

Table1 - Summary of November 2019 Private Well Analytical Results Gustavus, Alaska

Sample Name			NPS Well	NPS Well 2 (Dup)	PW-010	PW-110 (Dup)	PW-012	PW-037
Well Category			1	1	1	1	1	1
Analyte	LHA	Units	10/11/2019	10/11/2019	10/12/2019	10/12/2019	10/12/2019	10/11/2019
Perfluoro-octanoic acid (PFOA)	70†	ppt	2.8	2.9	<2.0	<1.9	0.74 J	<1.9
Perfluoro-octane sulfonate (PFOS)		ppt	18	19	2.2	2.0	13	<1.9
Perfluoro-butane sulfonic acid (PFBS)	-	ppt	0.73 J*	1.0 J*	<2.0	<1.9	0.99 J	<1.9
Perfluoro-heptanoic acid (PFHpA)	-	ppt	1.3 J	1.4 J	<2.0	<1.9	0.86 J	<1.9
Perfluoro-nonanoic acid (PFNA)	-	ppt	<1.9	<1.8	<2.0	<1.9	<1.9	<1.9
Perfluoro-hexane sulfonic acid (PFHxS)	-	ppt	9.3	10	2.9	2.5	9.3	<1.9
4,8- Dioxo-3H-perfluorononanoic acid (ADONA)	-	ppt	<1.9	<1.8	<2.0	<1.9	<1.9	<1.9
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	-	ppt	<1.9	<1.8	<2.0	<1.9	<1.9	<1.9
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	-	ppt	<1.9	<1.8	<2.0	<1.9	<1.9	<1.9
Perfluoro-tridecanoic acid (PFTrIA)	-	ppt	<1.9	<1.8	<2.0	<1.9	<1.9	<1.9
Perfluoro-tetradecanoic acid (PFTeA)	-	ppt	<1.9	<1.8	<2.0	<1.9	<1.9	<1.9
Hexafluoropropylene oxide dimer acid (HFPO-DA)	-	ppt	<1.9 J*	0.40 J*	<2.0	<1.9	<1.9	0.89 J
Perfluorodecanoic acid (PFDA)	-	ppt	<1.9	<1.8	<2.0	<1.9	<1.9	<1.9
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	-	ppt	<1.9	<1.8	<2.0	<1.9	<1.9	<1.9
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	-	ppt	<1.9	<1.8	<2.0	<1.9	<1.9	<1.9
Perfluorohexanoic acid (PFHxA)	-	ppt	1.8 J	2.2	1.0 J	0.97 J	2.8	<1.9
Perfluoroundecanoic acid (PFUnA)	-	ppt	<1.9	<1.8	<2.0	<1.9	<1.9	<1.9
Perfluorododecanoic acid (PFDoA)	-	ppt	<1.9	<1.8	<2.0	<1.9	<1.9	<1.9
LHA Combined (PFOS + PFOA)	70†	ppt	21	22	2.2 ‡	2.0 ‡	14 J	N/A

ppt parts per trillion, equivalent to nanograms per liter

EPA Environmental Protection Agency

LHA Lifetime Health Advisory

† EPA LHA level is 70 ppt for PFOS and PFOA combined.

< Analyte not detected; listed as less than the reporting limit (RL) unless otherwise flagged due to quality-control (QC) failures.

Bold Concentration exceeds LHA level.

DUP Field-duplicate sample

J Estimated concentration, detected greater than the method detection limit (MDL) and less than the RL. Flag applied by the laboratory.

J* Result considered estimated due to a QC failure. Flag applied by Shannon & Wilson, Inc.

‡ Minimum concentration, the LHA Combined concentration includes one or more result that is not detected greater than the MDL.

N/A Not applicable. The LHA Combined concentration could not be calculated because PFOS and PFOA were not detected in the project sample.

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Sample Name			PW-038	PW-039	PW-040	PW-045	PW-059
Well Category			1	1	1	1	1
Analyte	EPA LHA	Units	10/11/2019	10/11/2019	10/11/2019	10/11/2019	10/12/2019
Perfluoro-octanoic acid (PFOA)	70†	ppt	<1.8	<1.8	<1.9	<1.9	<1.9
Perfluoro-octane sulfonate (PFOS)		ppt	<1.8	<1.8	<1.9	0.79 J	<1.9
Perfluoro-butane sulfonic acid (PFBS)	-	ppt	<1.8	<1.8	<1.9	<1.9	<1.9
Perfluoro-heptanoic acid (PFHpA)	-	ppt	<1.8	<1.8	<1.9	<1.9	<1.9
Perfluoro-nonanoic acid (PFNA)	-	ppt	<1.8	<1.8	<1.9	<1.9	<1.9
Perfluoro-hexane sulfonic acid (PFHxS)	-	ppt	<1.8	<1.8	<1.9	0.48 J	1.1 J
4,8- Dioxo-3H-perfluorononanoic acid (ADONA)	-	ppt	<1.8	<1.8	<1.9	<1.9	<1.9
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	-	ppt	<1.8	<1.8	<1.9	<1.9	<1.9
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	-	ppt	<1.8	<1.8	<1.9	<1.9	<1.9
Perfluoro-tridecanoic acid (PFTrIA)	-	ppt	<1.8	<1.8	<1.9	<1.9	<1.9
Perfluoro-tetradecanoic acid (PFTeA)	-	ppt	<1.8	<1.8	<1.9	<1.9	<1.9
Hexafluoropropylene oxide dimer acid (HFPO-DA)	-	ppt	<1.8	<1.8	0.66 J	<1.9	<1.9
Perfluorodecanoic acid (PFDA)	-	ppt	<1.8	<1.8	<1.9	<1.9	<1.9
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	-	ppt	<1.8	<1.8	<1.9	<1.9	<1.9
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	-	ppt	<1.8	<1.8	<1.9	<1.9	<1.9
Perfluorohexanoic acid (PFHxA)	-	ppt	<1.8	<1.8	<1.9	<1.9	<1.9
Perfluoroundecanoic acid (PFUnA)	-	ppt	<1.8	<1.8	<1.9	<1.9	<1.9
Perfluoro-dodecanoic acid (PFDoA)	-	ppt	<1.8	<1.8	<1.9	<1.9	<1.9
LHA Combined (PFOS + PFOA)	70†	ppt	N/A	N/A	N/A	0.79 J‡	N/A

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Sample Name			PW-203	PW-205	PW-211	PW-212	PW-219	PW-221	PW-401
Well Category			1	4	1	1	6	1	1
Analyte	EPA LHA	Units	10/14/2019	10/12/2019	10/13/2019	10/14/2019	10/14/2019	10/12/2019	10/11/2019
Perfluoro-octanoic acid (PFOA)	70†	ppt	<2.0	0.76 J	1.0 J	<1.9	0.84 J	<1.9	1.4 J
Perfluoro-octane sulfonate (PFOS)		ppt	<2.0	10	1.0 J	<1.9	<1.9	2.4	45
Perfluoro-butane sulfonic acid (PFBS)	-	ppt	<2.0	1.4 J	1.4 J	<1.9	1.2 J	<1.9	1.3 J
Perfluoro-heptanoic acid (PFHpA)	-	ppt	<2.0	0.63 J	0.51 J	<1.9	0.49 J	<1.9	1.8 J
Perfluoro-nonanoic acid (PFNA)	-	ppt	<2.0	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9
Perfluoro-hexane sulfonic acid (PFHxS)	-	ppt	<2.0	10	<1.9	<1.9	<1.9	2.1	16
4,8- Dioxo-3H-perfluorononanoic acid (ADONA)	-	ppt	<2.0	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	-	ppt	<2.0	<1.9	3.7	<1.9	<1.9	<1.9	<1.9
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	-	ppt	<2.0	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9
Perfluoro-tridecanoic acid (PFTrIA)	-	ppt	<2.0	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9
Perfluoro-tetradecanoic acid (PFTeA)	-	ppt	<2.0	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9
Hexafluoropropylene oxide dimer acid (HFPO-DA)	-	ppt	<2.0	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9
Perfluorodecanoic acid (PFDA)	-	ppt	<2.0	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	-	ppt	<2.0	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	-	ppt	<2.0	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9
Perfluorohexanoic acid (PFHxA)	-	ppt	<2.0	3.0	0.83 J	<1.9	0.74 J	0.87 J	5.4
Perfluoroundecanoic acid (PFUnA)	-	ppt	<2.0	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9
Perfluoro-dodecanoic acid (PFDoA)	-	ppt	<2.0	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9
LHA Combined (PFOS + PFOA)	70†	ppt	N/A	11 J	2.0 J	N/A	0.84 J‡	2.4 ‡	46 J

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Sample Name			PW-415	PW-464
Well Category			1	-
Analyte	EPA LHA	Units	10/11/2019	10/13/2019
Perfluoro-octanoic acid (PFOA)	70†	ppt	2.4	<2.0
Perfluoro-octane sulfonate (PFOS)		ppt	120	1.6 J
Perfluoro-butane sulfonic acid (PFBS)	-	ppt	1.7 J	<2.0
Perfluoro-heptanoic acid (PFHpA)	-	ppt	6.0	<2.0
Perfluoro-nonanoic acid (PFNA)	-	ppt	<1.9	<2.0
Perfluoro-hexane sulfonic acid (PFHxS)	-	ppt	27	2.1
4,8- Dioxo-3H-perfluorononanoic acid (ADONA)	-	ppt	<1.9	<2.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	-	ppt	<1.9	<2.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	-	ppt	<1.9	<2.0
Perfluoro-tridecanoic acid (PFTrIA)	-	ppt	<1.9	<2.0
Perfluoro-tetradecanoic acid (PFTeA)	-	ppt	<1.9	<2.0
Hexafluoropropylene oxide dimer acid (HFPO-DA)	-	ppt	<1.9	<2.0
Perfluorodecanoic acid (PFDA)	-	ppt	<1.9	<2.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	-	ppt	<1.9	<2.0
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	-	ppt	<1.9	<2.0
Perfluorohexanoic acid (PFHxA)	-	ppt	15	0.51 J
Perfluoroundecanoic acid (PFUnA)	-	ppt	<1.9	<2.0
Perfluoro-dodecanoic acid (PFDoA)	-	ppt	<1.9	<2.0
LHA Combined (PFOS + PFOA)	70†	ppt	122	1.6 J‡