

Work Orders: 2A05050

Report Date: 1/26/2022

Project: PFAS

Received Date: 1/5/2022

Turnaround Time: Normal

Phones: (417) 864-1708

Fax:

Attn: Todd Cox

P.O. #:

Client: City of Springfield
218 E. Central
Springfield, MO 65802

Billing Code:

ELAP-CA #1132 • EPA-UCMR #CA00211 • Guam-EPA #17-008R • HW-DOH #4047 • LACSD #10143 • NELAP-OR #4047 • NJ-DEP #CA015 • NV-DEP #NAC 445A • SCAQMD #93LA1006

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.

Dear Todd Cox,

Enclosed are the results of analyses for samples received 1/05/22 with the Chain-of-Custody document. The samples were received in good condition, at 2.1 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:



Chris Samatmanakit
Project Manager



City of Springfield
 218 E. Central
 Springfield, MO 65802

Project Number: PFAS

Reported:

01/26/2022 13:17

Project Manager: Todd Cox

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
SW Primary Influent (Raw)	Derek Gillis	2A05050-01	Water	01/03/22 06:40	
NW Primary Influent (Raw)	Derek Gillis	2A05050-02	Water	01/03/22 08:10	
SW Effluent 001	Derek Gillis	2A05050-03	Water	01/03/22 06:20	
NW Effluent 001	Derek Gillis	2A05050-04	Water	01/03/22 08:00	
Springfield Landfill Leachate	Derek Gillis	2A05050-05	Water	01/03/22 07:30	
SW Primary Influent (Raw) Field Blank	Derek Gillis	2A05050-06	Water	01/03/22 06:40	
NW Primary Influent (Raw) Field Blank	Derek Gillis	2A05050-07	Water	01/03/22 08:10	
SW Effluent 001 Field Blank	Derek Gillis	2A05050-08	Water	01/03/22 06:20	
NW Effluent 001 Field Blank	Derek Gillis	2A05050-09	Water	01/03/22 08:00	
Springfield Landfill Leachate Field Blank	Derek Gillis	2A05050-10	Water	01/03/22 07:30	
SW Biosolids Field Sample (BTSF)	Derek Gillis	2A05050-11	Solid	01/03/22 06:00	
SW Biosolids Field Sample (BTSF) Field Blank	Derek Gillis	2A05050-12	Water	01/03/22 06:00	

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Project Number: PFAS
Project Manager: Todd Cox

Reported:
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Sample Results

Sample: SW Primary Influent (Raw)
2A05050-01 (Water)

Sampled: 01/03/22 6:40 by Derek Gillis

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Per- and Polyfluorinated Alkyl Substances (PFAS) by SPE/LCMSMS						
Method: EPA 537M		Instr: LCMS06				
Batch ID: W2A0641	Preparation: EPA 537/SPE	Prepared: 01/11/22 08:49			Analyst: jna	
11CI-PF3OUdS	ND	10	ng/l	1	01/12/22	M-02
4:2 FTS	ND	5.0	ng/l	1	01/12/22	I, M-02
6:2 FTS	ND	5.0	ng/l	1	01/12/22	I, M-02
8:2 FTS	ND	5.0	ng/l	1	01/12/22	I, M-02
9CI-PF3ONS	ND	5.0	ng/l	1	01/12/22	M-02
ADONA	ND	5.0	ng/l	1	01/12/22	M-02
EtFOSA	ND	10	ng/l	1	01/12/22	A-01a, M-02
EtFOSAA	ND	10	ng/l	1	01/12/22	M-02
EtFOSE	ND	5.0	ng/l	1	01/12/22	A-01a, M-02
FOSA	ND	5.0	ng/l	1	01/12/22	M-02
HFPO-DA	ND	5.0	ng/l	1	01/12/22	M-02
MeFOSA	ND	10	ng/l	1	01/12/22	A-01a, M-02
MeFOSAA	ND	5.0	ng/l	1	01/12/22	M-02
MeFOSE	ND	10	ng/l	1	01/12/22	M-02
Perfluorooctanoic acid (PFOA)	ND	5.0	ng/l	1	01/12/22	M-02
PFBA	ND	5.0	ng/l	1	01/12/22	M-02
PFBS	5.1	5.0	ng/l	1	01/12/22	M-02
PFDA	ND	5.0	ng/l	1	01/12/22	M-02
PFDoA	ND	5.0	ng/l	1	01/12/22	M-02
PFDS	ND	5.0	ng/l	1	01/12/22	M-02
PFHpA	ND	20	ng/l	1	01/12/22	M-02
PFHpS	ND	5.0	ng/l	1	01/12/22	M-02
PFHxA	ND	10	ng/l	1	01/12/22	M-02
PFHxS	5.0	5.0	ng/l	1	01/12/22	M-02
PFNA	ND	5.0	ng/l	1	01/12/22	M-02
PFNS	ND	5.0	ng/l	1	01/12/22	M-02
PFOS	14	10	ng/l	1	01/12/22	M-02
PFPeA	ND	5.0	ng/l	1	01/12/22	M-02
PFPeS	ND	5.0	ng/l	1	01/12/22	M-02
PFTeDA	ND	10	ng/l	1	01/12/22	M-02
PFTTrDA	ND	5.0	ng/l	1	01/12/22	M-02
PFUnA	ND	5.0	ng/l	1	01/12/22	M-02

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Reported:
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Sample Results

(Continued)

Sample: NW Primary Influent (Raw) Sampled: 01/03/22 8:10 by Derek Gillis
2A05050-02 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Per- and Polyfluorinated Alkyl Substances (PFAS) by SPE/LCMSMS						
Method: EPA 537M						
Batch ID: W2A0641	Preparation: EPA 537/SPE					Analyst: jna
		Instr: LCMS06				
		Prepared: 01/11/22 08:49				
11CI-PF3OUdS	ND	1.8	ng/l	1	01/12/22	
4:2 FTS	ND	0.89	ng/l	1	01/12/22	I
6:2 FTS	ND	0.89	ng/l	1	01/12/22	I
8:2 FTS	ND	0.89	ng/l	1	01/12/22	I
9CI-PF3ONS	ND	0.89	ng/l	1	01/12/22	
ADONA	ND	0.89	ng/l	1	01/12/22	
EtFOSA	ND	1.8	ng/l	1	01/12/22	A-01a
EtFOSAA	ND	1.8	ng/l	1	01/12/22	
EtFOSE	ND	0.89	ng/l	1	01/12/22	
FOSA	ND	0.89	ng/l	1	01/12/22	
HFPO-DA	ND	0.89	ng/l	1	01/12/22	
MeFOSA	ND	1.8	ng/l	1	01/12/22	A-01a
MeFOSAA	ND	0.89	ng/l	1	01/12/22	
MeFOSE	ND	1.8	ng/l	1	01/12/22	A-01a
Perfluorooctanoic acid (PFOA)	10	0.89	ng/l	1	01/12/22	
PFBA	9.6	0.89	ng/l	1	01/12/22	I-05
PFBS	11	0.89	ng/l	1	01/12/22	
PFDA	ND	0.89	ng/l	1	01/12/22	
PFDoA	ND	0.89	ng/l	1	01/12/22	
PFDS	ND	0.89	ng/l	1	01/12/22	
PFHpA	4.4	3.6	ng/l	1	01/12/22	
PFHpS	ND	0.89	ng/l	1	01/12/22	
PFHxA	24	1.8	ng/l	1	01/12/22	
PFHxS	7.0	0.89	ng/l	1	01/12/22	
PFNA	ND	0.89	ng/l	1	01/12/22	
PFNS	ND	0.89	ng/l	1	01/12/22	
PFOS	5.0	1.8	ng/l	1	01/12/22	
PFPeA	20	0.89	ng/l	1	01/12/22	
PFPeS	ND	0.89	ng/l	1	01/12/22	
PFTeDA	ND	1.8	ng/l	1	01/12/22	I-05
PFTTrDA	ND	0.89	ng/l	1	01/12/22	
PFUnA	ND	0.89	ng/l	1	01/12/22	

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Sample Results

(Continued)

Sample: SW Effluent 001
2A05050-03 (Water) Sampled: 01/03/22 6:20 by Derek Gillis

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Per- and Polyfluorinated Alkyl Substances (PFAS) by SPE/LCMSMS						
Method: EPA 537M		Instr: LCMS06				
Batch ID: W2A0641		Preparation: EPA 537/SPE			Prepared: 01/11/22 08:49	
		Analyst: jna				
11CI-PF3OUdS	ND	1.8	ng/l	1	01/12/22	
4:2 FTS	ND	0.90	ng/l	1	01/12/22	
6:2 FTS	3.4	0.90	ng/l	1	01/12/22	
8:2 FTS	ND	0.90	ng/l	1	01/12/22	
9CI-PF3ONS	ND	0.90	ng/l	1	01/12/22	
ADONA	ND	0.90	ng/l	1	01/12/22	
EtFOSA	ND	1.8	ng/l	1	01/12/22	
EtFOSAA	ND	1.8	ng/l	1	01/12/22	
EtFOSE	ND	0.90	ng/l	1	01/12/22	
FOSA	ND	0.90	ng/l	1	01/12/22	
HFPO-DA	ND	0.90	ng/l	1	01/12/22	
MeFOSA	ND	1.8	ng/l	1	01/12/22	
MeFOSAA	ND	0.90	ng/l	1	01/12/22	
MeFOSE	ND	1.8	ng/l	1	01/12/22	
Perfluorooctanoic acid (PFOA)	4.8	0.90	ng/l	1	01/12/22	
PFBA	3.8	0.90	ng/l	1	01/12/22	
PFBS	6.2	0.90	ng/l	1	01/12/22	
PFDA	ND	0.90	ng/l	1	01/12/22	
PFDoA	ND	0.90	ng/l	1	01/12/22	
PFDS	ND	0.90	ng/l	1	01/12/22	
PFHpA	ND	3.6	ng/l	1	01/12/22	
PFHpS	ND	0.90	ng/l	1	01/12/22	
PFHxA	12	1.8	ng/l	1	01/12/22	
PFHxS	5.1	0.90	ng/l	1	01/12/22	
PFNA	ND	0.90	ng/l	1	01/12/22	
PFNS	ND	0.90	ng/l	1	01/12/22	
PFOS	8.9	1.8	ng/l	1	01/12/22	
PFPeA	8.9	0.90	ng/l	1	01/12/22	
PFPeS	ND	0.90	ng/l	1	01/12/22	
PFTeDA	ND	1.8	ng/l	1	01/12/22	
PFTTrDA	ND	0.90	ng/l	1	01/12/22	
PFUnA	ND	0.90	ng/l	1	01/12/22	

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Sample Results

(Continued)

Sample: NW Effluent 001
2A05050-04 (Water) Sampled: 01/03/22 8:00 by Derek Gillis

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Per- and Polyfluorinated Alkyl Substances (PFAS) by SPE/LCMSMS						
Method: EPA 537M		Instr: LCMS06				
Batch ID: W2A0641		Preparation: EPA 537/SPE			Prepared: 01/11/22 08:49	
		Analyst: jna				
11CI-PF3OUdS	ND	10	ng/l	1	01/12/22	M-02
4:2 FTS	ND	5.0	ng/l	1	01/12/22	I, M-02
6:2 FTS	ND	5.0	ng/l	1	01/12/22	I, M-02
8:2 FTS	ND	5.0	ng/l	1	01/12/22	I, M-02
9CI-PF3ONS	ND	5.0	ng/l	1	01/12/22	M-02
ADONA	ND	5.0	ng/l	1	01/12/22	M-02
EtFOSA	ND	10	ng/l	1	01/12/22	A-01a, M-02
EtFOSAA	ND	10	ng/l	1	01/12/22	M-02
EtFOSE	ND	5.0	ng/l	1	01/12/22	A-01a, M-02
FOSA	ND	5.0	ng/l	1	01/12/22	M-02
HFPO-DA	ND	5.0	ng/l	1	01/12/22	M-02
MeFOSA	ND	10	ng/l	1	01/12/22	A-01a, M-02
MeFOSAA	6.0	5.0	ng/l	1	01/12/22	M-02
MeFOSE	ND	10	ng/l	1	01/12/22	A-01a, M-02
Perfluorooctanoic acid (PFOA)	20	5.0	ng/l	1	01/12/22	M-02
PFBA	22	5.0	ng/l	1	01/12/22	M-02
PFBS	23	5.0	ng/l	1	01/12/22	M-02
PFDA	ND	5.0	ng/l	1	01/12/22	M-02
PFDoA	ND	5.0	ng/l	1	01/12/22	M-02
PFDS	ND	5.0	ng/l	1	01/12/22	M-02
PFHpA	ND	20	ng/l	1	01/12/22	M-02
PFHpS	ND	5.0	ng/l	1	01/12/22	M-02
PFHxA	39	10	ng/l	1	01/12/22	M-02
PFHxS	14	5.0	ng/l	1	01/12/22	M-02
PFNA	ND	5.0	ng/l	1	01/12/22	M-02
PFNS	ND	5.0	ng/l	1	01/12/22	M-02
PFOS	14	10	ng/l	1	01/12/22	M-02
PFPeA	19	5.0	ng/l	1	01/12/22	M-02
PFPeS	ND	5.0	ng/l	1	01/12/22	M-02
PFTeDA	ND	10	ng/l	1	01/12/22	I-05, M-02
PFTTrDA	ND	5.0	ng/l	1	01/12/22	M-02
PFUnA	ND	5.0	ng/l	1	01/12/22	M-02

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Sample Results

(Continued)

Sample: Springfield Landfill Leachate
2A05050-05 (Water)

Sampled: 01/03/22 7:30 by Derek Gillis

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Per- and Polyfluorinated Alkyl Substances (PFAS) by SPE/LCMSMS						
Method: EPA 537M		Instr: LCMS06				
Batch ID: W2A0641	Preparation: EPA 537/SPE	Prepared: 01/11/22 08:49		Analyst: jna		
11CI-PF3OUdS	ND	10	ng/l	1	01/12/22	M-02
4:2 FTS	ND	5.0	ng/l	1	01/12/22	I, M-02
6:2 FTS	120	5.0	ng/l	1	01/12/22	I, M-02
8:2 FTS	20	5.0	ng/l	1	01/12/22	I, M-02
9CI-PF3ONS	ND	5.0	ng/l	1	01/12/22	M-02
ADONA	ND	5.0	ng/l	1	01/12/22	M-02
EtFOSA	ND	10	ng/l	1	01/12/22	A-01a, M-02
EtFOSAA	93	10	ng/l	1	01/12/22	M-02
EtFOSE	7.0	5.0	ng/l	1	01/12/22	A-01, M-02
FOSA	ND	5.0	ng/l	1	01/12/22	M-02
HFPO-DA	ND	5.0	ng/l	1	01/12/22	M-02
MeFOSA	ND	10	ng/l	1	01/12/22	A-01a, M-02
MeFOSAA	170	5.0	ng/l	1	01/12/22	M-02
MeFOSE	23	10	ng/l	1	01/12/22	A-01, M-02
Perfluorooctanoic acid (PFOA)	660	5.0	ng/l	1	01/12/22	E-01, M-02
PFBA	650	5.0	ng/l	1	01/12/22	E-01, I-05, M-02
PFBS	920	5.0	ng/l	1	01/12/22	E-01, M-02
PFDA	17	5.0	ng/l	1	01/12/22	M-02
PFDoA	ND	5.0	ng/l	1	01/12/22	M-02
PFDS	ND	5.0	ng/l	1	01/12/22	M-02
PFHpA	310	20	ng/l	1	01/12/22	I-05, M-02
PFHpS	7.8	5.0	ng/l	1	01/12/22	M-02
PFHxA	1100	10	ng/l	1	01/12/22	E-01, I-05, M-02
PFHxS	450	5.0	ng/l	1	01/12/22	E-01, M-02
PFNA	37	5.0	ng/l	1	01/12/22	M-02
PFNS	ND	5.0	ng/l	1	01/12/22	M-02
PFOS	220	10	ng/l	1	01/12/22	M-02
PFPeA	540	5.0	ng/l	1	01/12/22	E-01, I-05, M-02
PFPeS	24	5.0	ng/l	1	01/12/22	M-02
PFTeDA	ND	10	ng/l	1	01/12/22	I-05, M-02
PFTTrDA	ND	5.0	ng/l	1	01/12/22	M-02
PFUnA	ND	5.0	ng/l	1	01/12/22	M-02

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Sample Results

(Continued)

Sample: SW Primary Influent (Raw) Field Blank
2A05050-06 (Water)

Sampled: 01/03/22 6:40 by Derek Gillis

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Per- and Polyfluorinated Alkyl Substances (PFAS) by SPE/LCMSMS						
Method: EPA 537M			Instr: LCMS06			
Batch ID: W2A0641		Preparation: EPA 537/SPE		Prepared: 01/11/22 08:49		Analyst: jna
11CI-PF3OUdS	ND	2.0	ng/l	1	01/12/22	
4:2 FTS	ND	1.0	ng/l	1	01/12/22	
6:2 FTS	ND	1.0	ng/l	1	01/12/22	I
8:2 FTS	ND	1.0	ng/l	1	01/12/22	
9CI-PF3ONS	ND	1.0	ng/l	1	01/12/22	
ADONA	ND	1.0	ng/l	1	01/12/22	
EtFOSA	ND	2.0	ng/l	1	01/12/22	A-01a
EtFOSAA	ND	2.0	ng/l	1	01/12/22	
EtFOSE	ND	1.0	ng/l	1	01/12/22	A-01a
FOSA	ND	1.0	ng/l	1	01/12/22	
HFPO-DA	ND	1.0	ng/l	1	01/12/22	
MeFOSA	ND	2.0	ng/l	1	01/12/22	A-01a
MeFOSAA	ND	1.0	ng/l	1	01/12/22	
MeFOSE	ND	2.0	ng/l	1	01/12/22	A-01a
Perfluorooctanoic acid (PFOA)	ND	1.0	ng/l	1	01/12/22	
PFBA	ND	1.0	ng/l	1	01/12/22	
PFBS	ND	1.0	ng/l	1	01/12/22	
PFDA	ND	1.0	ng/l	1	01/12/22	
PFDoA	ND	1.0	ng/l	1	01/12/22	
PFDS	ND	1.0	ng/l	1	01/12/22	
PFHpA	ND	4.0	ng/l	1	01/12/22	
PFHpS	ND	1.0	ng/l	1	01/12/22	
PFHxA	ND	2.0	ng/l	1	01/12/22	
PFHxS	ND	1.0	ng/l	1	01/12/22	
PFNA	ND	1.0	ng/l	1	01/12/22	
PFNS	ND	1.0	ng/l	1	01/12/22	
PFOS	ND	2.0	ng/l	1	01/12/22	
PFPeA	ND	1.0	ng/l	1	01/12/22	
PFPeS	ND	1.0	ng/l	1	01/12/22	
PFTeDA	ND	2.0	ng/l	1	01/12/22	
PFTTrDA	ND	1.0	ng/l	1	01/12/22	
PFUnA	ND	1.0	ng/l	1	01/12/22	

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Sample Results

(Continued)

Sample: NW Primary Influent (Raw) Field Blank
2A05050-07 (Water)

Sampled: 01/03/22 8:10 by Derek Gillis

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Per- and Polyfluorinated Alkyl Substances (PFAS) by SPE/LCMSMS						
Method: EPA 537M		Instr: LCMS06				
Batch ID: W2A0641	Preparation: EPA 537/SPE	Prepared: 01/11/22 08:49			Analyst: jna	
11CI-PF3OUdS	ND	2.0	ng/l	1	01/12/22	
4:2 FTS	ND	1.0	ng/l	1	01/12/22	I
6:2 FTS	ND	1.0	ng/l	1	01/12/22	I
8:2 FTS	ND	1.0	ng/l	1	01/12/22	
9CI-PF3ONS	ND	1.0	ng/l	1	01/12/22	
ADONA	ND	1.0	ng/l	1	01/12/22	
EtFOSA	ND	2.0	ng/l	1	01/12/22	A-01a
EtFOSAA	ND	2.0	ng/l	1	01/12/22	
EtFOSE	ND	1.0	ng/l	1	01/12/22	A-01a
FOSA	ND	1.0	ng/l	1	01/12/22	A-01a
HFPO-DA	ND	1.0	ng/l	1	01/12/22	
MeFOSA	ND	2.0	ng/l	1	01/12/22	A-01a
MeFOSAA	ND	1.0	ng/l	1	01/12/22	
MeFOSE	ND	2.0	ng/l	1	01/12/22	A-01a
Perfluorooctanoic acid (PFOA)	ND	1.0	ng/l	1	01/12/22	
PFBA	ND	1.0	ng/l	1	01/12/22	
PFBS	ND	1.0	ng/l	1	01/12/22	
PFDA	ND	1.0	ng/l	1	01/12/22	
PFDoA	ND	1.0	ng/l	1	01/12/22	
PFDS	ND	1.0	ng/l	1	01/12/22	
PFHpA	ND	4.0	ng/l	1	01/12/22	
PFHpS	ND	1.0	ng/l	1	01/12/22	
PFHxA	ND	2.0	ng/l	1	01/12/22	
PFHxS	ND	1.0	ng/l	1	01/12/22	
PFNA	ND	1.0	ng/l	1	01/12/22	
PFNS	ND	1.0	ng/l	1	01/12/22	
PFOS	ND	2.0	ng/l	1	01/12/22	
PFPeA	ND	1.0	ng/l	1	01/12/22	
PFPeS	ND	1.0	ng/l	1	01/12/22	
PFTeDA	ND	2.0	ng/l	1	01/12/22	
PFTTrDA	ND	1.0	ng/l	1	01/12/22	
PFUnA	ND	1.0	ng/l	1	01/12/22	

City of Springfield
218 E. Central
Springfield, MO 65802

Project Number: PFAS
Project Manager: Todd Cox

Reported:
01/26/2022 13:17

Sample Results

(Continued)

Sample: SW Effluent 001 Field Blank
2A05050-08 (Water) Sampled: 01/03/22 6:20 by Derek Gillis

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Per- and Polyfluorinated Alkyl Substances (PFAS) by SPE/LCMSMS						
Method: EPA 537M		Instr: LCMS06				
Batch ID: W2A0641	Preparation: EPA 537/SPE	Prepared: 01/11/22 08:49			Analyst: jna	
11CI-PF3OUdS	ND	2.0	ng/l	1	01/12/22	
4:2 FTS	ND	1.0	ng/l	1	01/12/22	
6:2 FTS	ND	1.0	ng/l	1	01/12/22	I
8:2 FTS	ND	1.0	ng/l	1	01/12/22	
9CI-PF3ONS	ND	1.0	ng/l	1	01/12/22	
ADONA	ND	1.0	ng/l	1	01/12/22	
EtFOSA	ND	2.0	ng/l	1	01/12/22	A-01a
EtFOSAA	ND	2.0	ng/l	1	01/12/22	
EtFOSE	ND	1.0	ng/l	1	01/12/22	A-01a
FOSA	ND	1.0	ng/l	1	01/12/22	
HFPO-DA	ND	1.0	ng/l	1	01/12/22	
MeFOSA	ND	2.0	ng/l	1	01/12/22	A-01a
MeFOSAA	ND	1.0	ng/l	1	01/12/22	
MeFOSE	ND	2.0	ng/l	1	01/12/22	
Perfluorooctanoic acid (PFOA)	ND	1.0	ng/l	1	01/12/22	
PFBA	ND	1.0	ng/l	1	01/12/22	
PFBS	ND	1.0	ng/l	1	01/12/22	
PFDA	ND	1.0	ng/l	1	01/12/22	
PFDoA	ND	1.0	ng/l	1	01/12/22	
PFDS	ND	1.0	ng/l	1	01/12/22	
PFHpA	ND	4.0	ng/l	1	01/12/22	
PFHpS	ND	1.0	ng/l	1	01/12/22	
PFHxA	ND	2.0	ng/l	1	01/12/22	
PFHxS	ND	1.0	ng/l	1	01/12/22	
PFNA	ND	1.0	ng/l	1	01/12/22	
PFNS	ND	1.0	ng/l	1	01/12/22	
PFOS	ND	2.0	ng/l	1	01/12/22	
PFPeA	ND	1.0	ng/l	1	01/12/22	
PFPeS	ND	1.0	ng/l	1	01/12/22	
PFTeDA	ND	2.0	ng/l	1	01/12/22	
PFTTrDA	ND	1.0	ng/l	1	01/12/22	
PFUnA	ND	1.0	ng/l	1	01/12/22	

City of Springfield
218 E. Central
Springfield, MO 65802

Project Number: PFAS
Project Manager: Todd Cox

Reported:
01/26/2022 13:17

Sample Results

(Continued)

Sample: NW Effluent 001 Field Blank
2A05050-09 (Water)

Sampled: 01/03/22 8:00 by Derek Gillis

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Per- and Polyfluorinated Alkyl Substances (PFAS) by SPE/LCMSMS						
Method: EPA 537M						
Batch ID: W2A0641	Preparation: EPA 537/SPE					
		Instr: LCMS06				
		Prepared: 01/11/22 08:49				Analyst: jna
11CI-PF3OUdS	ND	2.0	ng/l	1	01/12/22	
4:2 FTS	ND	1.0	ng/l	1	01/12/22	
6:2 FTS	ND	1.0	ng/l	1	01/12/22	I
8:2 FTS	ND	1.0	ng/l	1	01/12/22	
9CI-PF3ONS	ND	1.0	ng/l	1	01/12/22	
ADONA	ND	1.0	ng/l	1	01/12/22	
EtFOSA	ND	2.0	ng/l	1	01/12/22	A-01a
EtFOSAA	ND	2.0	ng/l	1	01/12/22	
EtFOSE	ND	1.0	ng/l	1	01/12/22	A-01a
FOSA	ND	1.0	ng/l	1	01/12/22	
HFPO-DA	ND	1.0	ng/l	1	01/12/22	
MeFOSA	ND	2.0	ng/l	1	01/12/22	A-01a
MeFOSAA	ND	1.0	ng/l	1	01/12/22	
MeFOSE	ND	2.0	ng/l	1	01/12/22	A-01a
Perfluorooctanoic acid (PFOA)	ND	1.0	ng/l	1	01/12/22	
PFBA	ND	1.0	ng/l	1	01/12/22	
PFBS	ND	1.0	ng/l	1	01/12/22	
PFDA	ND	1.0	ng/l	1	01/12/22	
PFDoA	ND	1.0	ng/l	1	01/12/22	
PFDS	ND	1.0	ng/l	1	01/12/22	
PFHpA	ND	4.0	ng/l	1	01/12/22	
PFHpS	ND	1.0	ng/l	1	01/12/22	
PFHxA	ND	2.0	ng/l	1	01/12/22	
PFHxS	ND	1.0	ng/l	1	01/12/22	
PFNA	ND	1.0	ng/l	1	01/12/22	
PFNS	ND	1.0	ng/l	1	01/12/22	
PFOS	ND	2.0	ng/l	1	01/12/22	
PFPeA	ND	1.0	ng/l	1	01/12/22	
PFPeS	ND	1.0	ng/l	1	01/12/22	
PFTeDA	ND	2.0	ng/l	1	01/12/22	I-05
PFTTrDA	ND	1.0	ng/l	1	01/12/22	
PFUnA	ND	1.0	ng/l	1	01/12/22	

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Springfield, MO 65802

Project Number: PFAS
Project Manager: Todd Cox

Reported:
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Sample Results

(Continued)

Sample: Springfield Landfill Leachate Field Blank
2A05050-10 (Water)

Sampled: 01/03/22 7:30 by Derek Gillis

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Per- and Polyfluorinated Alkyl Substances (PFAS) by SPE/LCMSMS						
Method: EPA 537M		Instr: LCMS06				
Batch ID: W2A0641	Preparation: EPA 537/SPE	Prepared: 01/11/22 08:49			Analyst: jna	
11CI-PF3OUdS	ND	2.0	ng/l	1	01/12/22	
4:2 FTS	ND	1.0	ng/l	1	01/12/22	
6:2 FTS	ND	1.0	ng/l	1	01/12/22	
8:2 FTS	ND	1.0	ng/l	1	01/12/22	
9CI-PF3ONS	ND	1.0	ng/l	1	01/12/22	
ADONA	ND	1.0	ng/l	1	01/12/22	
EtFOSA	ND	2.0	ng/l	1	01/12/22	A-01a
EtFOSAA	ND	2.0	ng/l	1	01/12/22	
EtFOSE	ND	1.0	ng/l	1	01/12/22	A-01a
FOSA	ND	1.0	ng/l	1	01/12/22	A-01a
HFPO-DA	ND	1.0	ng/l	1	01/12/22	
MeFOSA	ND	2.0	ng/l	1	01/12/22	A-01a
MeFOSAA	ND	1.0	ng/l	1	01/12/22	
MeFOSE	ND	2.0	ng/l	1	01/12/22	A-01a
Perfluorooctanoic acid (PFOA)	ND	1.0	ng/l	1	01/12/22	
PFBA	ND	1.0	ng/l	1	01/12/22	
PFBS	ND	1.0	ng/l	1	01/12/22	
PFDA	ND	1.0	ng/l	1	01/12/22	
PFDoA	ND	1.0	ng/l	1	01/12/22	
PFDS	ND	1.0	ng/l	1	01/12/22	
PFHpA	ND	4.0	ng/l	1	01/12/22	
PFHpS	ND	1.0	ng/l	1	01/12/22	
PFHxA	ND	2.0	ng/l	1	01/12/22	
PFHxS	ND	1.0	ng/l	1	01/12/22	
PFNA	ND	1.0	ng/l	1	01/12/22	
PFNS	ND	1.0	ng/l	1	01/12/22	
PFOS	ND	2.0	ng/l	1	01/12/22	
PFPeA	ND	1.0	ng/l	1	01/12/22	
PFPeS	ND	1.0	ng/l	1	01/12/22	
PFTeDA	ND	2.0	ng/l	1	01/12/22	
PFTTrDA	ND	1.0	ng/l	1	01/12/22	
PFUnA	ND	1.0	ng/l	1	01/12/22	

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Project Number: PFAS
Project Manager: Todd Cox

Reported:
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Sample Results

(Continued)

Sample: SW Biosolids Field Sample (BTSF) Sampled: 01/03/22 6:00 by Derek Gillis
2A05050-11 (Solid)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Pesticides by GCMSMS						
Method: EPA 537M		Instr: LCMS06				
Batch ID: W2A0640		Preparation: EPA 537M			Prepared: 01/11/22 08:47	
		Analyst: jna				
11CI-PF3OUdS	ND	2.5	ug/kg	1	01/14/22	
4:2 FTS	ND	2.5	ug/kg	1	01/14/22	
6:2 FTS	ND	2.5	ug/kg	1	01/14/22	
8:2 FTS	ND	4.0	ug/kg	1	01/14/22	I
9CI-PF3ONS	ND	2.5	ug/kg	1	01/14/22	
ADONA	ND	2.5	ug/kg	1	01/14/22	
EtFOSA	ND	2.5	ug/kg	1	01/14/22	I-05
EtFOSAA	ND	2.5	ug/kg	1	01/14/22	I
EtFOSE	ND	2.5	ug/kg	1	01/14/22	I-05
FOSA	ND	2.5	ug/kg	1	01/14/22	
HFPO-DA	ND	2.5	ug/kg	1	01/14/22	
MeFOSA	ND	2.5	ug/kg	1	01/14/22	
MeFOSAA	3.2	2.5	ug/kg	1	01/14/22	
MeFOSE	ND	2.5	ug/kg	1	01/14/22	
Perfluorooctanoic acid (PFOA)	ND	2.5	ug/kg	1	01/14/22	
PFBA	ND	2.5	ug/kg	1	01/14/22	
PFBS	ND	2.5	ug/kg	1	01/14/22	
PFDA	ND	2.5	ug/kg	1	01/14/22	
PFDoA	ND	2.5	ug/kg	1	01/14/22	
PFDS	ND	2.5	ug/kg	1	01/14/22	
PFHpA	ND	2.5	ug/kg	1	01/14/22	
PFHpS	ND	2.5	ug/kg	1	01/14/22	
PFHxA	ND	2.5	ug/kg	1	01/14/22	
PFHxS	ND	2.5	ug/kg	1	01/14/22	
PFNA	ND	2.5	ug/kg	1	01/14/22	
PFNS	ND	2.5	ug/kg	1	01/14/22	
PFOS	6.6	2.5	ug/kg	1	01/14/22	
PFPeA	ND	2.5	ug/kg	1	01/14/22	
PFPeS	ND	2.5	ug/kg	1	01/14/22	
PFTeDA	ND	2.5	ug/kg	1	01/14/22	
PFTTrDA	ND	2.5	ug/kg	1	01/14/22	
PFUnA	ND	2.5	ug/kg	1	01/14/22	

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Project Number: PFAS
Project Manager: Todd Cox

Reported:
01/26/2022 13:17

Sample Results

(Continued)

Sample: SW Biosolids Field Sample (BTSF) Field Blank
2A05050-12 (Water)

Sampled: 01/03/22 6:00 by Derek Gillis

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Per- and Polyfluorinated Alkyl Substances (PFAS) by SPE/LCMSMS						
Method: EPA 537M		Instr: LCMS06				
Batch ID: W2A0641	Preparation: EPA 537/SPE	Prepared: 01/11/22 08:49			Analyst: jna	
11CI-PF3OUdS	ND	2.0	ng/l	1	01/12/22	
4:2 FTS	ND	1.0	ng/l	1	01/12/22	
6:2 FTS	ND	1.0	ng/l	1	01/12/22	I
8:2 FTS	ND	1.0	ng/l	1	01/12/22	
9CI-PF3ONS	ND	1.0	ng/l	1	01/12/22	
ADONA	ND	1.0	ng/l	1	01/12/22	
EtFOSA	ND	2.0	ng/l	1	01/12/22	A-01a
EtFOSAA	ND	2.0	ng/l	1	01/12/22	
EtFOSE	ND	1.0	ng/l	1	01/12/22	A-01a
FOSA	ND	1.0	ng/l	1	01/12/22	A-01a
HFPO-DA	ND	1.0	ng/l	1	01/12/22	
MeFOSA	ND	2.0	ng/l	1	01/12/22	A-01a
MeFOSAA	ND	1.0	ng/l	1	01/12/22	
MeFOSE	ND	2.0	ng/l	1	01/12/22	A-01a
Perfluorooctanoic acid (PFOA)	ND	1.0	ng/l	1	01/12/22	
PFBA	ND	1.0	ng/l	1	01/12/22	
PFBS	ND	1.0	ng/l	1	01/12/22	
PFDA	ND	1.0	ng/l	1	01/12/22	
PFDoA	ND	1.0	ng/l	1	01/12/22	
PFDS	ND	1.0	ng/l	1	01/12/22	
PFHpA	ND	4.0	ng/l	1	01/12/22	
PFHpS	ND	1.0	ng/l	1	01/12/22	
PFHxA	ND	2.0	ng/l	1	01/12/22	
PFHxS	ND	1.0	ng/l	1	01/12/22	
PFNA	ND	1.0	ng/l	1	01/12/22	
PFNS	ND	1.0	ng/l	1	01/12/22	
PFOS	ND	2.0	ng/l	1	01/12/22	
PFPeA	ND	1.0	ng/l	1	01/12/22	
PFPeS	ND	1.0	ng/l	1	01/12/22	
PFTeDA	ND	2.0	ng/l	1	01/12/22	
PFTTrDA	ND	1.0	ng/l	1	01/12/22	
PFUnA	ND	1.0	ng/l	1	01/12/22	

City of Springfield
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Springfield, MO 65802

Project Number: PFAS

Reported:

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Project Manager: Todd Cox

Quality Control Results

Per- and Polyfluorinated Alkyl Substances (PFAS) by SPE/LCMSMS

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W2A0641 - EPA 537M										
Blank (W2A0641-BLK1)										
Prepared: 01/11/22 Analyzed: 01/12/22										
11CI-PF3OUdS	ND	2.0	ng/l							
4:2 FTS	ND	1.0	ng/l							
6:2 FTS	ND	1.0	ng/l							
8:2 FTS	ND	1.0	ng/l							
9CI-PF3ONS	ND	1.0	ng/l							
ADONA	ND	1.0	ng/l							
EtFOSA	ND	2.0	ng/l							
EtFOSAA	ND	2.0	ng/l							
EtFOSE	ND	1.0	ng/l							
FOSA	ND	1.0	ng/l							
HFPO-DA	ND	1.0	ng/l							
MeFOSA	ND	2.0	ng/l							
MeFOSAA	ND	1.0	ng/l							
MeFOSE	ND	2.0	ng/l							
Perfluorooctanoic acid (PFOA)	ND	1.0	ng/l							
PFBA	ND	1.0	ng/l							
PFBS	ND	1.0	ng/l							
PFDA	ND	1.0	ng/l							
PFDoA	ND	1.0	ng/l							
PFDS	ND	1.0	ng/l							
PFHpA	ND	4.0	ng/l							
PFHpS	ND	1.0	ng/l							
PFHxA	ND	2.0	ng/l							
PFHxS	ND	1.0	ng/l							
PFNA	ND	1.0	ng/l							
PFNS	ND	1.0	ng/l							
PFOS	ND	2.0	ng/l							
PFPeA	ND	1.0	ng/l							
PFPeS	ND	1.0	ng/l							
PFTeDA	ND	2.0	ng/l							
PFTrDA	ND	1.0	ng/l							
PFOUnA	ND	1.0	ng/l							
LCS (W2A0641-BS1)										
Prepared: 01/11/22 Analyzed: 01/12/22										
11CI-PF3OUdS	1.94	2.0	ng/l	2.00		97	70-130			
4:2 FTS	1.91	1.0	ng/l	2.00		96	63-143			
6:2 FTS	1.77	1.0	ng/l	2.00		89	64-140			
8:2 FTS	1.92	1.0	ng/l	2.00		96	67-138			
9CI-PF3ONS	1.86	1.0	ng/l	2.00		93	70-130			
ADONA	1.88	1.0	ng/l	2.00		94	70-130			

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Project Manager: Todd Cox

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Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by SPE/LCMSMS (Continued)

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W2A0641 - EPA 537M (Continued)										
LCS (W2A0641-BS1)										
				Prepared: 01/11/22 Analyzed: 01/12/22						
EtFOSA	4.03	2.0	ng/l	4.00		101	70-130			
EtFOSAA	1.40	2.0	ng/l	2.00		70	61-135			
EtFOSE	3.79	1.0	ng/l	4.00		95	70-130			
FOSA	1.87	1.0	ng/l	2.00		94	67-137			
HFPO-DA	1.86	1.0	ng/l	2.00		93	70-130			
MeFOSA	3.79	2.0	ng/l	4.00		95	68-141			
MeFOSAA	1.89	1.0	ng/l	2.00		95	65-136			
MeFOSE	4.10	2.0	ng/l	4.00		102	70-130			
Perfluorooctanoic acid (PFOA)	2.00	1.0	ng/l	2.00		100	71-133			
PFBA	1.90	1.0	ng/l	2.00		95	73-129			
PFBS	1.89	1.0	ng/l	2.00		95	72-130			
PFDA	1.93	1.0	ng/l	2.00		97	71-129			
PFDoA	1.85	1.0	ng/l	2.00		92	72-134			
PFDS	1.91	1.0	ng/l	2.00		95	53-142			
PFHpA	1.89	4.0	ng/l	2.00		95	72-130			
PFHpS	1.88	1.0	ng/l	2.00		94	69-134			
PFHxA	1.93	2.0	ng/l	2.00		96	72-129			
PFHxS	1.87	1.0	ng/l	2.00		94	68-131			
PFNA	1.89	1.0	ng/l	2.00		95	69-130			
PFNS	1.69	1.0	ng/l	2.00		84	69-127			
PFOS	2.16	2.0	ng/l	2.00		108	65-140			
PFPeA	1.86	1.0	ng/l	2.00		93	72-129			
PFPeS	1.92	1.0	ng/l	2.00		96	71-127			
PFTeDA	2.17	2.0	ng/l	2.00		109	71-132			
PFTrDA	1.97	1.0	ng/l	2.00		99	65-144			
PFUnA	2.05	1.0	ng/l	2.00		103	69-133			
LCS Dup (W2A0641-BSD1)										
				Prepared: 01/11/22 Analyzed: 01/12/22						
11Cl-PF3OUdS	1.87	2.0	ng/l	2.00		93	70-130	4	30	
4:2 FTS	1.99	1.0	ng/l	2.00		99	63-143	4	30	
6:2 FTS	1.76	1.0	ng/l	2.00		88	64-140	1	30	
8:2 FTS	1.86	1.0	ng/l	2.00		93	67-138	3	30	
9Cl-PF3ONS	1.76	1.0	ng/l	2.00		88	70-130	6	30	
ADONA	1.81	1.0	ng/l	2.00		90	70-130	4	30	
EtFOSA	3.05	2.0	ng/l	4.00		76	70-130	28	30	A-01b
EtFOSAA	1.27	2.0	ng/l	2.00		64	61-135	10	30	
EtFOSE	4.22	1.0	ng/l	4.00		105	70-130	11	30	A-01b
FOSA	1.90	1.0	ng/l	2.00		95	67-137	1	30	A-01b
HFPO-DA	1.71	1.0	ng/l	2.00		86	70-130	8	30	

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Quality Control Results

(Continued)

Per- and Polyfluorinated Alkyl Substances (PFAS) by SPE/LCMSMS (Continued)

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W2A0641 - EPA 537M (Continued)										
LCS Dup (W2A0641-BSD1)										
Prepared: 01/11/22 Analyzed: 01/12/22										
MeFOSA	7.03	2.0	ng/l	4.00		176	68-141	60	30	A-01c, BS-04
MeFOSAA	1.86	1.0	ng/l	2.00		93	65-136	2	30	
MeFOSE	3.86	2.0	ng/l	4.00		96	70-130	6	30	A-01b
Perfluorooctanoic acid (PFOA)	1.86	1.0	ng/l	2.00		93	71-133	7	30	
PFBA	1.87	1.0	ng/l	2.00		93	73-129	2	30	
PFBS	1.76	1.0	ng/l	2.00		88	72-130	7	30	
PFDA	1.83	1.0	ng/l	2.00		92	71-129	5	30	
PFDoA	1.89	1.0	ng/l	2.00		95	72-134	2	30	
PFDS	1.89	1.0	ng/l	2.00		95	53-142	0.8	30	
PFHpA	1.87	4.0	ng/l	2.00		93	72-130	1	30	
PFHpS	1.69	1.0	ng/l	2.00		84	69-134	11	30	
PFHxA	1.89	2.0	ng/l	2.00		95	72-129	2	30	
PFHxS	1.91	1.0	ng/l	2.00		95	68-131	2	30	
PFNA	1.90	1.0	ng/l	2.00		95	69-130	0.07	30	
PFNS	1.77	1.0	ng/l	2.00		89	69-127	5	30	
PFOS	1.79	2.0	ng/l	2.00		90	65-140	19	30	
PFPeA	1.87	1.0	ng/l	2.00		94	72-129	0.4	30	
PFPeS	1.89	1.0	ng/l	2.00		94	71-127	2	30	
PFTeDA	2.32	2.0	ng/l	2.00		116	71-132	6	30	
PFTrDA	1.73	1.0	ng/l	2.00		87	65-144	13	30	
PFUnA	1.97	1.0	ng/l	2.00		98	69-133	4	30	

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Quality Control Results

(Continued)

Pesticides by GCMSMS

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W2A0640 - EPA 537M										
Blank (W2A0640-BLK1)										
Prepared: 01/11/22 Analyzed: 01/14/22										
11CI-PF3OUdS	ND	2.5	ug/kg							
4:2 FTS	ND	2.5	ug/kg							
6:2 FTS	ND	2.5	ug/kg							
8:2 FTS	ND	4.0	ug/kg							
9CI-PF3ONS	ND	2.5	ug/kg							
ADONA	ND	2.5	ug/kg							
EtFOSA	ND	2.5	ug/kg							
EtFOSAA	ND	2.5	ug/kg							
EtFOSE	ND	2.5	ug/kg							
FOSA	ND	2.5	ug/kg							
HFPO-DA	ND	2.5	ug/kg							
MeFOSA	ND	2.5	ug/kg							
MeFOSAA	ND	2.5	ug/kg							
MeFOSE	ND	2.5	ug/kg							
Perfluorooctanoic acid (PFOA)	ND	2.5	ug/kg							
PFBA	ND	2.5	ug/kg							
PFBS	ND	2.5	ug/kg							
PFDA	ND	2.5	ug/kg							
PFDoA	ND	2.5	ug/kg							
PFDS	ND	2.5	ug/kg							
PFHpA	ND	2.5	ug/kg							
PFHpS	ND	2.5	ug/kg							
PFHxA	ND	2.5	ug/kg							
PFHxS	ND	2.5	ug/kg							
PFNA	ND	2.5	ug/kg							
PFNS	ND	2.5	ug/kg							
PFOS	ND	2.5	ug/kg							
PFPeA	ND	2.5	ug/kg							
PFPeS	ND	2.5	ug/kg							
PFTeDA	ND	2.5	ug/kg							
PFTrDA	ND	2.5	ug/kg							
PFUnA	ND	2.5	ug/kg							
LCS (W2A0640-BS1)										
Prepared: 01/11/22 Analyzed: 01/14/22										
11CI-PF3OUdS	2.48	2.5	ug/kg	2.50		99	70-130			
4:2 FTS	2.49	2.5	ug/kg	2.50		99	62-145			
6:2 FTS	2.28	2.5	ug/kg	2.50		91	64-140			
8:2 FTS	1.87	4.0	ug/kg	2.50		75	65-137			
9CI-PF3ONS	2.64	2.5	ug/kg	2.50		106	70-130			
ADONA	2.04	2.5	ug/kg	2.50		82	70-130			

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Quality Control Results

(Continued)

Pesticides by GCMSMS (Continued)

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W2A0640 - EPA 537M (Continued)										
LCS (W2A0640-BS1)										
				Prepared: 01/11/22 Analyzed: 01/14/22						
EtFOSA	4.42	2.5	ug/kg	5.00		88	70-130			
EtFOSAA	2.03	2.5	ug/kg	2.50		81	61-139			
EtFOSE	4.82	2.5	ug/kg	5.00		96	70-130			
FOSA	2.39	2.5	ug/kg	2.50		95	67-137			
HFPO-DA	2.16	2.5	ug/kg	2.50		86	70-130			
MeFOSA	5.04	2.5	ug/kg	5.00		101	70-130			
MeFOSAA	2.33	2.5	ug/kg	2.50		93	63-144			
MeFOSE	5.53	2.5	ug/kg	5.00		111	70-130			
Perfluorooctanoic acid (PFOA)	2.47	2.5	ug/kg	2.50		99	69-133			
PFBA	2.51	2.5	ug/kg	2.50		100	71-135			
PFBS	2.32	2.5	ug/kg	2.50		93	72-128			
PFDA	2.45	2.5	ug/kg	2.50		98	69-133			
PFDoA	2.61	2.5	ug/kg	2.50		104	69-135			
PFDS	2.70	2.5	ug/kg	2.50		108	59-134			
PFHpA	2.55	2.5	ug/kg	2.50		102	71-131			
PFHpS	2.99	2.5	ug/kg	2.50		120	70-132			
PFHxA	2.44	2.5	ug/kg	2.50		98	70-132			
PFHxS	2.41	2.5	ug/kg	2.50		96	67-130			
PFNA	2.55	2.5	ug/kg	2.50		102	72-129			
PFNS	2.77	2.5	ug/kg	2.50		111	69-125			
PFOS	2.79	2.5	ug/kg	2.50		111	68-136			
PFPeA	2.50	2.5	ug/kg	2.50		100	69-132			
PFPeS	2.58	2.5	ug/kg	2.50		103	73-123			
PFTeDA	2.63	2.5	ug/kg	2.50		105	69-133			
PFTTrDA	2.62	2.5	ug/kg	2.50		105	66-139			
PFUnA	2.58	2.5	ug/kg	2.50		103	64-136			
Matrix Spike (W2A0640-MS1)										
		Source: 2A05050-11			Prepared: 01/11/22 Analyzed: 01/14/22					
11Cl-PF3OUdS	1.99	2.5	ug/kg	2.48	ND	80	70-130			
4:2 FTS	2.58	2.5	ug/kg	2.48	ND	104	62-145			
6:2 FTS	2.62	2.5	ug/kg	2.48	ND	106	64-140			I
8:2 FTS	2.12	4.0	ug/kg	2.48	ND	86	65-137			I
9Cl-PF3ONS	1.96	2.5	ug/kg	2.48	ND	79	70-130			
ADONA	2.03	2.5	ug/kg	2.48	ND	82	70-130			
EtFOSA	5.25	2.5	ug/kg	4.95	ND	106	70-130			I-05
EtFOSAA	3.32	2.5	ug/kg	2.48	1.35	80	61-139			I
EtFOSE	6.36	2.5	ug/kg	4.95	ND	128	70-130			I-05
FOSA	2.70	2.5	ug/kg	2.48	ND	109	67-137			
HFPO-DA	2.21	2.5	ug/kg	2.48	ND	89	70-130			
MeFOSA	5.09	2.5	ug/kg	4.95	ND	103	70-130			

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Quality Control Results

(Continued)

Pesticides by GCMSMS (Continued)

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W2A0640 - EPA 537M (Continued)										
Matrix Spike (W2A0640-MS1)			Source: 2A05050-11			Prepared: 01/11/22 Analyzed: 01/14/22				
MeFOSAA	5.74	2.5	ug/kg	2.48	3.20	103	63-144			
MeFOSE	7.91	2.5	ug/kg	4.95	1.42	131	70-130			MS-01
Perfluorooctanoic acid (PFOA)	2.72	2.5	ug/kg	2.48	ND	110	69-133			
PFBA	2.94	2.5	ug/kg	2.48	ND	119	71-135			
PFBS	2.42	2.5	ug/kg	2.48	ND	98	72-128			
PFDA	3.54	2.5	ug/kg	2.48	1.14	97	69-133			
PFDoA	3.28	2.5	ug/kg	2.48	ND	133	69-135			
PFDS	2.50	2.5	ug/kg	2.48	ND	101	59-134			
PFHpA	2.55	2.5	ug/kg	2.48	ND	103	71-131			
PFHpS	2.27	2.5	ug/kg	2.48	ND	92	70-132			
PFHxA	2.88	2.5	ug/kg	2.48	ND	116	70-132			
PFHxS	2.48	2.5	ug/kg	2.48	ND	100	67-130			
PFNA	2.74	2.5	ug/kg	2.48	ND	111	72-129			
PFNS	2.24	2.5	ug/kg	2.48	ND	91	69-125			
PFOS	10.0	2.5	ug/kg	2.48	6.64	136	68-136			
PFPeA	2.43	2.5	ug/kg	2.48	ND	98	69-132			
PFPeS	2.48	2.5	ug/kg	2.48	ND	100	73-123			
PFTeDA	2.69	2.5	ug/kg	2.48	ND	109	69-133			
PFTrDA	2.69	2.5	ug/kg	2.48	ND	109	66-139			
PFUnA	2.89	2.5	ug/kg	2.48	ND	117	64-136			
Matrix Spike Dup (W2A0640-MSD1)										
Source: 2A05050-11			Prepared: 01/11/22 Analyzed: 01/14/22							
11CI-PF3OUdS	1.77	2.5	ug/kg	2.42	ND	73	70-130	12	30	
4:2 FTS	2.50	2.5	ug/kg	2.42	ND	103	62-145	3	30	
6:2 FTS	2.62	2.5	ug/kg	2.42	ND	109	64-140	0.2	30	I
8:2 FTS	2.47	4.0	ug/kg	2.42	ND	102	65-137	16	30	I
9CI-PF3ONS	2.11	2.5	ug/kg	2.42	ND	87	70-130	7	30	
ADONA	2.32	2.5	ug/kg	2.42	ND	96	70-130	13	30	
EtFOSA	6.44	2.5	ug/kg	4.83	ND	133	70-130	20	30	I-05, MS-01
EtFOSAA	2.97	2.5	ug/kg	2.42	1.35	67	61-139	11	30	I
EtFOSE	5.64	2.5	ug/kg	4.83	ND	117	70-130	12	30	I-05
FOSA	2.75	2.5	ug/kg	2.42	ND	114	67-137	2	30	
HFPO-DA	2.04	2.5	ug/kg	2.42	ND	85	70-130	8	30	
MeFOSA	4.44	2.5	ug/kg	4.83	ND	92	70-130	14	30	
MeFOSAA	5.07	2.5	ug/kg	2.42	3.20	78	63-144	12	30	
MeFOSE	7.27	2.5	ug/kg	4.83	1.42	121	70-130	8	30	
Perfluorooctanoic acid (PFOA)	2.87	2.5	ug/kg	2.42	ND	119	69-133	5	30	
PFBA	2.97	2.5	ug/kg	2.42	ND	123	71-135	1	30	
PFBS	2.71	2.5	ug/kg	2.42	ND	112	72-128	11	30	
PFDA	3.60	2.5	ug/kg	2.42	1.14	102	69-133	2	30	

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Quality Control Results

(Continued)

Pesticides by GCMSMS (Continued)

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W2A0640 - EPA 537M (Continued)										
Matrix Spike Dup (W2A0640-MSD1)			Source: 2A05050-11			Prepared: 01/11/22 Analyzed: 01/14/22				
PFD _o A	2.87	2.5	ug/kg	2.42	ND	119	69-135	13	30	
PFDS	2.72	2.5	ug/kg	2.42	ND	113	59-134	8	30	
PFHpA	2.58	2.5	ug/kg	2.42	ND	107	71-131	1	30	
PFHpS	2.40	2.5	ug/kg	2.42	ND	99	70-132	6	30	
PFHxA	2.94	2.5	ug/kg	2.42	ND	122	70-132	2	30	
PFHxS	2.85	2.5	ug/kg	2.42	ND	118	67-130	14	30	
PFNA	2.55	2.5	ug/kg	2.42	ND	105	72-129	7	30	
PFNS	2.25	2.5	ug/kg	2.42	ND	93	69-125	0.3	30	
PFOS	7.37	2.5	ug/kg	2.42	6.64	30	68-136	30	30	MS-01
PFP _e A	2.49	2.5	ug/kg	2.42	ND	103	69-132	2	30	
PFP _e S	2.68	2.5	ug/kg	2.42	ND	111	73-123	8	30	
PFT _e DA	2.78	2.5	ug/kg	2.42	ND	115	69-133	3	30	
PFT _r DA	2.68	2.5	ug/kg	2.42	ND	111	66-139	0.4	30	
PFUnA	2.81	2.5	ug/kg	2.42	ND	116	64-136	3	30	

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Notes and Definitions

Item	Definition
A-01	IS has low recovery, result is suspect.
A-01a	IS has low recovery, sample is ND.
A-01b	IS has low recovery, target is passing.
A-01c	IS has low recovery.
BS-04	The recovery of this analyte in LCS or LCSD was outside control limit. Sample was accepted based on the remaining LCS, LCSD or LCS-LL.
E-01	The concentration indicated for this analyte is an estimated value above the calibration range.
I	Internal Standard outside of acceptance limit due to possible matrix effects
I-05	Low internal standard recovery possibly due to matrix interference. The result is suspect.
M-02	Due to the nature of matrix interferences, sample was diluted prior to preparation. The MDL and MRL were raised due to the dilution.
MS-01	The spike recovery for this QC sample is outside of established control limits possibly due to sample matrix interference.
%REC	Percent Recovery
Dil	Dilution
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.