Town of Brookfield - Sanitary District #4

Sampled 5/16/2023

Sample Location:	EP200 Well 1 & 2		EP300 Well 3 & 4						
Radium	Result	Qualifier	Result	Qualifier	LOD	LOQ	MCL	Units
Semi-Volatiles								
Radioactivity, Gross Alpha (including U and Ra)	1.85 +- 1.58		1.41 +-2.24		2.79	2.79		pCi/L
Radioactivity, Gross Alpha (excluding U and Ra)	1.52		1.17				15	pCi/L
Radium 226, total	1.51 +- 0.695		1.19 +- 0.541		0.556	0.556	5	pCi/L
Radium 228, total	.0937 +- 0.358		0.628 +- 0.351		0.628	0.628	5	pCi/L
Uranium, Total	0.486 +- 0.010		.0328 +- 0.007		0.323	0.323	30	ug/L

Sampled 5/16/2023

Sample location:	EP200 Well 1 & 2		EP300 Well 3 & 4		EP400 Well 5 & 6					
Contaminants	Result	Qualifier	Result	Qualifier	Result	Qualifier	LOD	LOQ	MCL	Units
Wet Chemistry										
Fluoride (unfiltered)	0.15		0.17		0.23		0.030	0.10		mg/L
Nitrate as N (unfiltered)	ND		ND		ND		0.073	0.24		mg/L
Nitrite as N (unfiltered)	ND		ND	MS_CI	ND		0.040	0.13	1	mg/L
N+N by IC	ND		ND		ND		0.11	0.37	10	mg/L
Metals										
Turbidity, screening - SDWA (200.7)	ND		ND		ND		0.50	0.50	1	NTU
Turbidity, screening - SDWA (200.8)	ND		ND		ND		0.50	0.50	1	NTU
Chromium, Total	ND		ND		ND		0.1	3.8	100	ug/L
Sodium High, Total	120		180		120		0.12	0.41		mg/L
Antimony, Total	ND		ND		ND		0.32	1.1	6	ug/L
Arsenic, Total	ND		ND		ND		0.1	3.7	10	ug/L
Barium, Total	200		270		190		0.20	0.67	2000	ug/L
Beryllium, Total	ND		ND		ND		0.060	0.20	4	ug/L
Cadmium, Total	ND		ND		ND		0.12	0.40	5	ug/L
Mercury, Total	ND		ND		ND		0.047	0.16	2	ug/L
Nickel, Total	2.5	J	3	J	3.2	J	1	3.4	100	ug/L
Selenium, Total	ND		ND		ND		1	3.3	50	ug/L
Thallium, Total	ND		ND		ND		0.75	2.5	2	ug/L
Semi-Volatiles										
Total PCBs	ND		ND		ND		0.098	0.39	0.5	ug/L
Total Chlordane	ND		ND		ND		0.033	0.11	2	ug/L
Toxaphene	ND		ND		ND		0.65	2.2	3	ug/L
Alachlor	ND		ND		ND		0.0055	0.018	2	ug/L
Atrazine	ND		ND		ND		0.0063	0.021	3	ug/L
Endrin	ND		ND		ND		0.0084	0.028	2	ug/L
Heptachlor	ND		ND		ND		0.0049	0.017	0.4	ug/L
Heptachlor Epoxide	ND		ND		ND		0.013	0.045	0.2	ug/L

Sample location:	EP200 Well 1 & 2		EP300 Well 3 & 4		EP400 Well 5 & 6					
Contaminants	Result		Result		Result	Qualifier	LOD	LOQ	MCL	Units
Hexachlorobenzene	ND		ND		ND		0.0051	0.017	1	ug/L
Hexachlorocyclopentadiene	ND		ND		ND		0.027	0.091	50	ug/L
BHC gamma (Lindane)	ND		ND		ND		0.0052	0.017	0.2	ug/L
Methoxychlor	ND		ND		ND		0.0099	0.033	40	ug/L
Simazine	ND		ND		ND		0.0064	0.021	4	ug/L
Carbofuran	ND		ND		ND		0.28	0.93	40	ug/L
Oxamyl	ND		ND		ND		0.24	0.80	200	ug/L
Glyphosate	ND		ND		ND		3	10	700	ug/L
Endothall	ND		ND		ND		1.5	5.1	100	ug/L
Diquat	ND		ND		ND		0.34	1.1	20	ug/L
Subcontract										
2,4-D	ND		ND		ND		0.10	0.33	70	µg/L
Dalapon	ND		ND		ND		0.93	3.1	200	µg/L
Dicamba	ND		ND		ND		0.15	0.51		µg/L
Dinoseb	ND		ND		ND		0.15	0.49	7	µg/L
Pentachlorophenol	ND		ND		ND		0.04	0.13	1	µg/L
Picloram	ND		ND		ND		0.10	0.35		µg/L
2,4,5-TP (Silvex)	ND		ND		ND		0.11	0.37	50	µg/L
Volatiles										
Benzene	ND		ND		ND		0.11	0.37	5	ug/L
Bromodichloromethane	3.5	NRC	2.9	NRC	0.17	J, NRC	0.17	0.56	80	ug/L
Bromoform	1	NRC	2.3	NRC			0.24	0.82	80	ug/L
Carbon Tetrachloride	ND		ND		ND		0.19	0.62	5	ug/L
Chloroform	2.2	NRC	1.3	NRC			0.14	0.45	80	ug/L
Dibromochloromethane	4	NRC	4.4	NRC			0.24	0.79	80	ug/L
1,2-Dichlorobenzene	ND		ND		ND		0.32	1.1	600	ug/L
1,4-Dichlorobenzene	ND		ND		ND		0.29	0.96	75	ug/L
1,2-Dichloroethane	ND		ND		ND		0.13	0.42	5	ug/L
1,1-Dichloroethene	ND		ND		ND		0.14	0.48	7	ug/L
cis-1,2-Dichloroethene	ND		ND		ND		0.15	0.50	70	ug/L
trans-1,2-Dichloroethene	ND		ND		ND		0.11	0.37	100	ug/L
Dichloromethane	ND		ND		ND		0.38	1.3	5	ug/L
1,2-Dichloropropane	ND		ND		ND		0.16	0.54	5	ug/L
Ethyl Benzene	ND		ND		ND		0.21	0.70	700	ug/L
MTBE					0.37	J, NRC				
Chlorobenzene	ND		ND		ND		0.20	0.67	100	ug/L
Styrene	ND		ND		ND		0.19	0.63	100	ug/L
Tetrachloroethene	ND		ND		ND		0.49	1.6	5	ug/L
Toluene	ND		ND		ND		0.17	0.58	1000	ug/L
1,2,4-Trichlorobenzene	ND		ND		ND		0.28	0.93	70	ug/L
1,1,1-Trichloroethane	ND		ND		ND		0.15	0.50	200	ug/L
1,1,2-Trichloroethane	ND		ND		ND		0.21	0.69	5	ug/L
Trichloroethene	ND		ND		ND		0.17	0.55	5	ug/L
Vinyl Chloride	ND		ND		ND		0.086	0.29	0.2	ug/L
Xylene (Total)	ND		ND		ND		0.73	2.4	10000	ug/L

Town of Brookfield - Sanitary District #4

Sampled 5/16/2023

Sample Location:	EP200 Well 1 & 2		EP300 Well 3 & 4		EP400 Well 5 & 6					
PFAS	Result	Qualifier	Result	Qualifier	Result	Qualifier	LOD	LOQ	MCL	Units
Semi-Volatiles										
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	ND		ND		ND		0.32	1		ng/L
9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	ND		ND		ND		0.35	1.1		ng/L
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND		ND		ND		0.38	1.2		ng/L
hexafluoropropylene oxide dimer acid (HFPO DA)	ND		ND		ND		0.42	1.4		ng/L
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		ND		ND		0.48	1.6		ng/L
n-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		ND		ND		0.41	1.3		ng/L
perfluorobutanesulfonic acid (PFBS)	1.3		1.2		1		0.31	1		ng/L
perfluorodecanoic acid (PFDA)	ND		ND		ND		0.34	1.1		ng/L
perfluorododecanoic acid (PFDoA)	ND		ND		ND		0.23	0.79		ng/L
perfluoroheptanoic acid (PFHpA)	ND		0.66	J	0.67	J	0.45	1.5		ng/L
perfluorohexanoic acid (PFHxA)	0.83	J	1.5	J	1.6		0.48	1.6		ng/L
perfluorohexanesulfonic acid (PFHxS)	0.80	J	0.92	J	0.71	J	0.35	1.1		ng/L
perfluorononanoic acid (PFNA)	0.55	J	ND		ND		0.47	1.5		ng/L
perfluorooctanoic acid (PFOA)	0.58	J	1	J	1.6		0.50	1.6	70	ng/L
perfluorooctanesulfonic acid (PFOS)	ND		ND		ND		0.32	1	70	ng/L
perfluorotetradecanoic acid (PFTA)	ND		ND		ND		0.35	1.1		ng/L
perfluorotridecanoic acid (PFTrDA)	ND		ND		ND		0.44	1.4		ng/L
perfluoroundecanoic acid (PFUnA)	ND		ND		ND		0.31	1		ng/L
Semi-Volatiles										
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	ND		ND		ND		0.30	0.98		ng/L
9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	ND		ND		ND		0.33	1.1		ng/L
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND		ND		ND		0.36	1.2		ng/L
hexafluoropropylene oxide dimer acid (HFPO DA)	ND		ND		ND		0.40	1.4		ng/L
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		ND		ND		0.46	1.6		ng/L
n-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		ND		ND		0.39	1.3		ng/L
perfluorobutanesulfonic acid (PFBS)	ND		ND		ND		0.29	0.98		ng/L
perfluorodecanoic acid (PFDA)	ND		ND		ND		0.32	1.1		ng/L
perfluorododecanoic acid (PFDoA)	ND		ND		ND		0.23	0.75		ng/L
perfluoroheptanoic acid (PFHpA)	ND		ND		ND		0.43	1.5		ng/L
perfluorohexanoic acid (PFHxA)	ND		ND		ND		0.46	1.6		ng/L
perfluorohexanesulfonic acid (PFHxS)	ND		ND		ND		0.33	1.1		ng/L
perfluorononanoic acid (PFNA)	ND		ND		ND		0.45	1.5		ng/L
perfluorooctanoic acid (PFOA)	ND		ND		ND		0.48	1.6		ng/L
perfluorooctanesulfonic acid (PFOS)	ND		ND		ND		0.30	0.98		ng/L
perfluorotetradecanoic acid (PFTA)	ND		ND		ND		0.33	1.1		ng/L
perfluorotridecanoic acid (PFTrDA)	ND		ND		ND		0.42	1.4		ng/L
perfluoroundecanoic acid (PFUnA)	ND		ND		ND		0.29	0.98		ng/L

Town of Brookfield - Sanitary District #4

2023 Lead & Copper Testing - 13th Round

ID	Address	Test Date	Lead	Copper	Units
D 9	910 Summit Drive	06/20/23	3.3	110	ug/L
D 11	525 Long Beard Road	06/20/23	6.8	150	ug/L
LC 1	830 Plateau Lane	06/20/23	2.4	120	ug/L
LC 4	905 Sunnycrest Drive	06/20/23	0.86	82	ug/L
LC 5	21305 Belgren Road	06/20/23	1.4	160	ug/L
LC 7	1200 Hawthorne Ridge Drive	07/05/23	2.2	69	ug/L
LC 8	1015 Dona Vista Drive	06/19/23	3.4	200	ug/L
LC 9	21515 Cologne Road	06/20/23	0.73	86	ug/L
LC 10	21225 Candlewood Drive	06/20/23	2.9	120	ug/L
LC 11	21475 Clarion Lane	06/20/23	0.83	150	ug/L
LC 15	21320 Birdseye Lane	06/20/23	2.7	130	ug/L
LC 16	21395 Cologne Road	06/20/23	1.2	83	ug/L
LC 17	815 Plateau Lane	06/20/23	0.88	97	ug/L
LC 18	260 Rip Van Winkle Drive	06/19/23	0.43	68	ug/L
LC 19	21365 Cologne Road	06/20/23	2.5	77	ug/L
LC 21	960 Timber Pass	06/20/23	1.5	110	ug/L
LC 22	984 Arlyne Court	06/20/23	0.52	72	ug/L
LC 23	295 Catskill Road	06/20/23	1.7	150	ug/L
LC 24	950 Rolling Green Drive	06/20/23	ND	180	ug/L
LC 25	21625 Greendale Drive	06/22/23	4.2	210	ug/L

	Lead	Copper	
2023 - 90% Percentile:	3.4	180	ug/L
Action Level:	15	1300	ug/L

The Sanitary District has many older homes that were constructed when lead plumbing materials were commonly used. Fortunately we do not have any lead services in our system but lead solder was used with copper pipes until 1984. Even today lead can be found in some brass fixtures.

Lead and copper testing is mandated by the EPA's Lead & Copper Rule which was adopted in June of 1991. Because we are historically in compliance we have taken the fewest samples allowed by law. The law doesn't give anyone the opportunity to get a pass, so we will continue to sample every three years.

This year Sanitary District No. 4 completed its thirteenth round on a group of 20 homes that we have been monitoring since 1993. The homes in our test group have copper plumbing with lead solder. EPA regulations require that 90% of the homes in our test group have lead levels of 15 micrograms per liter (µg/l) or less. The 90 percentile level in this round of testing for lead was 3.4 µg/l, well under the EPA maximum level. EPA regulations require that 90% of the homes in our test group have Copper levels of 1300 micrograms per liter (µg/l) or less. The 90 percentile level in this round of testing for Copper was 180 µg/l, also well under the EPA maximum level. Another "thank you' to those who again have taken time to help us with the testing.

Lead is not found in our groundwater or water in the district's distribution mains, but is absorbed from lead plumbing materials. The utility carefully monitors the corrosion potential of our drinking water to minimize the amount of lead absorbed from household plumbing.

We recommend that residents with homes built before 1984 flush their water line before using water for cooking or drinking. It takes time for the water to absorb lead, so the idea is to use water that has not been in contact with lead plumbing materials for more than a few hours. Adequately flushing the water line can require running 1 to 2 gallons of water to draw fresh water from the water main.

Definitions and Qualifiers

Item	Definition
ug/l	micrograms per liter which is equal to ppb: parts per billion.
FBNA	The field sample had no detects, therefore the corresponding trip blank/field reagent blank was not analyzed.
J	Result is between LOD and LOQ and considered to be within a region of less-certain quantitation.
MS_Cl	Chlorine odor present. Nitrite matrix spike and spike duplicate recovery low and Nitrate matrix spike and spike duplicate recovery high due to the presence of chlorine in the sample.
NRC	Compound was detected in the sample, but was not requested in the order of analyses.
ND	Analyte NOT DETECTED at or above the LOD or MRL.
LOD	Limit of Detection.
LOQ	Limit of Quantitation.
NA	Not Applicable.
Dry	Dry Weight Basis.
Wet	Wet Weight Basis.
% Dry	Equal to: (mg/kg dry) / 10000.
1000 ug/L	Equal to: 1 mg/L.
MCL	Maximum Contaminant Levels for Drinking Water Samples.
RPD	Relative Percent Difference.
%REC	Percent Recovery.
Source	Sample that was matrix spiked or duplicated.