



Superior Refinery Temporary Treatment System Preliminary PFAS Results - 6/10/2018

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Location		EQ Tank	SP-0A	SP-2	SP-3	SP-6
Date		6/10/2018	6/10/2018	6/10/2018	6/10/2018	6/10/2018
Sample Type		N	N	N	N	N
Sample ID		EQ Tank	SP-0A	SP-2	SP-3	SP-6
Sample Description		Prior to normal WWTP	Treatment system influent, before prefiltration	Between lead and lag 10,000-lb GAC vessels	After the lag 10,000-lb GAC vessel	After the ion exchange vessels, treatment system effluent
Parameter	Units					
Per- and Polyfluoroalkyl Substances						
4:2 Fluorotelomer sulfonate (4:2 FTS)	ng/l	90	40	< 10	< 10	< 10
6:2 Fluorotelomer sulfonate (6:2 FTS)	ng/l	29640	26980	690	< 10	< 10
8:2 Fluorotelomer sulfonate (8:2 FTS)	ng/l	1610	700	< 10	< 10	< 10
Methylperfluoro-1-octanesulfonamide (N-MEFOSA)	ng/l	< 10	< 10	< 10	< 10	< 10
n-Ethyl perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	ng/l	< 10	< 10	< 10	< 10	< 10
Perfluorobutane sulfonate (PFBS)	ng/l	80	30	< 10	< 10	< 10
Perfluorobutanoic acid (PFBA)	ng/l	830	1870	600	< 20	< 20
Perfluorodecane sulfonate (PFDS)	ng/l	< 10	< 10	< 10	< 10	< 10
Perfluorodecanoic acid (PFDA)	ng/l	40	20	< 10	< 10	< 10
Perfluorododecanoic acid (PFDoA / PFDoDA)	ng/l	< 10	< 10	< 10	< 10	< 10
Perfluoroheptane sulfonate (PFHpS)	ng/l	< 10	< 10	< 10	< 10	< 10
Perfluoroheptanoic acid (PFHpA)	ng/l	810	2990	110	< 10	< 10
Perfluorohexane sulfonate (PFHxS)	ng/l	280	280	< 10	< 10	< 10
Perfluorohexane sulfonate (PFHxS) - Branched	ng/l	40	40	< 10	< 10	< 10
Perfluorohexane sulfonate (PFHxS) - Linear	ng/l	230	230	< 10	< 10	< 10
Perfluorohexanoic acid (PFHxA)	ng/l	2710	3780	250	< 10	< 10
Perfluorononanesulfonate (PFNS)	ng/l	< 10	< 10	< 10	< 10	< 10
Perfluorononanoic acid (PFNA)	ng/l	140	120	< 10	< 10	< 10
Perfluorooctanesulfonamide (PFOSA / FOSA)	ng/l	< 10	< 10	< 10	< 10	< 10
Perfluorooctanesulfonate (PFOS)	ng/l	290	100	< 10	< 10	< 10
Perfluorooctanesulfonate (PFOS) - Branched	ng/l	140	70	< 10	< 10	< 10
Perfluorooctanesulfonate (PFOS) - Linear	ng/l	150	30	< 10	< 10	< 10
Perfluorooctanoic acid (PFOA)	ng/l	1030	1100	30	< 10	< 10
Perfluoropentanoic acid (PFPeA)	ng/l	1730	7970	1000	< 10	< 10
Perfluoropentansulfonate (PFPeS)	ng/l	40	40	< 10	< 10	< 10
Perfluorotetradecanoic acid (PFTA / PFTeDA / PFTeA)	ng/l	< 10	< 10	< 10	< 10	< 10
Perfluorotridecanoic acid (PFTTrDA / PFTTriA)	ng/l	< 10	< 10	< 10	< 10	< 10
Perfluoroundecanoic acid (PFUnA / PFUnDA)	ng/l	< 10	< 10	< 10	< 10	< 10

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