

TOWN OF COUPEVILLE & FT. CASEY TREATMENT PLANT (KEYSTONE HILL WELL 108)

PO BOX 725, COUPEVILLE, WA 98239

Sample ID: WI-CV-1RW23-1017

Date Collected: 10/19/2017

Time Collected: 14:25

Preliminary Results Provided: December 22, 2017

RECEIVED

JAN 02 2018

TOWN OF COUPEVILLE

Below are the **preliminary** test results for your drinking water sampled on October 19, 2017. These results indicate that your drinking water is below the U.S. Environmental Protection Agency (EPA)'s lifetime health advisory (LHA) for Perfluorooctane Sulfonate (PFOS) and/or Perfluorooctanoic acid (PFOA). Once the Navy receives the final, validated results we will notify you and provide you with a copy of the validated results.

The Navy's Environmental Restoration Program analyzed for fourteen per- and polyfluoroalkyl substances (PFAS) as part of this drinking water investigation; however, PFOA and PFOS are the only PFAS for which EPA has established a LHA. The Navy provides bottled water when the sample results exceed the EPA's LHA. The Navy also analyzed for additional parameters for wells with PFAS detections, including select dissolved metals and general water quality parameters. These results are shown below.

If the EPA or the State of Washington Department of Ecology sets health advisories for other PFAS compounds in the future, then the Navy will evaluate necessary actions to take based on the health advisories.

Results of Laboratory Analytical Tests for PFAS with EPA Health Advisory Levels

Chemical Name	October 2017	Health Advisory (ppt)
	Result (ppt)	
Perfluorooctane Sulfonate (PFOS)	ND	70
Perfluorooctanoic acid (PFOA)	64.7	70
PFOS and PFOA (cumulative) ¹	64.7	70

¹ Only detected values of PFOS and PFOA are summed.

J - Analyte present, but result is estimated

ND - Analyte not detected in the sample

ppt - parts per trillion

Results for other PFAS where no EPA Health Advisory Levels have been established

Chemical Name	October 2017	Health Advisory (ppt)
	Result (ppt)	
Perfluorobutane sulfonate (PFBS)	14.8	Not applicable
Perfluorohexanoic acid (PFHxA)	33.7 B	Not applicable
Perfluoroheptanoic acid (PFHpA)	10.6	Not applicable
Perfluorohexane sulfonate (PFHxS)	65.2	Not applicable
Perfluorononanoic acid (PFNA)	ND	Not applicable
Perfluoro-n-decanoic acid (PFDA)	ND	Not applicable
N-Ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	ND	Not applicable
N-Methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	ND	Not applicable

Perfluoro-n-undecanoic acid (PFUnA)	ND	Not applicable
Perfluoro-n-dodecanoic acid (PFDoA)	ND	Not applicable
Perfluoro-n-tridecanoic acid (PFTrDA)	ND	Not applicable
Perfluoro-n-tetradecanoic acid (PFTeDA)	ND	Not applicable

J - Analyte present, but result is estimated

B - Analyte not detected above the level reported in blanks

ND - Analyte not detected in the sample

ppt - parts per trillion

Results for other chemical parameters

Chemical Name	October 2017
	Result (units mg/L)
Total Metals	
Iron	0.47 U
Dissolved Metals	
Aluminum	0.44 U
Calcium	64
Iron	0.47 U
Magnesium	31
Manganese	0.043
Potassium	5.1
Silicon	17
Wet Chemistry	
Alkalinity	240
Ammonia	0.15 J
Bicarbonate Alkalinity as CaCO ₃	240
Carbonate Alkalinity as CaCO ₃	5.0 U
Chloride	28
Fluoride	0.041 J
Hydroxide Alkalinity as CaCO ₃	5.0 U
Nitrate/Nitrite	2.1
Phosphate	0.11 H
Sulfate	25
Total dissolved solids (TDS)	390 B
Total suspended solids (TSS)	2.0 U
Wet Chemistry	Result (units CM-1)
UV254	0.0173
Dissolved Wet Chemistry	Result (units mg/L)
Dissolved organic carbon	1.2

CM-1 - Reciprocal centimeters

H - The analyte was analyzed outside of holding time.

J - Analyte present. Value may or may not be accurate or precise

MG/L - Milligrams per liter

U - The material was analyzed for, but not detected

Sample ID: WI-CV-1RW23-1017

EPA Method 537

Client Data		Laboratory Data	
Name:	CH2M Hill	Lab Sample:	1701526-12
Project:	CLEAN CTO-4041 NASWI	Date Received:	21-Oct-17 09:30
Location:	DW	Matrix:	Drinking Water
		Date Collected:	19-Oct-17 14:25
		Column:	BEHC18

Analyte	Conc. (ug/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	0.0148	0.000427	0.00482	0.00964		B7J0173	26-Oct-17	0.259 L	01-Nov-17 03:15	1
PFHxA	0.0337	0.000639	0.00482	0.00964	B	B7J0173	26-Oct-17	0.259 L	01-Nov-17 03:15	1
PFHpA	0.0106	0.000514	0.00482	0.00964		B7J0173	26-Oct-17	0.259 L	01-Nov-17 03:15	1
PFHxS	0.0652	0.000400	0.00482	0.00964		B7J0173	26-Oct-17	0.259 L	01-Nov-17 03:15	1
PFOA	0.0647	0.00104	0.00482	0.00964		B7J0173	26-Oct-17	0.259 L	01-Nov-17 03:15	1
PFNA	ND	0.00139	0.00482	0.00964		B7J0173	26-Oct-17	0.259 L	01-Nov-17 03:15	1
PFOS	ND	0.00100	0.00482	0.00964		B7J0173	26-Oct-17	0.259 L	01-Nov-17 03:15	1
PFDA	ND	0.00123	0.00482	0.00964		B7J0173	26-Oct-17	0.259 L	01-Nov-17 03:15	1
MeFOSAA	ND	0.00293	0.00482	0.00964		B7J0173	26-Oct-17	0.259 L	01-Nov-17 03:15	1
EtFOSAA	ND	0.00186	0.00482	0.00964		B7J0173	26-Oct-17	0.259 L	01-Nov-17 03:15	1
PFUnA	ND	0.000246	0.00482	0.00964		B7J0173	26-Oct-17	0.259 L	01-Nov-17 03:15	1
PFDoA	ND	0.000917	0.00482	0.00964		B7J0173	26-Oct-17	0.259 L	01-Nov-17 03:15	1
PFTtDA	ND	0.000909	0.00482	0.00964		B7J0173	26-Oct-17	0.259 L	01-Nov-17 03:15	1
PFTeDA	ND	0.000749	0.00482	0.00964		B7J0173	26-Oct-17	0.259 L	01-Nov-17 03:15	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	107	70 - 130		B7J0173	26-Oct-17	0.259 L	01-Nov-17 03:15	1
13C2-PFDA	SURR	102	70 - 130		B7J0173	26-Oct-17	0.259 L	01-Nov-17 03:15	1
d5-EtFOSAA	SURR	103	70 - 130		B7J0173	26-Oct-17	0.259 L	01-Nov-17 03:15	1

When reported, PFHxS, PFOA and PFOS include both linear and branched isomers.
 Only the linear isomer is reported for all other analytes.

DL - Detection Limit
 LOD - Limit of Detection
 LOQ - Limit of quantitation
 LCL-UCL - Lower control limit - upper control limit
 Results reported to the DL.

TOWN OF COUPEVILLE & FT. CASEY TREATMENT PLANT (POST TREATMENT, DISTRIBUTION POINT)
 PO BOX 725, COUPEVILLE, WA 98239
 Sample ID: WI-CV-1RW27-1017
 Date Collected: 10/19/2017
 Time Collected: 12:10
 Preliminary Results Provided: December 22, 2017

RECEIVED

JAN 02 2018

TOWN OF COUPEVILLE

Below are the **preliminary** test results for your drinking water sampled on October 19, 2017. These results indicate that your drinking water is below the U.S. Environmental Protection Agency (EPA)'s lifetime health advisory (LHA) for Perfluorooctane Sulfonate (PFOS) and/or Perfluorooctanoic acid (PFOA). Once the Navy receives the final, validated results we will notify you and provide you with a copy of the validated results.

The Navy's Environmental Restoration Program analyzed for fourteen per- and polyfluoroalkyl substances (PFAS) as part of this drinking water investigation; however, PFOA and PFOS are the only PFAS for which EPA has established a LHA. The Navy provides bottled water when the sample results exceed the EPA's LHA. The Navy also analyzed for additional parameters for wells with PFAS detections, including select dissolved metals and general water quality parameters. These results are shown below.

If the EPA or the State of Washington Department of Ecology sets health advisories for other PFAS compounds in the future, then the Navy will evaluate necessary actions to take based on the health advisories.

Results of Laboratory Analytical Tests for PFAS with EPA Health Advisory Levels

Chemical Name	October 2017	Health Advisory (ppt)
	Result (ppt)	
Perfluorooctane Sulfonate (PFOS)	ND	70
Perfluorooctanoic acid (PFOA)	36.8	70
PFOS and PFOA (cumulative) ¹	36.8	70

¹ Only detected values of PFOS and PFOA are summed.

J - Analyte present, but result is estimated

ND - Analyte not detected in the sample

ppt - parts per trillion

Results for other PFAS where no EPA Health Advisory Levels have been established

Chemical Name	October 2017	Health Advisory (ppt)
	Result (ppt)	
Perfluorobutane sulfonate (PFBS)	9.46 J	Not applicable
Perfluorohexanoic acid (PFHxA)	19.9 B	Not applicable
Perfluoroheptanoic acid (PFHpA)	5.31 J	Not applicable
Perfluorohexane sulfonate (PFHxS)	38.8	Not applicable
Perfluorononanoic acid (PFNA)	ND	Not applicable
Perfluoro-n-decanoic acid (PFDA)	ND	Not applicable
N-Ethylperfluoro-1-ocatanesulfonamidoacetic acid (EtFOSAA)	ND	Not applicable
N-Methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	ND	Not applicable

Perfluoro-n-undecanoic acid (PFUnA)	ND	Not applicable
Perfluoro-n-dodecanoic acid (PFDoA)	ND	Not applicable
Perfluoro-n-tridecanoic acid (PFTrDA)	ND	Not applicable
Perfluoro-n-tetradecanoic acid (PFTeDA)	ND	Not applicable

J - Analyte present, but result is estimated

B - Analyte not detected above the level reported in blanks

ND - Analyte not detected in the sample

ppt - parts per trillion

Results for other chemical parameters

Chemical Name	October 2017
	Result (units mg/L)
Total Metals	
Iron	0.47 U
Dissolved Metals	
Aluminum	0.44 U
Calcium	61
Iron	0.47 U
Magnesium	34
Manganese	0.0044 J
Potassium	6.1
Silicon	17
Wet Chemistry	
Alkalinity	250
Ammonia	0.12 J
Bicarbonate Alkalinity as CaCO ₃	250
Carbonate Alkalinity as CaCO ₃	5.0 U
Chloride	37
Fluoride	0.070 J
Hydroxide Alkalinity as CaCO ₃	5.0 U
Nitrate/Nitrite	2.2
Phosphate	0.19 H
Sulfate	22
Total dissolved solids (TDS)	420 B
Total suspended solids (TSS)	2.0 U
Wet Chemistry	Result (units CM-1)
UV254	0.0243
Dissolved Wet Chemistry	Result (units mg/L)
Dissolved organic carbon	1.7

CM-1 - Reciprocal centimeters

H - The analyte was analyzed outside of holding time.

J - Analyte present. Value may or may not be accurate or precise

MG/L - Milligrams per liter

U - The material was analyzed for, but not detected

Sample ID: WI-CV-1RW27-1017										EPA Method 537					
Client Data					Laboratory Data										
Name:	CH2M Hill	Matrix:	Drinking Water	Lab Sample:	1701526-06	Column:	BEH C18								
Project:	CLEAN CTO-4041 NASW1	Date Collected:	19-Oct-17 12:10	Date Received:	21-Oct-17 09:30										
Location:	DW														
Analyte	Conc. (ug/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution					
PFBS	0.00946	0.000438	0.00495	0.00989	J	B7J0173	26-Oct-17	0.253 L	01-Nov-17 01:22	1					
PFHxA	0.0199	0.000656	0.00495	0.00989	B	B7J0173	26-Oct-17	0.253 L	01-Nov-17 01:22	1					
PFHpA	0.00531	0.000527	0.00495	0.00989	J	B7J0173	26-Oct-17	0.253 L	01-Nov-17 01:22	1					
PFHxS	0.0388	0.000411	0.00495	0.00989		B7J0173	26-Oct-17	0.253 L	01-Nov-17 01:22	1					
PFOA	0.0368	0.00107	0.00495	0.00989		B7J0173	26-Oct-17	0.253 L	01-Nov-17 01:22	1					
PFNA	ND	0.00142	0.00495	0.00989		B7J0173	26-Oct-17	0.253 L	01-Nov-17 01:22	1					
PFOS	ND	0.00103	0.00495	0.00989		B7J0173	26-Oct-17	0.253 L	01-Nov-17 01:22	1					
PFDA	ND	0.00127	0.00495	0.00989		B7J0173	26-Oct-17	0.253 L	01-Nov-17 01:22	1					
MeFOSAA	ND	0.00301	0.00495	0.00989		B7J0173	26-Oct-17	0.253 L	01-Nov-17 01:22	1					
EtFOSAA	ND	0.00191	0.00495	0.00989		B7J0173	26-Oct-17	0.253 L	01-Nov-17 01:22	1					
PFUnA	ND	0.000252	0.00495	0.00989		B7J0173	26-Oct-17	0.253 L	01-Nov-17 01:22	1					
PFDoA	ND	0.000942	0.00495	0.00989		B7J0173	26-Oct-17	0.253 L	01-Nov-17 01:22	1					
PFTtDA	ND	0.000933	0.00495	0.00989		B7J0173	26-Oct-17	0.253 L	01-Nov-17 01:22	1					
PFTeDA	ND	0.000769	0.00495	0.00989		B7J0173	26-Oct-17	0.253 L	01-Nov-17 01:22	1					
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution						
13C2-PFHxA	SURR	103	70 - 130		B7J0173	26-Oct-17	0.253 L	01-Nov-17 01:22	1						
13C2-PFDA	SURR	97.7	70 - 130		B7J0173	26-Oct-17	0.253 L	01-Nov-17 01:22	1						
d5-EtFOSAA	SURR	111	70 - 130		B7J0173	26-Oct-17	0.253 L	01-Nov-17 01:22	1						

When reported, PFHxS, PFOA and PFOA include both linear and branched isomers.
 Only the linear isomer is reported for all other analytes.

DL - Detection Limit
 LOD - Limit of Detection
 LOQ - Limit of quantitation
 LCL-LCL- Lower control limit - upper control limit
 Results reported to the DL.

TOWN OF COUPEVILLE & FT. CASEY TREATMENT PLANT (WELL 287)

PO BOX 725, COUPEVILLE, WA 98239

Sample ID: WI-CV-1RW60-0117

Date Collected: 10/19/2017

Time Collected: 15:30

Preliminary Results Provided: December 22, 2017

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TOWN OF COUPEVILLE

Below are the **preliminary** test results for your drinking water sampled on October 19, 2017. These results indicate that your drinking water is below the U.S. Environmental Protection Agency (EPA)'s lifetime health advisory (LHA) for Perfluorooctane Sulfonate (PFOS) and/or Perfluorooctanoic acid (PFOA). Once the Navy receives the final, validated results we will notify you and provide you with a copy of the validated results.

The Navy's Environmental Restoration Program analyzed for fourteen per- and polyfluoroalkyl substances (PFAS) as part of this drinking water investigation; however, PFOA and PFOS are the only PFAS for which EPA has established a LHA. The Navy provides bottled water when the sample results exceed the EPA's LHA.

If the EPA or the State of Washington Department of Ecology sets health advisories for other PFAS compounds in the future, then the Navy will evaluate necessary actions to take based on the health advisories.

Results of Laboratory Analytical Tests for PFAS with EPA Health Advisory Levels

Chemical Name	October 2017	Health Advisory (ppt)
	Result (ppt)	
Perfluorooctane Sulfonate (PFOS)	ND	70
Perfluorooctanoic acid (PFOA)	5.64 J	70
PFOS and PFOA (cumulative) ¹	5.64 J	70

¹ Only detected values of PFOS and PFOA are summed.

J - Analyte present, but result is estimated

ND - Analyte not detected in the sample

ppt - parts per trillion

Results for other PFAS where no EPA Health Advisory Levels have been established

Chemical Name	October 2017	Health Advisory (ppt)
	Result (ppt)	
Perfluorobutane sulfonate (PFBS)	1.11 J	Not applicable
Perfluorohexanoic acid (PFHxA)	3.20 JB	Not applicable
Perfluoroheptanoic acid (PFHpA)	0.572 J	Not applicable
Perfluorohexane sulfonate (PFHxS)	5.00 J	Not applicable
Perfluorononanoic acid (PFNA)	ND	Not applicable
Perfluoro-n-decanoic acid (PFDA)	ND	Not applicable
N-Ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	ND	Not applicable
N-Methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	ND	Not applicable
Perfluoro-n-undecanoic acid (PFUnA)	ND	Not applicable

Perfluoro-n-dodecanoic acid (PFDoA)	ND	Not applicable
Perfluoro-n-tridecanoic acid (PFTrDA)	ND	Not applicable
Perfluoro-n-tetradecanoic acid (PFTeDA)	ND	Not applicable

J - Analyte present, but result is estimated

B - Analyte not detected above the level reported in blanks

ND - Analyte not detected in the sample

ppt - parts per trillion

Sample ID: WI-CV-1RW60-1017 **EPA Method 537**

Client Data		Laboratory Data	
Name:	CH2M Hill	Lab Sample:	1701526-16
Project:	CLEAN CTO-4041 NASWI	Date Received:	21-Oct-17 09:30
Location:	DW	Matrix:	Drinking Water
		Date Collected:	19-Oct-17 15:30
		Column:	BEH C18

Analyte	Conc. (ug/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	0.00111	0.000449	0.00507	0.0101	J	B7J0173	26-Oct-17	0.246 L	01-Nov-17 04:04	1
PFHxA	0.00320	0.000673	0.00507	0.0101	J, B	B7J0173	26-Oct-17	0.246 L	01-Nov-17 04:04	1
PFHpA	0.000572	0.000541	0.00507	0.0101	J	B7J0173	26-Oct-17	0.246 L	01-Nov-17 04:04	1
PFHxS	0.00500	0.000421	0.00507	0.0101	J	B7J0173	26-Oct-17	0.246 L	01-Nov-17 04:04	1
PFOA	0.00564	0.00110	0.00507	0.0101	J	B7J0173	26-Oct-17	0.246 L	01-Nov-17 04:04	1
PFNA	ND	0.00146	0.00507	0.0101		B7J0173	26-Oct-17	0.246 L	01-Nov-17 04:04	1
PFOS	ND	0.00106	0.00507	0.0101		B7J0173	26-Oct-17	0.246 L	01-Nov-17 04:04	1
PFDA	ND	0.00130	0.00507	0.0101		B7J0173	26-Oct-17	0.246 L	01-Nov-17 04:04	1
MeFOSAA	ND	0.00308	0.00507	0.0101		B7J0173	26-Oct-17	0.246 L	01-Nov-17 04:04	1
EiFOSAA	ND	0.00196	0.00507	0.0101		B7J0173	26-Oct-17	0.246 L	01-Nov-17 04:04	1
PFUnA	ND	0.000259	0.00507	0.0101		B7J0173	26-Oct-17	0.246 L	01-Nov-17 04:04	1
PFDoA	ND	0.000966	0.00507	0.0101		B7J0173	26-Oct-17	0.246 L	01-Nov-17 04:04	1
PFTrDA	ND	0.000957	0.00507	0.0101		B7J0173	26-Oct-17	0.246 L	01-Nov-17 04:04	1
PFTeDA	ND	0.000788	0.00507	0.0101		B7J0173	26-Oct-17	0.246 L	01-Nov-17 04:04	1
Labeled Standards	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Dilution			
13C2-PFHxA	98.6	70 - 130		B7J0173	26-Oct-17	0.246 L	01-Nov-17 04:04			
13C2-PFDA	94.4	70 - 130		B7J0173	26-Oct-17	0.246 L	01-Nov-17 04:04			
d5-EiFOSAA	111	70 - 130		B7J0173	26-Oct-17	0.246 L	01-Nov-17 04:04			

DL - Detection Limit
 LOD - Limit of Detection
 LOQ - Limit of Quantitation
 LCL-UCL - Lower control limit - upper control limit
 Results reported to the DL.

When reported, PFHxS, PFOA and PFOS include both linear and branched isomers.
 Only the linear isomer is reported for all other analytes.

TOWN OF COUPEVILLE & FT. CASEY TREATMENT PLANT (WELL 487)
 PO BOX 725, COUPEVILLE, WA 98239
 Sample ID: WI-CV-1RW24-1017
 Date Collected: 10/19/2017
 Time Collected: 15:18
 Preliminary Results Provided: December 22, 2017

RECEIVED

JAN 02 2018

TOWN OF COUPEVILLE

Below are the **preliminary** test results for your drinking water sampled on October 19, 2017. These results indicate that your drinking water is below the U.S. Environmental Protection Agency (EPA)'s lifetime health advisory (LHA) for Perfluorooctane Sulfonate (PFOS) and/or Perfluorooctanoic acid (PFOA). Once the Navy receives the final, validated results we will notify you and provide you with a copy of the validated results.

The Navy's Environmental Restoration Program analyzed for fourteen per- and polyfluoroalkyl substances (PFAS) as part of this drinking water investigation; however, PFOA and PFOS are the only PFAS for which EPA has established a LHA. The Navy provides bottled water when the sample results exceed the EPA's LHA.

If the EPA or the State of Washington Department of Ecology sets health advisories for other PFAS compounds in the future, then the Navy will evaluate necessary actions to take based on the health advisories.

Results of Laboratory Analytical Tests for PFAS with EPA Health Advisory Levels

Chemical Name	October 2017	Health Advisory (ppt)
	Result (ppt)	
Perfluorooctane Sulfonate (PFOS)	ND	70
Perfluorooctanoic acid (PFOA)	ND	70
PFOS and PFOA (cumulative) ¹	ND	70

¹ Only detected values of PFOS and PFOA are summed.

J - Analyte present, but result is estimated

ND - Analyte not detected in the sample

ppt - parts per trillion

Results for other PFAS where no EPA Health Advisory Levels have been established

Chemical Name	October 2017	Health Advisory (ppt)
	Result (ppt)	
Perfluorobutane sulfonate (PFBS)	ND	Not applicable
Perfluorohexanoic acid (PFHxA)	1.35 JB	Not applicable
Perfluoroheptanoic acid (PFHpA)	ND	Not applicable
Perfluorohexane sulfonate (PFHxS)	ND	Not applicable
Perfluorononanoic acid (PFNA)	ND	Not applicable
Perfluoro-n-decanoic acid (PFDA)	ND	Not applicable
N-Ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	ND	Not applicable
N-Methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	ND	Not applicable
Perfluoro-n-undecanoic acid (PFUnA)	ND	Not applicable

Perfluoro-n-dodecanoic acid (PFDoA)	ND	Not applicable
Perfluoro-n-tridecanoic acid (PFTrDA)	ND	Not applicable
Perfluoro-n-tetradecanoic acid (PFTeDA)	ND	Not applicable

J - Analyte present, but result is estimated

B - Analyte not detected above the level reported in blanks

ND - Analyte not detected in the sample

ppt - parts per trillion

Sample ID: W1-CV-IRW24-1017		EPA Method 537								
Client Data		Laboratory Data								
Name:	CH2M Hill	Lab Sample:	1701526-14							
Project:	CLEAN CTO-4041 NASWI	Date Received:	21-Oct-17 09:30							
Location:	DW	Matrix:	Drinking Water							
		Date Collected:	19-Oct-17 15:18							
		Column:	BEH C18							
Analyte	Conc. (ug/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	ND	0.000449	0.00506	0.0101		B7J0173	26-Oct-17	0.247 L	01-Nov-17 03:40	1
PFHxA	0.00135	0.000671	0.00506	0.0101	J, B	B7J0173	26-Oct-17	0.247 L	01-Nov-17 03:40	1
PFHpA	ND	0.000540	0.00506	0.0101		B7J0173	26-Oct-17	0.247 L	01-Nov-17 03:40	1
PFHxS	ND	0.000420	0.00506	0.0101		B7J0173	26-Oct-17	0.247 L	01-Nov-17 03:40	1
PFOA	ND	0.00109	0.00506	0.0101		B7J0173	26-Oct-17	0.247 L	01-Nov-17 03:40	1
PFNA	ND	0.00146	0.00506	0.0101		B7J0173	26-Oct-17	0.247 L	01-Nov-17 03:40	1
PFOS	ND	0.00105	0.00506	0.0101		B7J0173	26-Oct-17	0.247 L	01-Nov-17 03:40	1
PFDA	ND	0.00130	0.00506	0.0101		B7J0173	26-Oct-17	0.247 L	01-Nov-17 03:40	1
MeFOSAA	ND	0.00308	0.00506	0.0101		B7J0173	26-Oct-17	0.247 L	01-Nov-17 03:40	1
EtFOSAA	ND	0.00195	0.00506	0.0101		B7J0173	26-Oct-17	0.247 L	01-Nov-17 03:40	1
PFUnA	ND	0.000258	0.00506	0.0101		B7J0173	26-Oct-17	0.247 L	01-Nov-17 03:40	1
PFDoA	ND	0.000964	0.00506	0.0101		B7J0173	26-Oct-17	0.247 L	01-Nov-17 03:40	1
PFTtDA	ND	0.000955	0.00506	0.0101		B7J0173	26-Oct-17	0.247 L	01-Nov-17 03:40	1
PFTeDA	ND	0.000787	0.00506	0.0101		B7J0173	26-Oct-17	0.247 L	01-Nov-17 03:40	1
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
13C2-PFHxA	SURR	100	70 - 130		B7J0173	26-Oct-17	0.247 L	01-Nov-17 03:40	1	
13C2-PFDA	SURR	91.2	70 - 130		B7J0173	26-Oct-17	0.247 L	01-Nov-17 03:40	1	
d5-EtFOSAA	SURR	107	70 - 130		B7J0173	26-Oct-17	0.247 L	01-Nov-17 03:40	1	

When reported, PFHxS, PFOA and PFOS include both linear and branched isomers.
Only the linear isomer is reported for all other analytes.

LCL-UCL - Lower control limit - upper control limit
Results reported to the DL.

LOD - Limit of Detection
LOQ - Limit of quantitation

DL - Detection Limit

TOWN OF COUPEVILLE & FT. CASEY TREATMENT PLANT (WELL 106)
 PO BOX 725, COUPEVILLE, WA 98239
 Sample ID: WI-CV-1RW25-1017
 Date Collected: 10/19/2017
 Time Collected: 12:38
 Preliminary Results Provided: December 22, 2017

RECEIVED

JAN 02 2018

TOWN OF COUPEVILLE

Below are the **preliminary** test results for your drinking water sampled on October 19, 2017. These results indicate that your drinking water is below the U.S. Environmental Protection Agency (EPA)'s lifetime health advisory (LHA) for Perfluorooctane Sulfonate (PFOS) and/or Perfluorooctanoic acid (PFOA). Once the Navy receives the final, validated results we will notify you and provide you with a copy of the validated results.

The Navy's Environmental Restoration Program analyzed for fourteen per- and polyfluoroalkyl substances (PFAS) as part of this drinking water investigation; however, PFOA and PFOS are the only PFAS for which EPA has established a LHA. The Navy provides bottled water when the sample results exceed the EPA's LHA.

If the EPA or the State of Washington Department of Ecology sets health advisories for other PFAS compounds in the future, then the Navy will evaluate necessary actions to take based on the health advisories.

Results of Laboratory Analytical Tests for PFAS with EPA Health Advisory Levels

Chemical Name	October 2017	Health Advisory (ppt)
	Result (ppt)	
Perfluorooctane Sulfonate (PFOS)	ND	70
Perfluorooctanoic acid (PFOA)	ND	70
PFOS and PFOA (cumulative) ¹	ND	70

¹ Only detected values of PFOS and PFOA are summed.

J - Analyte present, but result is estimated

ND - Analyte not detected in the sample

ppt - parts per trillion

Results for other PFAS where no EPA Health Advisory Levels have been established

Chemical Name	October 2017	Health Advisory (ppt)
	Result (ppt)	
Perfluorobutane sulfonate (PFBS)	1.72 J	Not applicable
Perfluorohexanoic acid (PFHxA)	2.24 JB	Not applicable
Perfluoroheptanoic acid (PFHpA)	ND	Not applicable
Perfluorohexane sulfonate (PFHxS)	ND	Not applicable
Perfluorononanoic acid (PFNA)	ND	Not applicable
Perfluoro-n-decanoic acid (PFDA)	ND	Not applicable
N-Ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	ND	Not applicable
N-Methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	ND	Not applicable
Perfluoro-n-undecanoic acid (PFUnA)	ND	Not applicable

Perfluoro-n-dodecanoic acid (PFDoA)	ND	Not applicable
Perfluoro-n-tridecanoic acid (PFTrDA)	ND	Not applicable
Perfluoro-n-tetradecanoic acid (PFTeDA)	ND	Not applicable

J - Analyte present, but result is estimated

B - Analyte not detected above the level reported in blanks

ND - Analyte not detected in the sample

ppt - parts per trillion

Sample ID: WI-CV-IRW25-1017

EPA Method 537

Client Data		Laboratory Data								
Name:	CH2M Hill	Lab Sample:	1701526-08	Column:	BEH C18					
Project:	CLEAN CTO-4041 NASWI	Date Collected:	19-Oct-17 12:38	Date Received:	21-Oct-17 09:30					
Location:	DW	Matrix:	Drinking Water							
Analyte	Conc. (ug/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	0.00172	0.000439	0.00496	0.00991	J	B7J0173	26-Oct-17	0.252 L	01-Nov-17 01:47	1
PFHxA	0.00224	0.000657	0.00496	0.00991	J, B	B7J0173	26-Oct-17	0.252 L	01-Nov-17 01:47	1
PFHpA	ND	0.000528	0.00496	0.00991		B7J0173	26-Oct-17	0.252 L	01-Nov-17 01:47	1
PFHxS	ND	0.000411	0.00496	0.00991		B7J0173	26-Oct-17	0.252 L	01-Nov-17 01:47	1
PFOA	ND	0.00107	0.00496	0.00991		B7J0173	26-Oct-17	0.252 L	01-Nov-17 01:47	1
PFNA	ND	0.00143	0.00496	0.00991		B7J0173	26-Oct-17	0.252 L	01-Nov-17 01:47	1
PFOS	ND	0.00103	0.00496	0.00991		B7J0173	26-Oct-17	0.252 L	01-Nov-17 01:47	1
PFDA	ND	0.00127	0.00496	0.00991		B7J0173	26-Oct-17	0.252 L	01-Nov-17 01:47	1
MeFOSAA	ND	0.00301	0.00496	0.00991		B7J0173	26-Oct-17	0.252 L	01-Nov-17 01:47	1
EiFOSAA	ND	0.00191	0.00496	0.00991		B7J0173	26-Oct-17	0.252 L	01-Nov-17 01:47	1
PFUnA	ND	0.000253	0.00496	0.00991		B7J0173	26-Oct-17	0.252 L	01-Nov-17 01:47	1
PFDoA	ND	0.000944	0.00496	0.00991		B7J0173	26-Oct-17	0.252 L	01-Nov-17 01:47	1
PFTtDA	ND	0.000935	0.00496	0.00991		B7J0173	26-Oct-17	0.252 L	01-Nov-17 01:47	1
PFTcDA	ND	0.000770	0.00496	0.00991		B7J0173	26-Oct-17	0.252 L	01-Nov-17 01:47	1
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
13C2-PFHxA	SURR	105	70 - 130		B7J0173	26-Oct-17	0.252 L	01-Nov-17 01:47	1	
13C2-PFDA	SURR	106	70 - 130		B7J0173	26-Oct-17	0.252 L	01-Nov-17 01:47	1	
d5-EiFOSAA	SURR	98.8	70 - 130		B7J0173	26-Oct-17	0.252 L	01-Nov-17 01:47	1	

DL - Detection Limit
 LOD - Limit of Detection
 LOQ - Limit of quantitation
 LCL-UCL- Lower control limit - upper control limit
 Results reported to the DL.
 When reported, PFHxS, PFOA and PFOS include both linear and branched isomers.
 Only the linear isomer is reported for all other analytes.

TOWN OF COUPEVILLE & FT. CASEY TREATMENT PLANT (WELL 190)
 PO BOX 725, COUPEVILLE, WA 98239
 Sample ID: WI-CV-1RW26-1017
 Date Collected: 10/19/2017
 Time Collected: 13:10
 Preliminary Results Provided: December 22, 2017

RECEIVED

JAN 02 2018

TOWN OF COUPEVILLE

Below are the **preliminary** test results for your drinking water sampled on October 19, 2017. These results indicate that your drinking water is below the U.S. Environmental Protection Agency (EPA)'s lifetime health advisory (LHA) for Perfluorooctane Sulfonate (PFOS) and/or Perfluorooctanoic acid (PFOA). Once the Navy receives the final, validated results we will notify you and provide you with a copy of the validated results.

The Navy's Environmental Restoration Program analyzed for fourteen per- and polyfluoroalkyl substances (PFAS) as part of this drinking water investigation; however, PFOA and PFOS are the only PFAS for which EPA has established a LHA. The Navy provides bottled water when the sample results exceed the EPA's LHA.

If the EPA or the State of Washington Department of Ecology sets health advisories for other PFAS compounds in the future, then the Navy will evaluate necessary actions to take based on the health advisories.

Results of Laboratory Analytical Tests for PFAS with EPA Health Advisory Levels

Chemical Name	October 2017	Health Advisory (ppt)
	Result (ppt)	
Perfluorooctane Sulfonate (PFOS)	ND	70
Perfluorooctanoic acid (PFOA)	ND	70
PFOS and PFOA (cumulative) ¹	ND	70

¹ Only detected values of PFOS and PFOA are summed.

J - Analyte present, but result is estimated

ND - Analyte not detected in the sample

ppt - parts per trillion

Results for other PFAS where no EPA Health Advisory Levels have been established

Chemical Name	October 2017	Health Advisory (ppt)
	Result (ppt)	
Perfluorobutane sulfonate (PFBS)	ND	Not applicable
Perfluorohexanoic acid (PFHxA)	1.85 JB	Not applicable
Perfluoroheptanoic acid (PFHpA)	ND	Not applicable
Perfluorohexane sulfonate (PFHxS)	ND	Not applicable
Perfluorononanoic acid (PFNA)	ND	Not applicable
Perfluoro-n-decanoic acid (PFDA)	ND	Not applicable
N-Ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	ND	Not applicable
N-Methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	ND	Not applicable
Perfluoro-n-undecanoic acid (PFUnA)	ND	Not applicable

Perfluoro-n-dodecanoic acid (PFDoA)	ND	Not applicable
Perfluoro-n-tridecanoic acid (PFTrDA)	ND	Not applicable
Perfluoro-n-tetradecanoic acid (PFTeDA)	ND	Not applicable

J - Analyte present, but result is estimated

B - Analyte not detected above the level reported in blanks

ND - Analyte not detected in the sample

ppt - parts per trillion

Sample ID: WI-CV-IRW26-1017 **EPA Method 537**

Client Data		Laboratory Data	
Name:	CH2M Hill	Lab Sample:	1701526-10
Project:	CLEAN CTO-4041 NASWI	Date Received:	21-Oct-17 09:30
Location:	DW	Matrix:	Drinking Water
		Date Collected:	19-Oct-17 13:10
		Column:	BEH C18

Analyte	Conc. (ug/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	Labeled Standards	
											Type	Dilution
PFBS	ND	0.000428	0.00484	0.00967		B7J0173	26-Oct-17	0.259 L	01-Nov-17 02:12	I		
PFHxA	0.00185	0.000641	0.00484	0.00967	J, B	B7J0173	26-Oct-17	0.259 L	01-Nov-17 02:12	I		
PFHpA	ND	0.000515	0.00484	0.00967		B7J0173	26-Oct-17	0.259 L	01-Nov-17 02:12	I		
PFHxS	ND	0.000401	0.00484	0.00967		B7J0173	26-Oct-17	0.259 L	01-Nov-17 02:12	I		
PFOA	ND	0.00104	0.00484	0.00967		B7J0173	26-Oct-17	0.259 L	01-Nov-17 02:12	I		
PFNA	ND	0.00139	0.00484	0.00967		B7J0173	26-Oct-17	0.259 L	01-Nov-17 02:12	I		
PFOS	ND	0.00101	0.00484	0.00967		B7J0173	26-Oct-17	0.259 L	01-Nov-17 02:12	I		
PFDA	ND	0.00124	0.00484	0.00967		B7J0173	26-Oct-17	0.259 L	01-Nov-17 02:12	I		
McFOSAA	ND	0.00294	0.00484	0.00967		B7J0173	26-Oct-17	0.259 L	01-Nov-17 02:12	I		
EtFOSAA	ND	0.00187	0.00484	0.00967		B7J0173	26-Oct-17	0.259 L	01-Nov-17 02:12	I		
PFUnA	ND	0.000247	0.00484	0.00967		B7J0173	26-Oct-17	0.259 L	01-Nov-17 02:12	I		
PFDoA	ND	0.000921	0.00484	0.00967		B7J0173	26-Oct-17	0.259 L	01-Nov-17 02:12	I		
PFTfDA	ND	0.000912	0.00484	0.00967		B7J0173	26-Oct-17	0.259 L	01-Nov-17 02:12	I		
PFTeDA	ND	0.000751	0.00484	0.00967		B7J0173	26-Oct-17	0.259 L	01-Nov-17 02:12	I		
		% Recovery	Limits			Qualifiers	Extracted	Samp Size	Analyzed	Dilution		
13C2-PFHxA	102		70 - 130			B7J0173	26-Oct-17	0.259 L	01-Nov-17 02:12	I		
13C2-PFDA	99.1		70 - 130			B7J0173	26-Oct-17	0.259 L	01-Nov-17 02:12	I		
d5-EtFOSAA	90.7		70 - 130			B7J0173	26-Oct-17	0.259 L	01-Nov-17 02:12	I		

DL - Detection Limit
 LOD - Limit of Detection
 LOQ - Limit of quantitation
 LCL-UCL - Lower control limit - upper control limit
 Results reported to the DL.
 When reported, PFHxS, PFOA and PFOS include both linear and branched isomers.
 Only the linear isomer is reported for all other analytes.

1 ng/L = 1 ppt
nanogram(s) part(s) per
per liter trillion

The detection limit (DL) is the lowest level at which the laboratory can reliably "see" that this compound is present.

The limit of detection (LOD) is the lowest level at which the laboratory can reliably "see" this compound is **not** present.

The limit of quantitation (LOQ) is the lowest level at which the laboratory can reliably measure this compound with a known degree of confidence and accuracy.

This section contains quality control information used by the data validator.

Sample ID: WF-RW02-0317		EPA Method 537	
Client Data		Laboratory Data	
Name:	[REDACTED]	Lab Sample:	[REDACTED]
Project:	[REDACTED]	QC Batch:	B7C0165
Date Collected:	[REDACTED]	Date Analyzed:	04-Apr-17 15:37
Location:	WF-RW02	Date Received:	29-Mar-2017 9:21
		Date Extracted:	30-Mar-2017 7:50
		Column:	BEH C18
Analyte	Conc. (ng/L)	Labeled Standard	%R
PFBS	ND	SUR 13C2-PFHxA	103
PFOA	6.53	SUR 13C2-PFDA	117
PFOS	ND		
		LCL-UCL	Qualifiers
			70 - 130
			70 - 130

DL - Detection limit
RL - Reporting limit
LCL-UCL - Lower control limit - upper control limit
Results reported to DL
When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers
Only the linear isomer is reported for all other analytes

The result for PFBS:
PFBS was not detected in the sample.
This is reported as "ND" (Non-Detect).

The result for PFOA:
PFOA was detected in the sample at 6.53 ng/L (6.53 ppt).
The "J" qualifier means that the PFOA was detected but the amount detected is estimated.

The result for PFOS:
PFOS was not detected in the sample.
This is reported as "ND" (Non-Detect).

This column identifies the data qualifiers that apply to a given result. Possible laboratory qualifiers are:
"J" (Estimated Value) - indicates the value reported for the analyte is below the LOQ and was detected. The value reported is considered estimated.
"B" (Blank) - this compound was also detected in the method blank.
"D" (Diluted Sample) - sample result was taken from a diluted sample.
"M" (Manually Integrated) - the peak on the laboratory equipment was manually, rather than automatically, integrated.

There is not a health advisory level for PFBS; therefore, no action is currently being taken based on this result. This chemical has health effects information that can be used to evaluate potential impact under the Navy's Environmental Restoration Program.