

Fort Drum Environmental Test Well (Groundwater) PFAS Sample Results

Site	Fire Training Area (FTA)															Old Sanitary Landfill (OSL)			Airfield Sanitary Landfill (ASL)			
Sample ID	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-6D	MW-7	MW-8	MW-10	MW-11	MW-11D	MW-12	MW-13	MW-13D	MW-14	MW-8	MW-9A	MW-10	MW-12	MW-14	MW-961
Date Sampled	8-Sep-16	8-Sep-16	8-Sep-16	8-Sep-16	17-Dec-16	12-May-17	12-May-17	13-May-17	10-Jan-17	10-Jan-17	18-Dec-16	19-Dec-16	19-Dec-16	17-Dec-16	17-Dec-16	12-May-17	21-Jul-16	21-Jul-16	21-Jul-16	21-Jul-16	21-Jul-16	21-Jul-16
	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L
Perfluorooctane Sulfonate (PFOS) (1763-23-1)	> 1500	> 3900	> 4800	> 4500	9.9	170	25	6.8 J	51	15 J	14000 (1)	150	8600 (1)	3.3 U	23	10 U	7.6	< 4	< 4	< 4	< 4	< 4
Perfluorooctanoic Acid (PFOA) (335-67-1)	> 1400	> 1500	> 2100	150	42	94	190	12 J	77	> 6.3 J	940 (1)	130	1200 (1)	5.3 U	41	10 U	< 2	6.6	4.2	2.6	< 2	4.3

(1) Due to high concentration of the target analyte, sample required high level analysis. Detection limit was adjusted accordingly.

U = Undetected at the limit of quantitation.

J = Estimated concentration between EDL & RDL.

TABLE 1: PFC Concentrations by Site - Groundwater

Site	FTA	FTA	FTA	FTA	WF	WF	WF	WF	WF
Sample ID	MW-1	MW-2	MW-3	MW-4	WW002	WW003	WW007	WW009	WW010
Date Sampled	8-Sep-16	8-Sep-16	8-Sep-16	8-Sep-16	13-Apr-16	13-Apr-16	2-Jun-16	13-Apr-16	13-Apr-16
	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L
Perfluorobutanesulfonic acid (PFBS)	100	96	> 1100	130	< 9	< 9	< 9	< 9	< 9
Perfluoroheptanoic acid (PFHpA)	> 770	> 210	> 1500	> 330	14	7.3	36	< 1	< 1
Perfluorohexanesulfonic acid (PFHxS)	> 1200	> 3700	> 3500	> 430	19	7.4	150	< 3	< 3
Perfluorononanoic acid (PFNA)	> 430	> 240	> 1300	9.6	< 2	< 2	< 2	< 2	< 2
Perfluorooctane sulfonate (PFOS)	> 1500	> 3900	> 4800	> 4500	< 4	< 4	11	< 4	< 4
Perfluorooctanoic acid (PFOA)	> 1400	> 1500	> 2100	150	2.4	< 2	90	< 2	< 2
Site	WF	WF	WF	WF	WF	WF	WF	OSL	OSL
Sample ID	WW011	WW012	WW0014	WW015	WW016	WW017	WW018	MW08	MW9A
Date Sampled	2-Jun-16	21-Jul-16	12-Apr-16	13-Apr-16	13-Apr-16	13-Apr-16	12-Apr-16	21-Jul-16	21-Jul-16
	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L
Perfluorobutanesulfonic acid (PFBS)	< 9	< 9	< 9	< 9	< 9	< 9	< 9	< 9	< 9
Perfluoroheptanoic acid (PFHpA)	36	12	< 1	< 1	< 1	< 1	< 1	1.3	4.2
Perfluorohexanesulfonic acid (PFHxS)	150	89	< 3	< 3	< 3	< 3	< 3	6.9	11
Perfluorononanoic acid (PFNA)	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Perfluorooctane sulfonate (PFOS)	11	< 4	< 4	< 4	< 4	< 4	< 4	7.6	< 4
Perfluorooctanoic acid (PFOA)	90	50	< 2	< 2	< 2	< 2	< 2	< 2	6.6
Site	OSL	ASL	ASL	ASL					
Sample ID	MW10	MW12A	MW14	MW961					
Date Sampled	21-Jul-16	21-Jul-16	21-Jul-16	21-Jul-16					
	ng/L	ng/L	ng/L	ng/L					
Perfluorobutanesulfonic acid (PFBS)	< 9	< 9	< 9	< 9					
Perfluoroheptanoic acid (PFHpA)	1.5	36	< 1	7.6					
Perfluorohexanesulfonic acid (PFHxS)	3	5.5	< 3	19					
Perfluorononanoic acid (PFNA)	< 2	< 2	< 2	< 2					
Perfluorooctane sulfonate (PFOS)	< 4	< 4	< 4	< 4					
Perfluorooctanoic acid (PFOA)	4.2	2.6	< 2	4.3					

BOLD TEXT INDICATE DETECTIONS PFOA & PFAS

DRAFT FINAL PROJECT REPORT

SITE WIDE PFC SCREENING LEVEL INVESTIGATION FORT DRUM, NEW YORK

Prepared by: Engineering Division U.S. Army Engineer District, Baltimore 10 South Howard Street Baltimore, MD 2120
May 11, 2017

TABLE 1

GROUNDWATER DETECTIONS SUMMARY TABLE

ANALYTE	UNITS	MW-5		MW-6		MW-6D		MW-7		MW-8		MW-10		MW-11		MW-11D		MW-12		MW-13		MW-13D		MW-14			
		Result	Note	Result	Note	Result	Note	Result	Note	Result	Note	Result	Note	Result	Note	Result	Note	Result	Note	Result	Note	Result	Note	Result	Note	Result	Note
8:2 Fluorotelomer sulfonate	ng/L	26		550		2200	(1)	10	U	3400	(1)	55	U	34000	(1)	1800	(1)	35000	(1)	11	J	360	U	10	U		
8:2 Fluorotelomer sulfonate	ng/L	5.5	U	54		220		11	J	5.5	U	5.5	U	1900	(1)	73		880		5.5	U	5.5	U	10	U		
Perfluorobutane Sulfonate (PFBS)	ng/L	1.9	U	7.1	J	10	J	10	U	110		1.9	U	280	(2)	21		190	J(2)	10	J	7.6	J	10	U		
Perfluorobutanoic acid	ng/L	54		76		110		15	J	460		8.5	J	1000	(1)	150		390	(2)	11	J	65		9.6	J		
Perfluorobutanoic Acid (PFBA)	ng/L	6.6	U	10	U	10	U	10	U	6.6	U	6.6	U	160	(1)	6.6	U	66	U(2)	6.6	U	6.6	U	10	U		
Perfluorohexanoic Acid (PFHxA)	ng/L	84		110		160		11	J	340		8.7	J	550	(2)	110		470	(2)	12	J	41		4.1	J		
Perfluorohexane Sulfonate (PFHxS)	ng/L	17	J	330		180		36		230		48		4500	(1)	240		2800	(1)	9.8	J	87		11	J		
Perfluorohexanoic Acid (PFHxA)	ng/L	88		240		230		11	J	1500	(1)	21		5000	(1)	390		2000	(1)	28		170		6.1	J		
Perfluorooctanoic Acid (PFOSA)	ng/L	42		94		390		12	J	77		6.9	J	940	(1)	150		1200	(1)	7.3	U	45		10	U		
Perfluorooctanoic Acid (PFOA)	ng/L	4.6	U	13	J	12	J	10	U	4.6	U	4.6	U	330	(2)	4.6	U	180	J(2)	4.6	U	4.6	U	10	U		
Perfluorooctane Sulfonate (PFOS)	ng/L	9.9	J	170		25		6.8	J	31		19	J	14000	(1)	150		8600	(1)	3.3	U	23		10	U		
Perfluorodecanoic Acid (PFDA)	ng/L	130		330		550		14	J	2400	(1)	19	J	4000	(1)	510		2000	(1)	40		260		10	J		
Perfluorodecanoic Acid (PFDA)	ng/L	3.7	U	10	U	10	U	5.5	J	3.7	U	3.7	U	37	U(2)	3.7	U	37	U(2)	3.7	U	3.7	U	10	U		

(1) Due to high concentration of the target analyte, sample required high level analysis. Detection limit was adjusted accordingly.
 (2) Due to high concentration of the target analyte, sample required 10x dilution. Detection limit was adjusted accordingly.
 U - Undetectable at the limit of quantitation.
 J - Detected concentration between the EDL & SDL.

PFC SITE CHARACTERIZATION INVESTIGATION SUMMARY REPORT – OLD FIRE TRAINING PIT, FORT DRUM, NEW YORK
 DEPARTMENT OF THE ARMY BALTIMORE DISTRICT, CORPS OF ENGINEERS 2 HOPKINS PLAZA BALTIMORE, MD 21201
 January 19, 2018