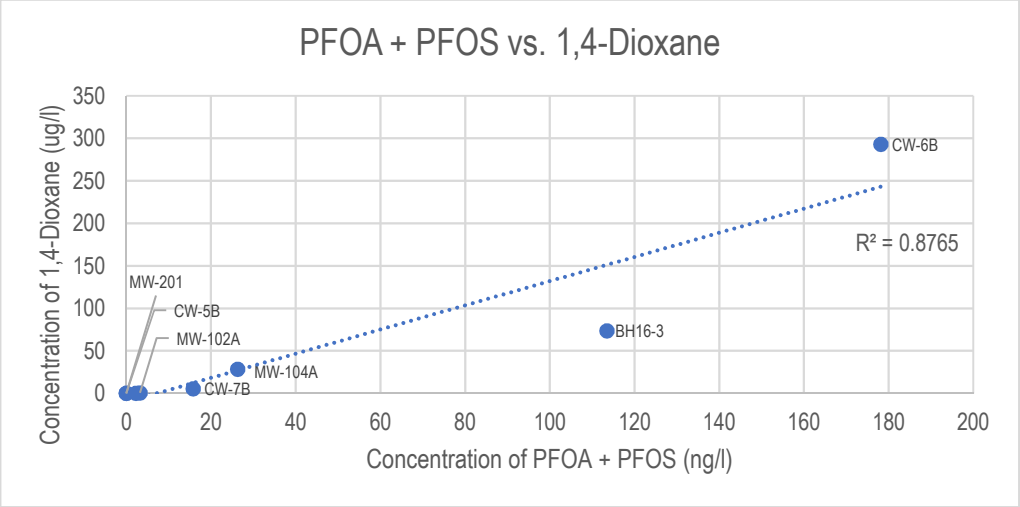
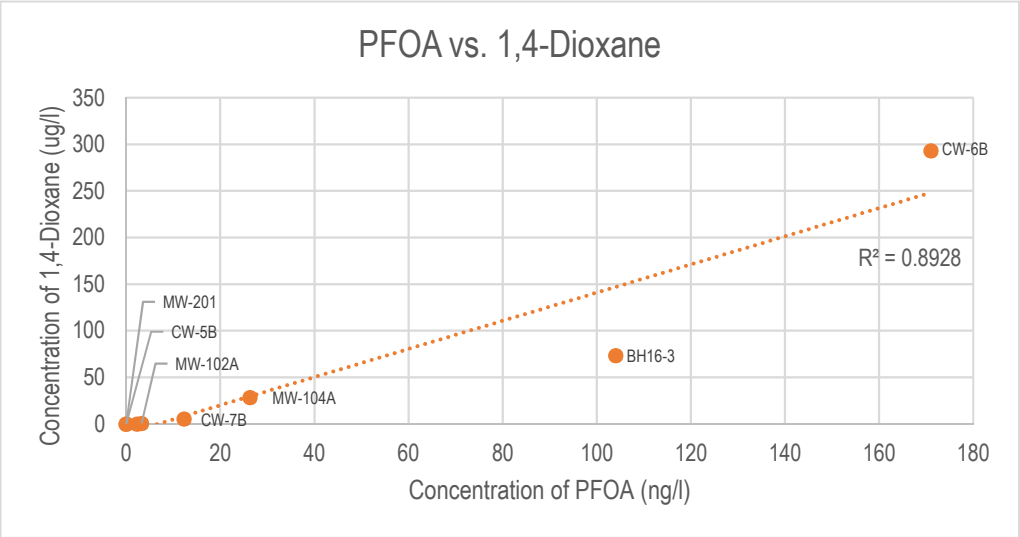
Concentrations of PFOA + PFOS vs. 1,4-Dioxane

L&RR Superfund Site OU 2 Remedial Investigation/Feasibility Study

North Smithfield, RI





Notes:

Concentrations of PFOA + PFOS from samples collected February 12, 2018. Concentrations of 1,4-dioxane collected during March/April 2017 Pre-ROD Groundwater Sampling.

ng/l = nanograms per liter (ppt); ug/l = micrograms per liter

PFOA = perfluorooctanoic acid; PFOS = perfluorooctanesulfonic acid

Analytical data is pending validation.

Table 1a
PFAS Results Compared with 2017 Pre-ROD 1,4-Dioxane
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			Upgradient	*NE LF Corner*		*Eastern Portion of LF*			*South LF*	*East of CW-6B /MW-104B*	*Quality Control Samples*			
Sample Location	*USEPA Screening Level*	*USEPA Health Advisories*	MW-201	CW-5B	CW-5B DUP	MW-102A	CW-6B	MW-104A	CW-7B	BH16-3 (88-98)	Trip Blank	Equipment Blank	Field Blank	Field Blank
Sample Date			2/12/2018	2/12/2018	2/12/2018	2/12/2018	2/12/2018	2/12/2018	2/12/2018	2/12/2018	2/12/2018	2/12/2018	2/12/2018	2/12/2018
PFAS (ng/l)														
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)			<1.92	<1.78	<1.72	<1.78	<1.85	<1.78	<1.85	<1.85	<1.72	<1.78	<1.78	<1.85
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)			<1.92	<1.78	<1.72	<1.78	<1.85	<1.78	<1.85	<1.85	<1.72	<1.78	<1.78	<1.85
Perfluorobutanesulfonic Acid (PFBS)	40,110		<1.92	<1.78	<1.72	<1.78	**21.9 J+**	**3.5 J+**	<1.85	**12.3 J+**	<1.72	<1.78	<1.78	<1.85
Perfluorodecanoic Acid (PFDA)			<1.92	<1.78	<1.72	<1.78	<1.85	<1.78	<1.85	<1.85	<1.72	<1.78	<1.78	<1.85
Perfluorododecanoic Acid (PFDoA)			<1.92	<1.78	<1.72	<1.78	<1.85	<1.78	<1.85	<1.85	<1.72	<1.78	<1.78	<1.85
Perfluoroheptanoic Acid (PFHpA)			<1.92	<1.78	<1.72	**1.84 J+**	**53.7 J+**	**12.4 J+**	**12.1 J+**	**33.2 J+**	<1.72	<1.78	<1.78	<1.85
Perfluorohexanesulfonic Acid (PFHxS)			<1.92	<1.78	<1.72	<1.78	**72.1 J+**	**11.8 J+**	<1.85	**41.9 J+**	<1.72	<1.78	<1.78	<1.85
Perfluorohexanoic Acid (PFHxA)			<1.92	**3.29 J+**	**2.13 J+**	**5.77 J+**	**183 J+**	**41.8 J+**	**10.7 J+**	**121 J+**	<1.72	<1.78	<1.78	<1.85
Perfluorononanoic Acid (PFNA)			<1.92	<1.78	<1.72	<1.78	<1.85	<1.78	**12 J+**	<1.85	<1.72	<1.78	<1.78	<1.85
Perfluorooctanesulfonic Acid (PFOS)	40.1	70	<1.92	<1.78	<1.72	<1.78	**7.17 J+**	<1.78	**3.53 J+**	**9.54 J+**	<1.72	<1.78	<1.78	<1.85
Perfluorooctanoic Acid (PFOA)	40.1	70	<1.92	**2.30 J+**	<1.72	**3.26 J+**	**171 J+**	**26.3 J+**	**12.3 J+**	**104 J+**	<1.72	<1.78	<1.78	<1.85
Perfluorotetradecanoic Acid (PFTA)			<1.92	<1.78	<1.72	<1.78	<1.85	<1.78	<1.85	<1.85	<1.72	<1.78	<1.78	<1.85
Perfluorotridecanoic Acid (PFTrDA)			<1.92	<1.78	<1.72	<1.78	<1.85	<1.78	<1.85	<1.85	<1.72	<1.78	<1.78	<1.85
Perfluoroundecanoic Acid (PFUnA)			<1.92	<1.78	<1.72	<1.78	<1.85	<1.78	<1.85	<1.85	<1.72	<1.78	<1.78	<1.85
Total PFOS & PFOA		*70*	---	*2.3*	---	*3.26*	***178.17***	*26.3*	*15.83*	***113.54***	---	---	---	---
Pre-ROD Sampling 1,4-Dioxane Data (ug/l)			3/8/2017	3/6/2017		3/7/2017	3/6/2017	3/7/2017	3/7/2017	3/8/2017				
1,4-dioxane (SIM)		0.4	<0.144	<0.144	---	**0.593**	**293**	**28.5**	**5.38**	**73.4**	---	---	---	---

Notes:
Concentrations of Per- & Polyflourinated alykyl substances (PFAS) reported in nanograms per liter (ng/l) with a part-per-trillion equivalency.
Concentrations in BOLD indicate those detected above laboratory reporting limits.
Shaded concentrations indicate those exceeding the USEPA Health Advisories for PFOA, PFOS, or a combination of both compounds issued in May 2016.
USEPA Screening Levels were calculate using the EPA RSL calculator, found at https://epa-prgs.ornl.gov/cgi-bin/chemicals/csl_search. These were developed for the L&RR Site in a memorandum dated, November 17, 2017.
< Indicates a concentration not detected above laboratorty reporting limits, provided.
Equipment and field blanks collected using laboratory supplied PFAS-free water. One equipment blank was collected per piece of non-dedicated sampling equipment. One field blank was collected per each field sampling personnel.
Analytical data validated by DataCheck, Inc. in accordance with the project specific Quality Assurance Project Plan (QAPP) and the Region I, EPA-NE Environmental Data Review Supplement for Regional Data Review Elements and Superfund Specific Guidance/Procedures (United States EPA, 2013).
J+ Indicates results estimated, bias high due to LCS/LCSD recoveries outside of acceptance criteria.