-112918
PFHxA	**27.9**	Matrix:
PFHpA	**11.2**	Laboratory Data
PFHxS	**56.5**	Lab Sample: 1803788-03
PFOA	**31.6**	PFAS Isotope Dilution Method
PFNA		SKOOKUM Contract Services Aqueous Column: BEH C18
PFOS	**124**	29-Nov-18 12:20 Date Received: 30-Nov-18 10:50
TOTAL	**261.7**	Location: (b) (6)

PFBS	**10.5**	Sample ID: PFC-AF-01-03-121918
PFHxA	**19**	Matrix:
PFHpA	**8.28**	Laboratory Data
PFHxS	**57**	Lab Sample: 1804146-03
PFOA	**22.4**	PFAS Isotope Dilution Method
PFNA		SKOOKUM Contract Services Aqueous Column: BEH C18
PFOS	**68.1**	**19-Dec-18** 12:30 Date Received: 20-Dec-18 10:12
TOTAL	**185**	Location: (b) (6)

PFBS	**13.8**	PFC Monthly Sites, FY19 Dec
PFHxA	**25.1**	Sample ID: PFC-AF-01-03-010819
PFHpA	**9.78**	Matrix:
PFHxS	**79.4**	Laboratory Data
PFOA	**31.2**	Lab Sample: 1900091-03
PFNA		PFAS Isotope Dilution Method
PFOS	**81.9**	SKOOKUM Contract Services Aqueous Column: BEH C18
TOTAL	**241.18**	**08-Jan-19** 09:00 Date Received: 10-Jan-19 10:47
		Location: (b) (6)

PFBS	**14.5**	Client Data
PFHxA	**23.6**	PFC Monthly Sites, Part A, FY19 Feb
PFHpA	**11.4**	Sample ID: PFC-AF-M-03-022619
PFHxS	**90.8**	Matrix:
PFOA	**30.9**	Laboratory Data
PFNA		Lab Sample: 1900381-03
PFOS	**95.5**	PFAS Isotope Dilution Method
TOTAL	**266.7**	SKOOKUM Contract Services Aqueous Column: BEH C18
		26-Feb-19 12:50 Date Received: 01-Mar-19 11:19
		Location: (b) (6)

PFBS	**11.6**	Client Data
PFHxA	**26**	PFC Monthly Sampling, FY19 Mar
PFHpA	**10.5**	Sample ID: PFC-AF-01-03-031819
PFHxS	**76.2**	Matrix:
PFOA	**36.5**	Laboratory Data
PFNA		Lab Sample: 1900494-03
PFOS	**89.5**	PFAS Isotope Dilution Method
TOTAL	**250.3**	SKOOKUM Contract Services Aqueous Column: BEH C18
		18-Mar-19 10:10 Date Received: 20-Mar-19 11:18
		Location: (b) (6)
		Analyte CAS Number Conc. (ng/L) DL

PFBS	**7.72**	Client Data
PFHxA	**21.1**	PFC Monthly Sampling Part A, FY19 Apr
PFHpA	**7.81**	Sample ID: PFC-AF-01-03-041219
PFHxS	**52.3**	Matrix:
PFOA	**25.1**	Laboratory Data
PFNA		Lab Sample: 1900780-03
PFOS	**60.9**	PFAS Isotope Dilution Method
TOTAL	**174.93**	SKOOKUM Contract Services Aqueous Column: BEH C18
		12-Apr-19 10:55 Date Received: 18-Apr-19 09:41
		Location: (b) (6)

PFBS	**9.79**	Sample ID: PFC-AF-01-03-050719
PFHxA	**26.9**	Matrix:
PFHpA	**8.44**	Laboratory Data
PFHxS	**66.8**	Lab Sample: 1901042-03
PFOA	**38.8**	PFAS Isotope Dilution Method
PFNA		SKOOKUM Contract Services Aqueous Column: BEH C18

PFOS	79.7	**07-May-19** 10:15 Date Received: 09-May-19 09:44	
TOTAL	230.43	Location: (b) (6)	PFC Monthly

PFBS	7.81	Sample ID: PFC-AF-01-03-061119
PFHxA	18	Matrix:
PFHpA	6.17	Laboratory Data
PFHxS	46.4	Lab Sample: 1901559-03
PFOA	23.1	PFAS Isotope Dilution Method
PFNA	ND	SKOOKUM Contract Services Aqueous Column: BEH C18
PFOS	57.8	**11-Jun-19** 14:20 Date Received: 13-Jun-19 09:59
TOTAL	159.28	Location: (b) (6)
		PFC Monthly Sampling - FY19 June

PFBS	7.95	Sample ID: PFC-AF-01-03-071019	
PFHxA	21.4	Matrix:	
PFHpA	5.74	Laboratory Data	
PFHxS	47.2	Lab Sample: 1902057-03	
PFOA	23	PFAS Isotope Dilution Method	
PFNA		SKOOKUM Contract Services Aqueous Column: BEH C18	
PFOS	58.3	10-Jul-19 08:40 Date Received: 11-Jul-19 11:16	
TOTAL	163.59	Location: (b) (6)	PFC Monthly

PFBS	8.24	Sample ID: PFC-AF-01-03-082719
PFHxA	19.9	Matrix:
PFHpA	5.43	Laboratory Data
PFHxS	44.3	Lab Sample: 1902866-03
PFOA	39.3	PFAS Isotope Dilution Method
PFNA		SKOOKUM Contract Services Aqueous Column: BEH C18
PFOS	76.5	**27-Aug-19** 14:05 Date Received: 29-Aug-19 10:09
TOTAL	193.67	Location: (b) (6)

PFBS	3.39	Sample ID: PFC-AF-01-03-091719	
PFHxA	14.1	Matrix:	
PFHpA	5.46	Laboratory Data	
PFHxS	36.7	Lab Sample: 1903180-03	
PFOA	20.3	PFAS Isotope Dilution Method	
PFNA		SKOOKUM Contract Services Aqueous Column: BEH C18	
PFOS	50.4	**17-Sep-19** 14:45 Date Received: 19-Sep-19 10:28	
TOTAL	130.35	Location: (b) (6)	PFC Monthly

Sampling Part A, FY19 May

PFC Monthly Sampling - FY19 June

Sampling Part A, FY19 Jul

Sampling - FY19 Sep

manhole and ones adjacent to it were cleaned and resampled in early August.

On Sept. 27, she and her team sampled in Clover Valley Creek, the property line and a pump station at Dike Road. In early October, results came back that showed the contaminates were leaving the base via the creek. Results found 172 parts per trillion at the installation’s

The public
works
department
at the base,
personnel
from the
Navy’s
regional
o!ce and the
EPA and
state
Department
of Health
are involved
in
the
investigatio
n.
regional o!ce and the EPA and state Department of Health are involved in
the investigation.

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investigation. Photo by Laura Guido/Whidbey News-Times

Routine maintenance reveals toxic firefighting foam in base stormwater

By Laura Guido

Tuesday, October 23, 2018 4:23pm | NEWS

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• *Anyone who uses surface water near Clover Valley Creek as drinking water should contact the base PAO at 360-257-2286 or email whdb_naswi_pao@navy.mil*

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