

TOWN OF COUPEVILLE & FT. CASEY TREATMENT PLANT
WELL 108
434 WANAMAKER ROAD
COUPEVILLE, WA 98239
WI-CV-1RW23-1120
Date Sampled: November 11, 2020
Time Sampled: 10:10
Validated Results Provided: January 22, 2021

Below are the **validated** test results for your drinking water sampled on November 11, 2020. These results indicate that your drinking water is below the U.S. Environmental Protection Agency (EPA)'s lifetime health advisory for Perfluorooctane Sulfonate (PFOS) and/or Perfluorooctanoic acid (PFOA). Based upon the completion of data validation, no results or qualifier flags have changed for the test results listed below.

The Navy's Environmental Restoration Program analyzed for eighteen 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 lifetime health advisory. The Navy provides bottled water when the sample results exceed the EPA's lifetime health advisory.

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	November 2020	Health Advisory (ppt)
	Result (ppt)	
Perfluorooctane Sulfonate (PFOS)	1.51 J	70
Perfluorooctanoic acid (PFOA)	57.9	70
PFOS and PFOA (cumulative) ¹	59.4 J	70

¹ Only detected values of PFOS and PFOA are summed.

J – Analyte present, but result is estimated

ppt – parts per trillion

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

Chemical Name	November 2020	Health Advisory (ppt)
	Result (ppt)	
Perfluorobutane sulfonate (PFBS)	16.3	Not applicable
Perfluorohexanoic acid (PFHxA)	44.0	Not applicable
Perfluoroheptanoic acid (PFHpA)	9.94	Not applicable
Perfluorohexane sulfonate (PFHxS)	53.7	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

Chemical Name	November 2020	Health Advisory (ppt)
	Result (ppt)	
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
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	Not applicable
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	Not applicable
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	ND	Not applicable
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	ND	Not applicable

ND – Analyte not detected in the sample

ppt – parts per trillion

Sample ID: WI-CV-1RW23-1120

EPA Method 537.1

Client Data		Laboratory Data	
Name:	CH2M Hill	Lab Sample:	BEH C18
Project:	9000NVT8	Date Received:	2002513-08
Location:	Drinking Water	Matrix:	Drinking Water
		Date Collected:	11-Nov-20 10:10
		Column:	2002513-08
		Batch:	16-Nov-20 10:02

Analyte	CAS Number	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	16.3	0.750	1.50	2.00		B0K0144	18-Nov-20	0.250 L	19-Nov-20 19:43	1
PFHxA	307-24-4	44.0	0.750	1.50	2.00		B0K0144	18-Nov-20	0.250 L	19-Nov-20 19:43	1
PFPO-DA	13252-13-6	ND	0.750	1.50	2.00		B0K0144	18-Nov-20	0.250 L	19-Nov-20 19:43	1
PFHpA	375-85-9	9.94	0.750	1.50	2.00		B0K0144	18-Nov-20	0.250 L	19-Nov-20 19:43	1
ADONA	919005-14-4	ND	0.750	1.50	2.00		B0K0144	18-Nov-20	0.250 L	19-Nov-20 19:43	1
PFHxS	355-46-4	53.7	0.750	1.50	2.00		B0K0144	18-Nov-20	0.250 L	19-Nov-20 19:43	1
PFOA	335-67-1	57.9	0.750	1.50	2.00		B0K0144	18-Nov-20	0.250 L	19-Nov-20 19:43	1
PFNA	375-95-1	ND	0.750	1.50	2.00		B0K0144	18-Nov-20	0.250 L	19-Nov-20 19:43	1
PFOS	1763-23-1	1.51	0.750	1.50	2.00	J	B0K0144	18-Nov-20	0.250 L	19-Nov-20 19:43	1
9CI-PF3ONS	756426-58-1	ND	0.750	1.50	2.00		B0K0144	18-Nov-20	0.250 L	19-Nov-20 19:43	1
PFDA	335-76-2	ND	0.750	1.50	2.00		B0K0144	18-Nov-20	0.250 L	19-Nov-20 19:43	1
MeFOSAA	2355-31-9	ND	0.750	1.50	2.00		B0K0144	18-Nov-20	0.250 L	19-Nov-20 19:43	1
EtFOSAA	2991-50-6	ND	0.750	1.50	2.00		B0K0144	18-Nov-20	0.250 L	19-Nov-20 19:43	1
PFUnA	2058-94-8	ND	0.750	1.50	2.00		B0K0144	18-Nov-20	0.250 L	19-Nov-20 19:43	1
PFDoA	307-55-1	ND	0.750	1.50	2.00		B0K0144	18-Nov-20	0.250 L	19-Nov-20 19:43	1
PFTrDA	72629-94-8	ND	0.750	1.50	2.00		B0K0144	18-Nov-20	0.250 L	19-Nov-20 19:43	1
11CI-PF3OUds	763051-92-9	ND	0.750	1.50	2.00		B0K0144	18-Nov-20	0.250 L	19-Nov-20 19:43	1
PFTeDA	376-06-7	ND	0.750	1.50	2.00		B0K0144	18-Nov-20	0.250 L	19-Nov-20 19:43	1
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution		
13C2-PFHxA	SURR	105	70 - 130		B0K0144	18-Nov-20	0.250 L	19-Nov-20 19:43	1		
13C2-PFDA	SURR	96.2	70 - 130		B0K0144	18-Nov-20	0.250 L	19-Nov-20 19:43	1		
d5-EtFOSAA	SURR	83.8	70 - 130		B0K0144	18-Nov-20	0.250 L	19-Nov-20 19:43	1		
13C3-HFPO-DA	SURR	111	70 - 130		B0K0144	18-Nov-20	0.250 L	19-Nov-20 19:43	1		

DL - Detection Limit
 LOD - Limit of Detection
 LOQ - Limit of quantitation
 Results reported to the DL.
 When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

11/21/20

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	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		
		ICL-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.

* 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.

TOWN OF COUPEVILLE & FT. CASEY TREATMENT PLANT
WELL 106
434 WANAMAKER ROAD
COUPVILLE, WA 98239
WI-CV-1RW25-1120
Date Sampled: November 11, 2020
Time Sampled: 9:30
Validated Results Provided: January 22, 2021

Below are the **validated** test results for your drinking water sampled on November 11, 2020. These results indicate that your drinking water is below the U.S. Environmental Protection Agency (EPA)'s lifetime health advisory for Perfluorooctane Sulfonate (PFOS) and/or Perfluorooctanoic acid (PFOA). Based upon the completion of data validation, no results or qualifier flags have changed for the test results listed below.

The Navy's Environmental Restoration Program analyzed for eighteen 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 lifetime health advisory. The Navy provides bottled water when the sample results exceed the EPA's lifetime health advisory.

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	November 2020	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.

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	November 2020	Health Advisory (ppt)
	Result (ppt)	
Perfluorobutane sulfonate (PFBS)	ND	Not applicable
Perfluorohexanoic acid (PFHxA)	ND	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

Chemical Name	November 2020	Health Advisory (ppt)
	Result (ppt)	
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
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	Not applicable
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	Not applicable
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	ND	Not applicable
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	ND	Not applicable

ND – Analyte not detected in the sample

ppt – parts per trillion

Sample ID: WI-CV-IRW25-1120

EPA Method 537.1

Client Data		Laboratory Data	
Name:	CH2M Hill	Lab Sample:	2002513-03
Project:	9000NV/T8	Date Received:	16-Nov-20 10:02
Location:	Drinking Water	Matrix:	Drinking Water
		Date Collected:	11-Nov-20 09:30
		Column:	BEH C18

Analyte	CAS Number	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	ND	0.753	1.51	2.01		B0K0144	18-Nov-20	0.249 L	19-Nov-20 18:47	1
PFHxA	307-24-4	ND	0.753	1.51	2.01		B0K0144	18-Nov-20	0.249 L	19-Nov-20 18:47	1
HFPO-DA	13252-13-6	ND	0.753	1.51	2.01		B0K0144	18-Nov-20	0.249 L	19-Nov-20 18:47	1
PFHpA	375-85-9	ND	0.753	1.51	2.01		B0K0144	18-Nov-20	0.249 L	19-Nov-20 18:47	1
ADONA	919005-14-4	ND	0.753	1.51	2.01		B0K0144	18-Nov-20	0.249 L	19-Nov-20 18:47	1
PFHxS	355-46-4	ND	0.753	1.51	2.01		B0K0144	18-Nov-20	0.249 L	19-Nov-20 18:47	1
PFOA	335-67-1	ND	0.753	1.51	2.01		B0K0144	18-Nov-20	0.249 L	19-Nov-20 18:47	1
PFNA	375-95-1	ND	0.753	1.51	2.01		B0K0144	18-Nov-20	0.249 L	19-Nov-20 18:47	1
PFOS	1763-23-1	ND	0.753	1.51	2.01		B0K0144	18-Nov-20	0.249 L	19-Nov-20 18:47	1
9Cl-PF3ONS	756426-58-1	ND	0.753	1.51	2.01		B0K0144	18-Nov-20	0.249 L	19-Nov-20 18:47	1
PFDA	335-76-2	ND	0.753	1.51	2.01		B0K0144	18-Nov-20	0.249 L	19-Nov-20 18:47	1
MeFOSAA	2355-31-9	ND	0.753	1.51	2.01		B0K0144	18-Nov-20	0.249 L	19-Nov-20 18:47	1
EtFOSAA	2991-50-6	ND	0.753	1.51	2.01		B0K0144	18-Nov-20	0.249 L	19-Nov-20 18:47	1
PFUnA	2058-94-8	ND	0.753	1.51	2.01		B0K0144	18-Nov-20	0.249 L	19-Nov-20 18:47	1
PFDoA	307-55-1	ND	0.753	1.51	2.01		B0K0144	18-Nov-20	0.249 L	19-Nov-20 18:47	1
PFTriDA	72629-94-8	ND	0.753	1.51	2.01		B0K0144	18-Nov-20	0.249 L	19-Nov-20 18:47	1
11Cl-PF3OUdS	763051-92-9	ND	0.753	1.51	2.01		B0K0144	18-Nov-20	0.249 L	19-Nov-20 18:47	1
PFTeDA	376-06-7	ND	0.753	1.51	2.01		B0K0144	18-Nov-20	0.249 L	19-Nov-20 18:47	1
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution		
13C2-PFHxA	SURR	111	70 - 130		B0K0144	18-Nov-20	0.249 L	19-Nov-20 18:47	1		
13C2-PFDA	SURR	96.8	70 - 130		B0K0144	18-Nov-20	0.249 L	19-Nov-20 18:47	1		
d5-EtFOSAA	SURR	84.9	70 - 130		B0K0144	18-Nov-20	0.249 L	19-Nov-20 18:47	1		
13C3-HFPO-DA	SURR	118	70 - 130		B0K0144	18-Nov-20	0.249 L	19-Nov-20 18:47	1		

DL - Detection Limit
 LOD - Limit of Detection
 LOQ - Limit of quantitation
 Results reported to the DL.
 When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Nov 12, 2020

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	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	

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

DL - Detection limit
RL - Reporting limit

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.

* 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.

**TOWN OF COUPEVILLE & FORT CASEY TREATMENT PLANT
 WELL 190
 434 WANAMAKER ROAD
 COUPEVILLE, WA 98239
 WI-CV-1RW26-1120
 Date Sampled: November 11, 2020
 Time Sampled: 09:50
 Validated Results Provided: January 22, 2021**

Below are the **validated** test results for your drinking water sampled on November 11, 2020. These results indicate that your drinking water is below the U.S. Environmental Protection Agency (EPA)'s lifetime health advisory for Perfluorooctane Sulfonate (PFOS) and/or Perfluorooctanoic acid (PFOA). Based upon the completion of data validation, no results or qualifier flags have changed for the test results listed below.

The Navy's Environmental Restoration Program analyzed for eighteen 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 lifetime health advisory. The Navy provides bottled water when the sample results exceed the EPA's lifetime health advisory.

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 Levels¹

Chemical Name	November 2020	Health Advisory (ppt)
	Result (ppt)	
Perfluorooctane Sulfonate (PFOS)	ND	70
Perfluorooctanoic acid (PFOA)	ND	70
PFOS and PFOA (cumulative) ²	ND	70

¹ A duplicate drinking water sample (WI-AF-1RW26P-1120) was collected in addition to the parent sample WI-AF-1RW26-1120. The most conservative values are shown from the parent sample and duplicate. The validated data for both the parent sample and duplicate sample are provided in Enclosure 2.

² Only detected values of PFOS and PFOA are summed.

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	November 2020	Health Advisory (ppt)
	Result (ppt)	
Perfluorobutane sulfonate (PFBS)	ND	Not applicable
Perfluorohexanoic acid (PFHxA)	ND	Not applicable
Perfluoroheptanoic acid (PFHpA)	ND	Not applicable
Perfluorohexane sulfonate (PFHxS)	ND	Not applicable
Perfluorononanoic acid (PFNA)	ND	Not applicable

Chemical Name	November 2020	Health Advisory (ppt)
	Result (ppt)	
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
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	Not applicable
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	Not applicable
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	ND	Not applicable
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	ND	Not applicable

ND – Analyte not detected in the sample

ppt – parts per trillion

Sample ID: WJ-CV-1RW26-1120

EPA Method 537.1

Client Data		Laboratory Data	
Name: CH2M Hill	Matrix: Drinking Water	Lab Sample: 2002513-05	Column: BEH C18
Project: 9000NV18	Date Collected: 11-Nov-20 09:50	Date Received: 16-Nov-20 10:02	
Location: Drinking Water			

Analyte	CAS Number	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	ND	0.755	1.51	2.01		B0K0144	18-Nov-20	0.248 L	19-Nov-20 19:09	1
PFHxA	307-24-4	ND	0.755	1.51	2.01		B0K0144	18-Nov-20	0.248 L	19-Nov-20 19:09	1
PFPO-DA	13252-13-6	ND	0.755	1.51	2.01		B0K0144	18-Nov-20	0.248 L	19-Nov-20 19:09	1
PFHpA	375-85-9	ND	0.755	1.51	2.01		B0K0144	18-Nov-20	0.248 L	19-Nov-20 19:09	1
ADONA	919005-14-4	ND	0.755	1.51	2.01		B0K0144	18-Nov-20	0.248 L	19-Nov-20 19:09	1
PFHxS	355-46-4	ND	0.755	1.51	2.01		B0K0144	18-Nov-20	0.248 L	19-Nov-20 19:09	1
PFOA	335-67-1	ND	0.755	1.51	2.01		B0K0144	18-Nov-20	0.248 L	19-Nov-20 19:09	1
PFNA	375-95-1	ND	0.755	1.51	2.01		B0K0144	18-Nov-20	0.248 L	19-Nov-20 19:09	1
PFOS	1763-23-1	ND	0.755	1.51	2.01		B0K0144	18-Nov-20	0.248 L	19-Nov-20 19:09	1
9CI-PF3ONS	756426-58-1	ND	0.755	1.51	2.01		B0K0144	18-Nov-20	0.248 L	19-Nov-20 19:09	1
PFDA	335-76-2	ND	0.755	1.51	2.01		B0K0144	18-Nov-20	0.248 L	19-Nov-20 19:09	1
MeFOSAA	2355-31-9	ND	0.755	1.51	2.01		B0K0144	18-Nov-20	0.248 L	19-Nov-20 19:09	1
EtFOSAA	2991-50-6	ND	0.755	1.51	2.01		B0K0144	18-Nov-20	0.248 L	19-Nov-20 19:09	1
PFUnA	2058-94-8	ND	0.755	1.51	2.01		B0K0144	18-Nov-20	0.248 L	19-Nov-20 19:09	1
PFDoA	307-55-1	ND	0.755	1.51	2.01		B0K0144	18-Nov-20	0.248 L	19-Nov-20 19:09	1
PFTrDA	72629-94-8	ND	0.755	1.51	2.01		B0K0144	18-Nov-20	0.248 L	19-Nov-20 19:09	1
11CI-PF3OUdS	763051-92-9	ND	0.755	1.51	2.01		B0K0144	18-Nov-20	0.248 L	19-Nov-20 19:09	1
PFTeDA	376-06-7	ND	0.755	1.51	2.01		B0K0144	18-Nov-20	0.248 L	19-Nov-20 19:09	1
Labeled Standards	Type	% Recovery		Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	115		70 - 130			B0K0144	18-Nov-20	0.248 L	19-Nov-20 19:09	1
13C2-PFDA	SURR	103		70 - 130			B0K0144	18-Nov-20	0.248 L	19-Nov-20 19:09	1
d5-EtFOSAA	SURR	85.6		70 - 130			B0K0144	18-Nov-20	0.248 L	19-Nov-20 19:09	1
13C3-HFPO-DA	SURR	120		70 - 130			B0K0144	18-Nov-20	0.248 L	19-Nov-20 19:09	1

Results reported to the DL.

LOD - Limit of Detection
LOQ - Limit of quantitation

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

Nov 12 11:18 1/20



Sample ID: WI-CV-1RW26P-1120 **EPA Method 537.1**

Client Data
 Name: CH2M Hill
 Project: 9000NVT8
 Location: Drinking Water

Laboratory Data
 Lab Sample: 2002513-06
 Date Received: 16-Nov-20 10:02
 Matrix: Drinking Water
 Date Collected: 11-Nov-20 09:55
 Column: BEH C18

Analyte	CAS Number	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	ND	0.767	1.54	2.05		B0K0144	18-Nov-20	0.244 L	19-Nov-20 19:21	1
PFHxA	307-24-4	ND	0.767	1.54	2.05		B0K0144	18-Nov-20	0.244 L	19-Nov-20 19:21	1
HFPO-DA	13252-13-6	ND	0.767	1.54	2.05		B0K0144	18-Nov-20	0.244 L	19-Nov-20 19:21	1
PFHpA	375-85-9	ND	0.767	1.54	2.05		B0K0144	18-Nov-20	0.244 L	19-Nov-20 19:21	1
ADONA	919005-14-4	ND	0.767	1.54	2.05		B0K0144	18-Nov-20	0.244 L	19-Nov-20 19:21	1
PFHxS	355-46-4	ND	0.767	1.54	2.05		B0K0144	18-Nov-20	0.244 L	19-Nov-20 19:21	1
PFOA	335-67-1	ND	0.767	1.54	2.05		B0K0144	18-Nov-20	0.244 L	19-Nov-20 19:21	1
PFNA	375-95-1	ND	0.767	1.54	2.05		B0K0144	18-Nov-20	0.244 L	19-Nov-20 19:21	1
PFOS	1763-23-1	ND	0.767	1.54	2.05		B0K0144	18-Nov-20	0.244 L	19-Nov-20 19:21	1
9CI-PF3ONS	756426-58-1	ND	0.767	1.54	2.05		B0K0144	18-Nov-20	0.244 L	19-Nov-20 19:21	1
PFDA	335-76-2	ND	0.767	1.54	2.05		B0K0144	18-Nov-20	0.244 L	19-Nov-20 19:21	1
MeFOSAA	2355-31-9	ND	0.767	1.54	2.05		B0K0144	18-Nov-20	0.244 L	19-Nov-20 19:21	1
EtFOSAA	2991-50-6	ND	0.767	1.54	2.05		B0K0144	18-Nov-20	0.244 L	19-Nov-20 19:21	1
PFUnA	2058-94-8	ND	0.767	1.54	2.05		B0K0144	18-Nov-20	0.244 L	19-Nov-20 19:21	1
PFDoA	307-55-1	ND	0.767	1.54	2.05		B0K0144	18-Nov-20	0.244 L	19-Nov-20 19:21	1
PFTtDA	72629-94-8	ND	0.767	1.54	2.05		B0K0144	18-Nov-20	0.244 L	19-Nov-20 19:21	1
11CI-PF3OUdS	763051-92-9	ND	0.767	1.54	2.05		B0K0144	18-Nov-20	0.244 L	19-Nov-20 19:21	1
PFTeDA	376-06-7	ND	0.767	1.54	2.05		B0K0144	18-Nov-20	0.244 L	19-Nov-20 19:21	1
Labeled Standards	Type	% Recovery		Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	115		70 - 130			B0K0144	18-Nov-20	0.244 L	19-Nov-20 19:21	1
13C2-PFDA	SURR	103		70 - 130			B0K0144	18-Nov-20	0.244 L	19-Nov-20 19:21	1
d5-EtFOSAA	SURR	84.3		70 - 130			B0K0144	18-Nov-20	0.244 L	19-Nov-20 19:21	1
13C3-HFPO-DA	SURR	118		70 - 130			B0K0144	18-Nov-20	0.244 L	19-Nov-20 19:21	1

DL - Detection Limit
 LOD - Limit of Detection
 LOQ - Limit of quantitation
 Results reported to the DL.
 When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

mw 121,8120

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:	29-Mar-2017 9:21
Project:	[Redacted]	QC Batch:	30-Mar-2017 7:50
Date Collected:	WF-RW02	Date Analyzed:	04-Apr-17 15:37 Column: BEH C18
Location:			
Analyte	Conc. (ng/L)	Labeled Standard	%R
PFBS	ND	SUR 13C2-PFHxA	103
PFOA	6.53	SUR 13C2-PFDA	117
PFOS	ND		
			LCL-UCL
			70 - 130
			70 - 130

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.

* 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.

**TOWN OF COUPEVILLE & FORT CASEY TREATMENT PLANT
 POST TREATMENT DISTRIBUTION POINT
 434 WANAMAKER ROAD
 COUPEVILLE, WA 98239
 WI-CV-1RW27-1120
 Date Sampled: November 11, 2020
 Time Sampled: 9:10
 Validated Results Provided: January 22, 2021**

Below are the **validated** test results for your drinking water sampled on November 11, 2020. These results indicate that your drinking water is below the U.S. Environmental Protection Agency (EPA)'s lifetime health advisory for Perfluorooctane Sulfonate (PFOS) and/or Perfluorooctanoic acid (PFOA). Based upon the completion of data validation, no results or qualifier flags have changed for the test results listed below.

The Navy's Environmental Restoration Program analyzed for eighteen 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 lifetime health advisory. The Navy provides bottled water when the sample results exceed the EPA's lifetime health advisory.

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	November 2020	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.

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	November 2020	Health Advisory (ppt)
	Result (ppt)	
Perfluorobutane sulfonate (PFBS)	ND	Not applicable
Perfluorohexanoic acid (PFHxA)	ND	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

Chemical Name	November 2020	Health Advisory (ppt)
	Result (ppt)	
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
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	Not applicable
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	Not applicable
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	ND	Not applicable
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	ND	Not applicable

ND – Analyte not detected in the sample

ppt – parts per trillion

Sample ID: WI-CV-1RW27-1120

EPA Method 537.1

Client Data		Laboratory Data	
Name:	CH2M Hill	Lab Sample:	2002513-01
Project:	9000NVT8	Date Received:	16-Nov-20 10:02
Location:	Drinking Water	Matrix:	Drinking Water
		Date Collected:	11-Nov-20 09:10
		Column:	BEH C18

Analyte	CAS Number	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	ND	0.780	1.56	2.08		B0K0144	18-Nov-20	0.240 L	19-Nov-20 18:25	1
PFHxA	307-24-4	ND	0.780	1.56	2.08		B0K0144	18-Nov-20	0.240 L	19-Nov-20 18:25	1
HFPO-DA	13252-13-6	ND	0.780	1.56	2.08		B0K0144	18-Nov-20	0.240 L	19-Nov-20 18:25	1
PFHpA	375-85-9	ND	0.780	1.56	2.08		B0K0144	18-Nov-20	0.240 L	19-Nov-20 18:25	1
ADONA	919005-14-4	ND	0.780	1.56	2.08		B0K0144	18-Nov-20	0.240 L	19-Nov-20 18:25	1
PFHxS	355-46-4	ND	0.780	1.56	2.08		B0K0144	18-Nov-20	0.240 L	19-Nov-20 18:25	1
PFOA	335-67-1	ND	0.780	1.56	2.08		B0K0144	18-Nov-20	0.240 L	19-Nov-20 18:25	1
PFNA	375-95-1	ND	0.780	1.56	2.08		B0K0144	18-Nov-20	0.240 L	19-Nov-20 18:25	1
PFOS	1763-23-1	ND	0.780	1.56	2.08		B0K0144	18-Nov-20	0.240 L	19-Nov-20 18:25	1
9CI-PF3ONS	756426-58-1	ND	0.780	1.56	2.08		B0K0144	18-Nov-20	0.240 L	19-Nov-20 18:25	1
PFDA	335-76-2	ND	0.780	1.56	2.08		B0K0144	18-Nov-20	0.240 L	19-Nov-20 18:25	1
MeFOSAA	2355-31-9	ND	0.780	1.56	2.08		B0K0144	18-Nov-20	0.240 L	19-Nov-20 18:25	1
EiFOSAA	2991-50-6	ND	0.780	1.56	2.08		B0K0144	18-Nov-20	0.240 L	19-Nov-20 18:25	1
PFUnA	2058-94-8	ND	0.780	1.56	2.08		B0K0144	18-Nov-20	0.240 L	19-Nov-20 18:25	1
PFDoA	307-55-1	ND	0.780	1.56	2.08		B0K0144	18-Nov-20	0.240 L	19-Nov-20 18:25	1
PFTtDA	72629-94-8	ND	0.780	1.56	2.08		B0K0144	18-Nov-20	0.240 L	19-Nov-20 18:25	1
11CI-PF3OUdS	763051-92-9	ND	0.780	1.56	2.08		B0K0144	18-Nov-20	0.240 L	19-Nov-20 18:25	1
PFTeDA	376-06-7	ND	0.780	1.56	2.08		B0K0144	18-Nov-20	0.240 L	19-Nov-20 18:25	1
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution		
13C2-PFHxA	SURR	111	70 - 130		B0K0144	18-Nov-20	0.240 L	19-Nov-20 18:25	1		
13C2-PFDA	SURR	98.0	70 - 130		B0K0144	18-Nov-20	0.240 L	19-Nov-20 18:25	1		
d5-EiFOSAA	SURR	91.3	70 - 130		B0K0144	18-Nov-20	0.240 L	19-Nov-20 18:25	1		
13C3-HFPO-DA	SURR	117	70 - 130		B0K0144	18-Nov-20	0.240 L	19-Nov-20 18:25	1		

DL - Detection Limit
 LOD - Limit of Detection
 LOQ - Limit of quantitation
 Results reported to the DL.
 When reported, PFHxS, PFOA, PFOS, MeFOSAA and EiFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

mw 12/18/20

1 ng/L = 1 ppt
nanogram(s) per liter = part(s) per 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]	Date Received:	29-Mar-2017 9:21
Date Collected:	[Redacted]	QC Batch:	B7C0165
Location:	WF-RW02	Date Analyzed:	04-Apr-17 15:37
		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		
		L.C.L.-U.C.L.	Qualifiers
		70 - 130	
		70 - 130	

L.C.L.-U.C.L. - Lower control limit - upper control limit
 Results reported to DL
 When reported, PFBS, PFHxA and PFOS include both linear and branched isomers.
 Only the linear isomer is reported for all other analytes

DL - Detection limit
 RL - Reporting limit

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.

* 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.