

Rhineland PFAS/PFOA Results Comparison

"[] Values" are between LOD and LOQ, region of less certain quantitation.

"Change" is difference between sample rounds, negative represents decrease and positive represents increase.

"Round Date" displayed is the sample collection date.

Well 4

Analyte Name	Results (ppt)		Change (Latest - Round 1)
	Round 1 (05/30/2019)	Round 15 (08/03/2021)	
perfluorobutanesulfonic acid (PFBS)	ND	ND	
perfluorohexanoic acid (PFHxA)	[3.77]	[1.56]	-2.21
perfluoroheptanoic acid (PFHpA)	3.11	[1.39]	-1.72
perfluorohexanesulfonic acid (PFHxS)	ND	ND	
perfluorooctanoic acid (PFOA)	8.02	2.21	-5.81
perfluorononanoic acid (PFNA)	ND	ND	
perfluorooctanesulfonic acid (PFOS)	ND	[0.91]	0.91
perfluorodecanoic acid (PFDA)	ND	ND	
perfluoroundecanoic acid (PFUnA)	ND	ND	
perfluorododecanoic acid (PFDoA)	ND	ND	
perfluorotridecanoic acid (PFTrDA)	ND	ND	
perfluorotetradecanoic acid (PFTA)	ND	ND	

Well 5

Analyte Name	Results (ppt)		Change (Latest - Round 1)
	Round 1 (05/30/2019)	Round 15 (08/03/2021)	
perfluorobutanesulfonic acid (PFBS)	ND	ND	
perfluorohexanoic acid (PFHxA)	8.29	5.74	-2.55
perfluoroheptanoic acid (PFHpA)	5.78	4.2	-1.58
perfluorohexanesulfonic acid (PFHxS)	ND	ND	
perfluorooctanoic acid (PFOA)	6.45	4.5	-1.95
perfluorononanoic acid (PFNA)	ND	ND	
perfluorooctanesulfonic acid (PFOS)	[2.67]	[2.03]	-0.64
perfluorodecanoic acid (PFDA)	ND	ND	
perfluoroundecanoic acid (PFUnA)	ND	ND	
perfluorododecanoic acid (PFDoA)	ND	ND	
perfluorotridecanoic acid (PFTrDA)	ND	ND	
perfluorotetradecanoic acid (PFTA)	ND	ND	

Well 6

Analyte Name	Results (ppt)		Change (Latest - Round 1)
	Round 1 (05/30/2019)	Round 15 (08/03/2021)	
perfluorobutanesulfonic acid (PFBS)	ND	[1.29]	1.29
perfluorohexanoic acid (PFHxA)	[2.38]	[3.16]	0.78
perfluoroheptanoic acid (PFHpA)	[1.61]	2.54	0.93
perfluorohexanesulfonic acid (PFHxS)	ND	[1.77]	1.77
perfluorooctanoic acid (PFOA)	[3.88]	4.91	1.03
perfluorononanoic acid (PFNA)	ND	ND	
perfluorooctanesulfonic acid (PFOS)	ND	[0.81]	0.81
perfluorodecanoic acid (PFDA)	ND	ND	
perfluoroundecanoic acid (PFUnA)	ND	ND	
perfluorododecanoic acid (PFDoA)	ND	ND	
perfluorotridecanoic acid (PFTrDA)	ND	ND	
perfluorotetradecanoic acid (PFTA)	ND	ND	
Hexafluoropropylene Oxide Dimer Acid (GenX)	ND	ND	

Well 7

Analyte Name	Results (ppt)		Change (Latest - Round 1)
	Round 1 (05/30/2019)	Round 12 (08/03/2021)	
perfluorobutanesulfonic acid (PFBS)	28.4	[1.54]	-26.86
perfluorohexanoic acid (PFHxA)	49.9	[2.28]	-47.62
perfluoroheptanoic acid (PFHpA)	15.9	[1.57]	-14.33
perfluorohexanesulfonic acid (PFHxS)	590	12.1	-577.9
perfluorooctanoic acid (PFOA)	25.2	3.27	-21.93
perfluorononanoic acid (PFNA)	ND	ND	
perfluorooctanesulfonic acid (PFOS)	79.6	[0.94]	-78.66
perfluorodecanoic acid (PFDA)	ND	ND	
perfluoroundecanoic acid (PFUnA)	ND	ND	
perfluorododecanoic acid (PFDoA)	ND	ND	
perfluorotridecanoic acid (PFTrDA)	ND	ND	
perfluorotetradecanoic acid (PFTA)	ND	ND	
Hexafluoropropylene Oxide Dimer Acid (GenX)	ND	ND	

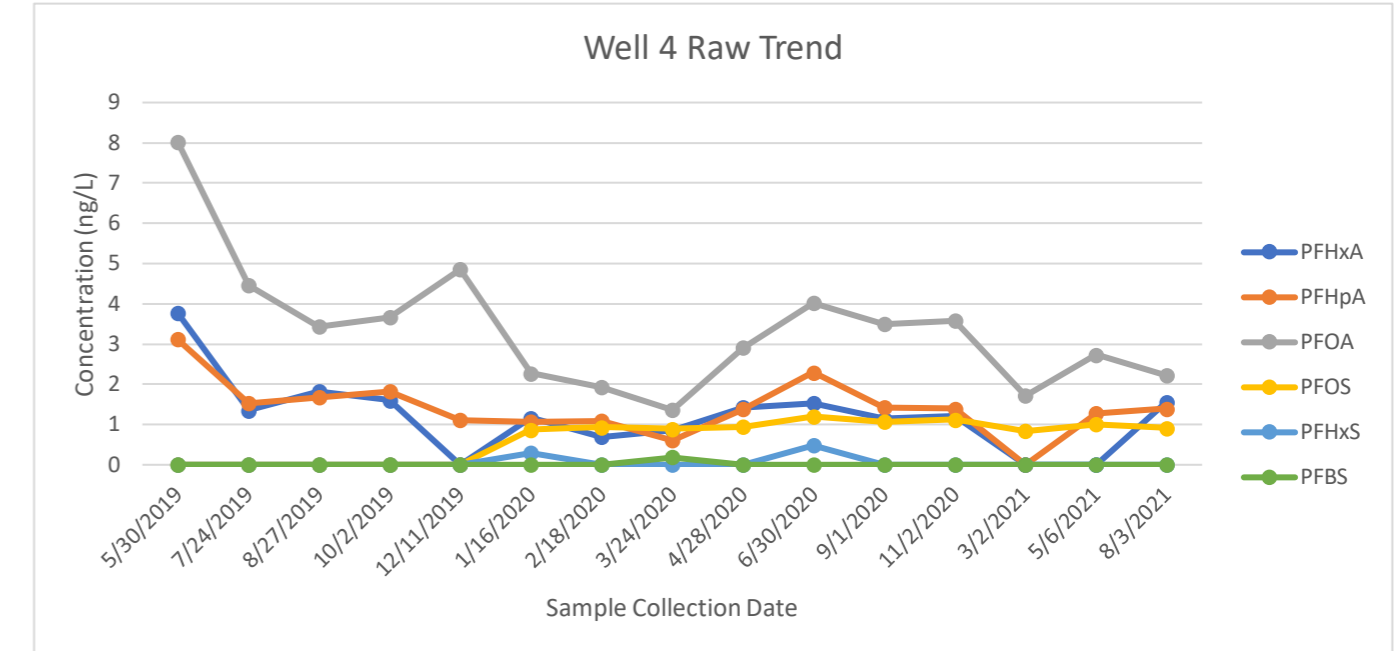
Well 8

Analyte Name	Results (ppt)		Change (Latest - Round 1)
	Round 1 (05/30/2019)	Round 11 (08/03/2021)	
perfluorobutanesulfonic acid (PFBS)	ND	ND	
perfluorohexanoic acid (PFHxA)	[2.08]	ND	-2.08
perfluoroheptanoic acid (PFHpA)	ND	ND	
perfluorohexanesulfonic acid (PFHxS)	[7.25]	ND	-7.25
perfluorooctanoic acid (PFOA)	[1.72]	ND	-1.72
perfluorononanoic acid (PFNA)	ND	ND	
perfluorooctanesulfonic acid (PFOS)	ND	ND	
perfluorodecanoic acid (PFDA)	ND	ND	
perfluoroundecanoic acid (PFUnA)	ND	ND	
perfluorododecanoic acid (PFDoA)	ND	ND	
perfluorotridecanoic acid (PFTrDA)	ND	ND	
perfluorotetradecanoic acid (PFTA)	ND	ND	

KEY	
perfluorobutanesulfonic acid	PFBS
perfluorohexanoic acid	PFHxA
perfluoroheptanoic acid	PFHpA
perfluorohexanesulfonic acid	PFHxS
perfluorooctanoic acid	PFOA
perfluorononanoic acid	PFNA
perfluorooctanesulfonic acid	PFOS
perfluorodecanoic acid	PFDA
perfluoroundecanoic acid	PFUnA
perfluorododecanoic acid	PFDoA
perfluorotridecanoic acid	PFTTrDA
perfluorotetradecanoic acid	PFTA
Hexafluoropropylene Oxide Dimer Acid (GenX)	GenX

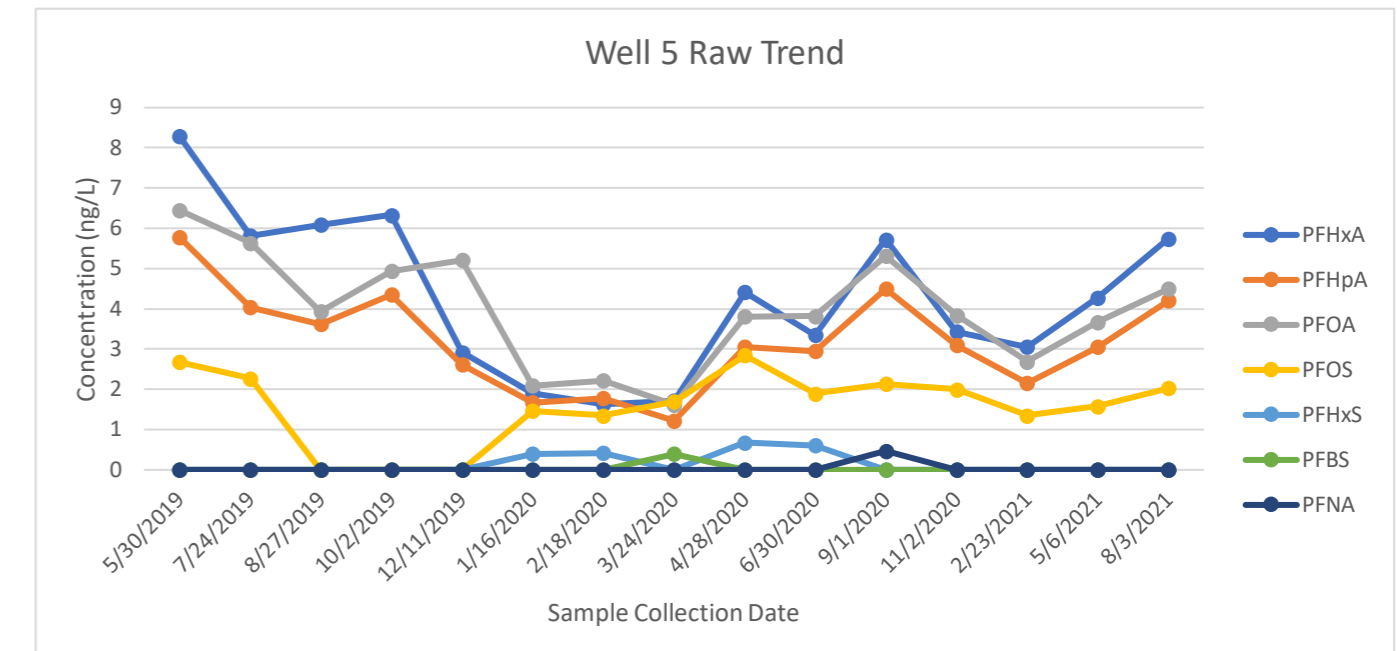
Well 4

Date	Compound and Concentration (ng/L)												
	PFBS	PFHxA	PFHpA	PFHxS	PFOA	PFNA	PFOS	PFDA	PFUnA	PFDoA	PFTTrDA	PFTA	GenX
5/30/2019	0	3.77	3.11	0	8.02		0						
7/24/2019	0	1.35	1.53	0	4.45		0						
8/27/2019	0	1.82	1.67	0	3.43		0						
10/2/2019	0	1.6	1.82	0	3.66		0						
12/11/2019	0	0	1.11	0	4.86		0						
1/16/2020	0	1.16	1.06	0.286	2.27		0.87						
2/18/2020	0	0.69	1.08	0	1.93		0.93						
3/24/2020	0.18	0.86	0.61	0	1.36		0.89						
4/28/2020	0	1.42	1.38	0	2.9		0.95						
6/30/2020	0	1.52	2.29	0.48	4.01		1.2						
9/1/2020	0	1.14	1.43	0	3.49		1.06						
11/2/2020	0	1.22	1.39	0	3.58		1.12						
3/2/2021	0	0	0	0	1.72		0.83						
5/6/2021	0	0	1.27	0	2.73		1.01						
8/3/2021	0	1.56	1.39	0	2.21		0.91						



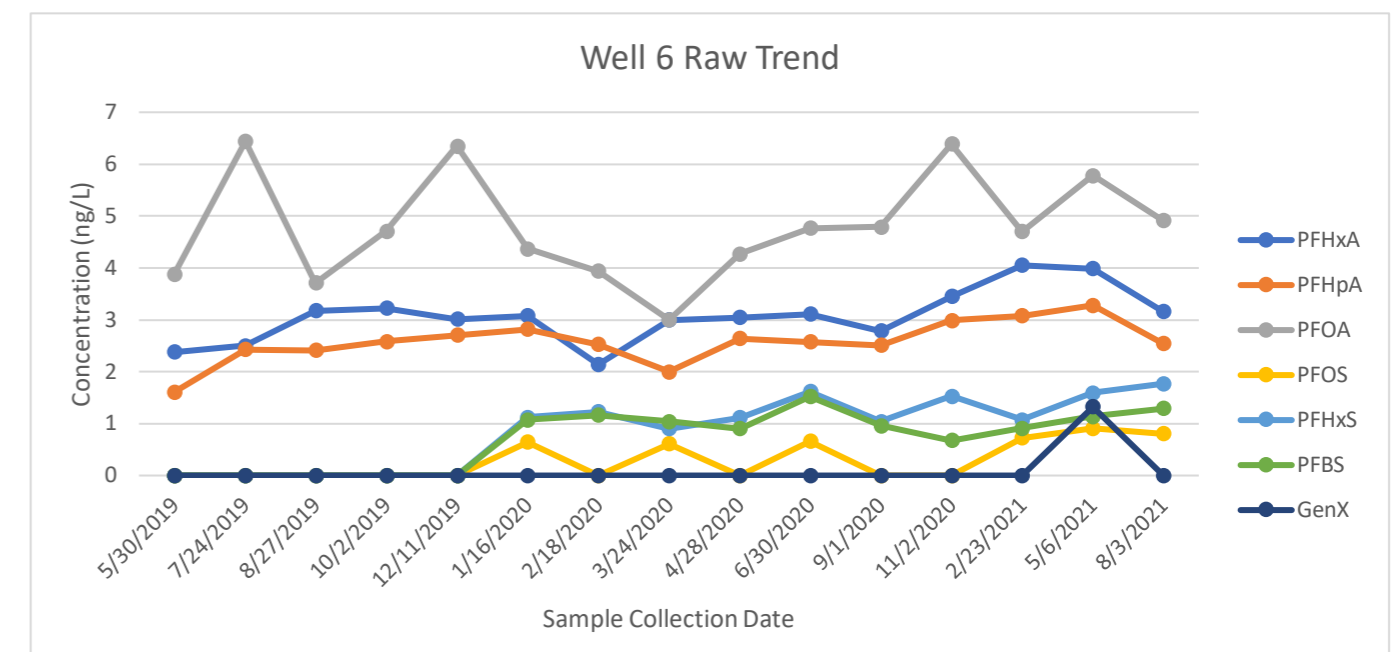
Well 5

Date	Compound and Concentration (ng/L)												
	PFBS	PFHxA	PFHpA	PFHxS	PFOA	PFNA	PFOS	PFDA	PFUnA	PFDoA	PFTTrDA	PFTA	GenX
5/30/2019	0	8.29	5.78	0	6.45	0	2.67						
7/24/2019	0	5.82	4.04	0	5.64	0	2.27						
8/27/2019	0	6.09	3.62	0	3.94	0	0						
10/2/2019	0	6.33	4.35	0	4.94	0	0						
12/11/2019	0	2.92	2.61	0	5.21	0	0						
1/16/2020	0	1.9	1.68	0.402	2.09	0	1.46						
2/18/2020	0	1.63	1.77	0.41	2.21	0	1.35						
3/24/2020	0.39	1.72	1.22	0	1.62	0	1.69						
4/28/2020	0	4.41	3.05	0.68	3.81	0	2.84						
6/30/2020	0	3.34	2.95	0.61	3.82	0	1.89						
9/1/2020	0	5.72	4.49	0	5.32	0.47	2.13						
11/2/2020	0	3.43	3.09	0	3.84	0	2						
2/23/2021	0	3.05	2.16	0	2.69	0	1.35						
5/6/2021	0	4.28	3.05	0	3.67	0	1.58						
8/3/2021	0	5.74	4.2	0	4.5	0	2.03						



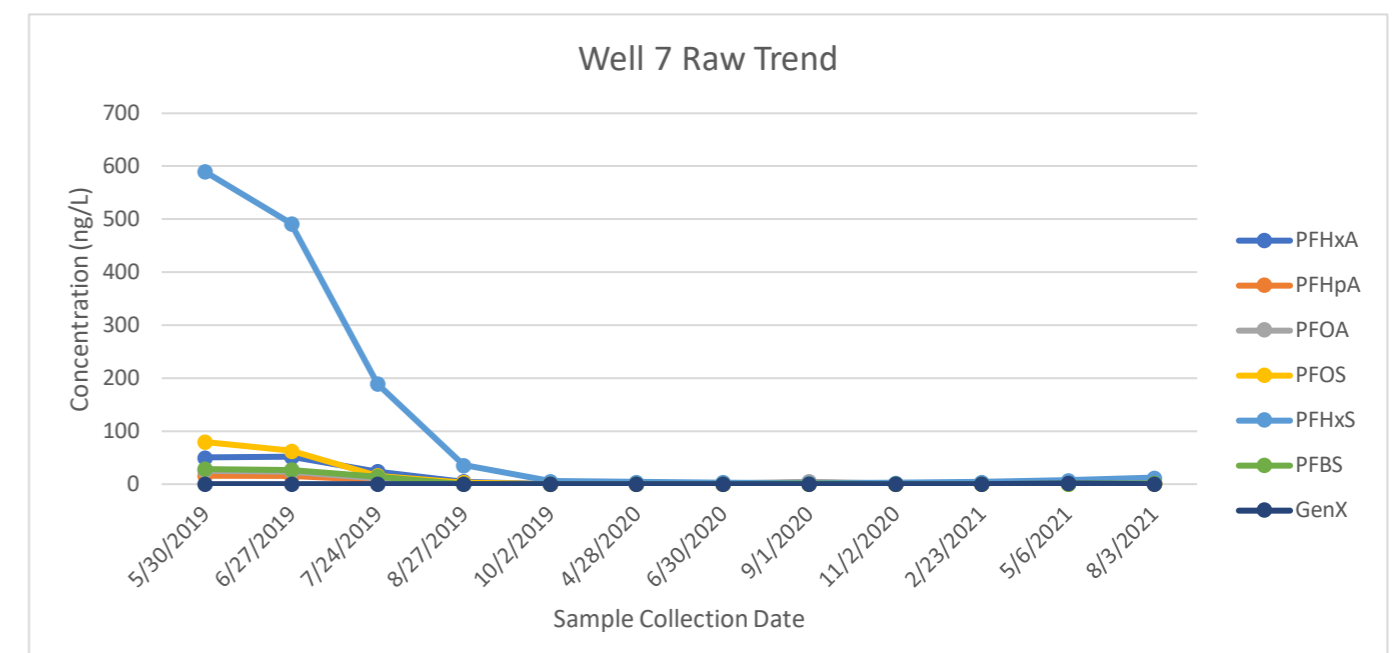
Well 6

Date	Compound and Concentration (ng/L)												
	PFBS	PFHxA	PFHpA	PFHxS	PFOA	PFNA	PFOS	PFDA	PFUnA	PFDoA	PFTTrDA	PFTA	GenX
5/30/2019	0	2.38	1.61	0	3.88		0						0
7/24/2019	0	2.5	2.43	0	6.44		0						0
8/27/2019	0	3.17	2.41	0	3.71		0						0
10/2/2019	0	3.22	2.58	0	4.71		0						0
12/11/2019	0	3.01	2.7	0	6.35		0						0
1/16/2020	1.07	3.08	2.82	1.12	4.37		0.642						0
2/18/2020	1.16	2.14	2.53	1.23	3.94		0						0
3/24/2020	1.04	3	2	0.9	3		0.61						0
4/28/2020	0.9	3.04	2.64	1.11	4.27		0						0
6/30/2020	1.52	3.11	2.57	1.62	4.76		0.66						0
9/1/2020	0.96	2.78	2.51	1.04	4.79		0						0
11/2/2020	0.68	3.45	2.99	1.53	6.39		0						0
2/23/2021	0.91	4.05	3.08	1.07	4.7		0.72						0
5/6/2021	1.14	3.99	3.28	1.59	5.78		0.91						1.32
8/3/2021	1.29	3.16	2.54	1.77	4.91		0.81						0



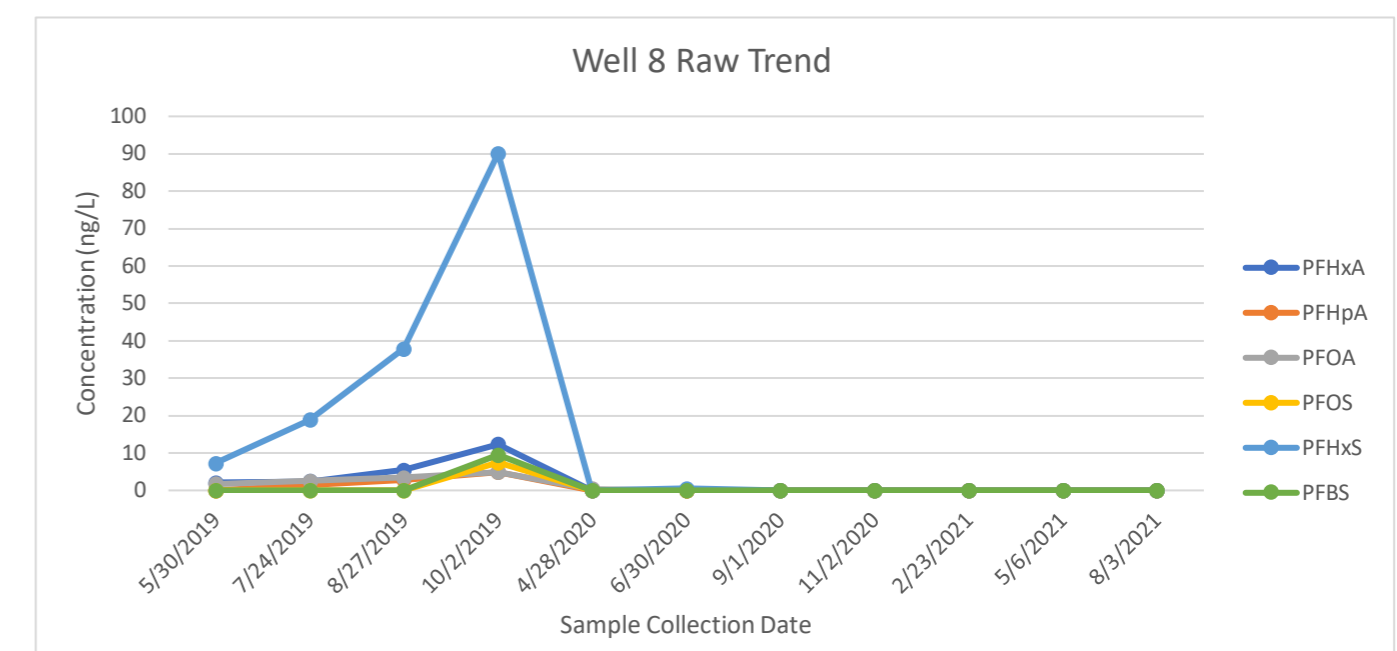
Well 7

Date	Compound and Concentration (ng/L)												
	PFBS	PFHxA	PFHpA	PFHxS	PFOA	PFNA	PFOS	PFDA	PFUnA	PFDoA	PFTTrDA	PFTA	GenX
5/30/2019	28.4	49.9	15.9	590	25.2		79.6						0
6/27/2019	27.1	51.9	15	492	23.9		63						0
7/24/2019	14.4	23.7	7.11	189	10.3		15.8						0
8/27/2019	0	4.73	1.53	35.9	2.4		3.42						0
10/2/2019	0	0	0	5.31	0		0						0
4/28/2020	0	1.1	0.63	4.45	0.83		0.77						0
6/30/2020	0	1.04	0.54	3.55	0.89		0.41						0
9/1/2020	1.12	2.78	2.77	1.82	4.66		0						0
11/2/2020	0	0.93	0.78	2.07	1.22		0.71						0
2/23/2021	0	1.47	0.97	4.23	1.62		0.6						0
5/6/2021	0.84	1.92	1.29	7.5	2.51		0.75						1.32
8/3/2021	1.54	2.28	1.57	12.1	3.27		0.94						0



Well 8

Date	Compound and Concentration (ng/L)												
	PFBS	PFHxA	PFHpA	PFHxS	PFOA	PFNA	PFOS	PFDA	PFUnA	PFDoA	PFTTrDA	PFTA	GenX
5/30/2019	0	2.08	0	7.25	1.72		0						
7/24/2019	0	2.39	1.56	18.9	2.53		0						
8/27/2019	0	5.51	2.83	37.9	3.44		0						
10/2/2019	9.5	12.3	4.87	90.1	4.86		7.46						
4/28/2020	0	0	0	0	0.42		0						
6/30/2020	0	0	0	0.47	0		0						
9/1/2020	0	0	0	0	0		0						
11/2/2020	0	0	0	0	0		0						
2/23/2021	0	0	0	0	0		0						
5/6/2021	0	0	0	0	0		0						
8/3/2021	0	0	0	0	0		0						



KEY		Recommended Enforcement Standard (ng/L)
perfluorobutanesulfonic acid	PFBS	450,000
perfluorohexanoic acid	PFHxA	150,000
perfluoroheptanoic acid	PFHpA	NA
perfluorohexanesulfonic acid	PFHxS	40
perfluorooctanoic acid	PFOA	combined
perfluorononanoic acid	PFNA	30
perfluorooctanesulfonic acid	PFOS	combined
perfluorodecanoic acid	PFDA	300
perfluoroundecanoic acid	PFUnA	3,000
perfluorododecanoic acid	PFDoA	500
perfluorotridecanoic acid	PFTTrDA	NA
perfluorotetradecanoic acid	PFTA	10,000
Combined PFOA & PFOS	PFOA/PFOS	20
Hexafluoropropylene Oxide Dimer Acid (GenX)	GenX	Unknown

	Total Hazard Index Summary Table	
	First Round	Latest Round
Well 4	0.4	0.16
Well 5	0.46	0.33
Well 6	0	0.33
Well 7	19.99	0.51
Well 8	0.18	0.00

Well 4

Hazard Index	Results		Change (Latest - Round 1)
	Round 1 (05/30/2019)	Round 15 (08/03/2021)	
450,000 (PFBS)			
150,000 (PFHxA)	0.00	0.00	
NA (PFHpA)			
40 (PFHxS)			
Combined (PFOA)			
30 (PFNA)			
Combined (PFOS)			
300 (PFDA)			
3000 (PFUnA)			
500 (PFDoA)			
NA (PFTTrDA)			
10,000 (PFTA)			
20 (Combined PFOA/PFOS)	0.40	0.16	-0.25
Total HZ	0.40	0.16	-0.25

Well 5

Hazard Index	Results		Change (Latest - Round 1)
	Round 1 (05/30/2019)	Round 15 (08/03/2021)	
450,000 (PFBS)			
150,000 (PFHxA)	0.00	0.00	
NA (PFHpA)			
40 (PFHxS)			
Combined (PFOA)			
30 (PFNA)			
Combined (PFOS)			
300 (PFDA)			
3000 (PFUnA)			
500 (PFDoA)			
NA (PFTTrDA)			
10,000 (PFTA)			
20 (Combined PFOA/PFOS)	0.46	0.33	-0.13
Total HZ	0.46	0.33	-0.13

Well 6

Hazard Index	Results		Change (Latest - Round 1)
	Round 1 (05/30/2019)	Round 15 (08/03/2021)	
450,000 (PFBS)		0.00	
150,000 (PFHxA)	0.00	0.00	
NA (PFHpA)			
40 (PFHxS)		0.04	0.04
Combined (PFOA)			
30 (PFNA)			
Combined (PFOS)			
300 (PFDA)			
3000 (PFUnA)			
500 (PFDoA)			
NA (PFTTrDA)			
10,000 (PFTA)			
20 (Combined PFOA/PFOS)		0.29	0.29
Total HZ	0.00	0.33	0.33

Well 7

Hazard Index	Results		Change (Latest - Round 1)
	Round 1 (05/30/2019)	Round 12 (08/03/2021)	
450,000 (PFBS)	0.00	0.00	
150,000 (PFHxA)	0.00	0.00	
NA (PFHpA)			
40 (PFHxS)	14.75	0.30	-14.75
Combined (PFOA)			
30 (PFNA)			
Combined (PFOS)			

300 (PFDA)			
3000 (PFUnA)			
500 (PFDoA)			
NA (PFTrDA)			
10,000 (PFTA)			
20 (Combined PFOA/PFOS)	5.24	0.21	-5.03
Total HZ	19.99	0.51	-19.48

Well 8

Hazard Index	Results		Change (Latest - Round 1)
	Round 1 (05/30/2019)	Round 11 (08/03/2021)	
450,000 (PFBS)			
150,000 (PFHxA)	0.00		
NA (PFHpA)			
40 (PFHxS)	0.18		-0.18
Combined (PFOA)			
30 (PFNA)			
Combined (PFOS)			
300 (PFDA)			
3000 (PFUnA)			
500 (PFDoA)			
NA (PFTrDA)			
10,000 (PFTA)			
20 (Combined PFOA/PFOS)			
Total HZ	0.18	0.00	0.00