State of Wisconsin
Department of Natural Resources
PO Box 7921, Madison WI 53707-7921
dnr.wi.gov

Site Investigation Sample Results Notification

Form 4400-249 (R 03/14)

Notice: This form may be used to comply with the requirements of s. NR 716.14 (2), Wis. Adm. Code; however, use of this form is not required. An alternate format may be used. The rule requires that notification be provided to 1) property owners when someone else is conducting the sampling, 2) to occupants of property belonging to the responsible person, and 3) to owners and occupants of property that does not belong to the responsible person but has been affected by contamination arising on his or her property. Notification is required within 10 business days of receiving the sample results. Personal information collected will be used for program administration and may be provided to requesters to the extent required by Wisconsin's Open Records law [ss. 19.31-19.39, Wis. Stats.].

NOTE: Under s. NR 716.14, Wis. Adm. Code, the responsible party must also submit sample results and other required information to the DNR. We recommend that copies of the sample results notifications be included with that submittal, along with all attachments. Using the same format used for data presentation for a closure request may be helpful to all parties. See s. NR 716.14, Wis. Adm. Code for the full list of information to be submitted to the DNR.

Notification of Property Owners and Occupants:

This notification form has been provided to you in order to provide the results of environmental sampling that has been conducted on property that you own or occupy. Samples were collected in accordance with the methods identified in the site investigation work plan, in accordance with s. NR. 716.09 and 716.13, Wis. Adm. Code. This sampling was conducted as a result of contamination originating at the following location.

Site Information

Site Name			DNR ID # (BRRTS #)
Blackhawk Drycleaners			02-12-552357
Address	**City**	**State**	**ZIP Code**
700 East Blackhawk Avenue	Prairie du Chien	WI	53821

Responsible Party

The person(s) responsible for completing this environmental investigation is:

Property Owner

Redevelopment Authority (RDA) of the City of Prairie du Chien

Address	City	State	ZIP Code
P.O. Box 324	Prairie du Chien	WI	53821

Contact Person	Phone Number (include area code)
Chad Abram	(608) 326-6406

Person or company that collected samples

SCS Engineers

Sample Results (Results Attached)

Reason for Sampling: ○ Routine ◉ Other (define) Groundwater PFAS.

The contaminants that have been identified at this time on property that you own or occupy include:

Contaminant	In Soil? Yes	In Soil? No	In Groundwater? Yes	In Groundwater? No
Gasoline	○	○	○	○
Diesel or Fuel Oil	○	○	○	○
Solvents	○	○	○	○
Heavy Metals	○	○	○	○
Pesticides	○	○	○	○
Other: PFAS	○	○	◉	○

This sampling event included sampling of a drinking water well.
○ Yes ◉ No

If yes, the sampled drinking water well had detectable contaminants.
○ Yes ○ No

Contaminants in Vapor	Yes	No
Indoor Air	○	○
Sub-slab	○	○
Exterior Soil Gas	○	○

Attached are:

- A map that shows the locations from which samples were collected. (The map needs to meet the requirements of s. NR 716.15 (4), Wis. Adm. Code.)
- A data table with specific contaminant levels at each sample location and whether or not the sample results exceed state standards.
- A copy of the laboratory results.

You are not identified as the person that is responsible for this contamination. However, your cooperation is important. Property owners may become legally responsible for contamination if they do not allow access to the person that is responsible so that person may complete the environmental investigation and clean up activities.

Option for written exemption: You have the option of requesting a written liability exemption from the DNR for contamination that originated on another property, or on property that you lease. To do this, you must present an adequate environmental assessment of your property and pay a $700 fee for review of this information. If you are interested in this option, please see DNR publication # RR 589, "When Contamination Crosses a Property Line - Rights and Responsibilities of Property Owners", available at: dnr.wi.gov/files/PDF/pubs/rr/rr589.pdf.

Contact Information

Please address questions regarding this notification, or requests for additional information to the contact person listed above, or to one of the following contacts:

Environmental Consultant

Company Name	Contact Person Last Name	First Name
SCS Engineers	Langdon	Robert

Address	City	State	ZIP Code
2830 Dairy Drive	Madison	WI	53718

Phone # (inc. area code)	Email
(608) 212-3995	rlangdon@scsengineers.com

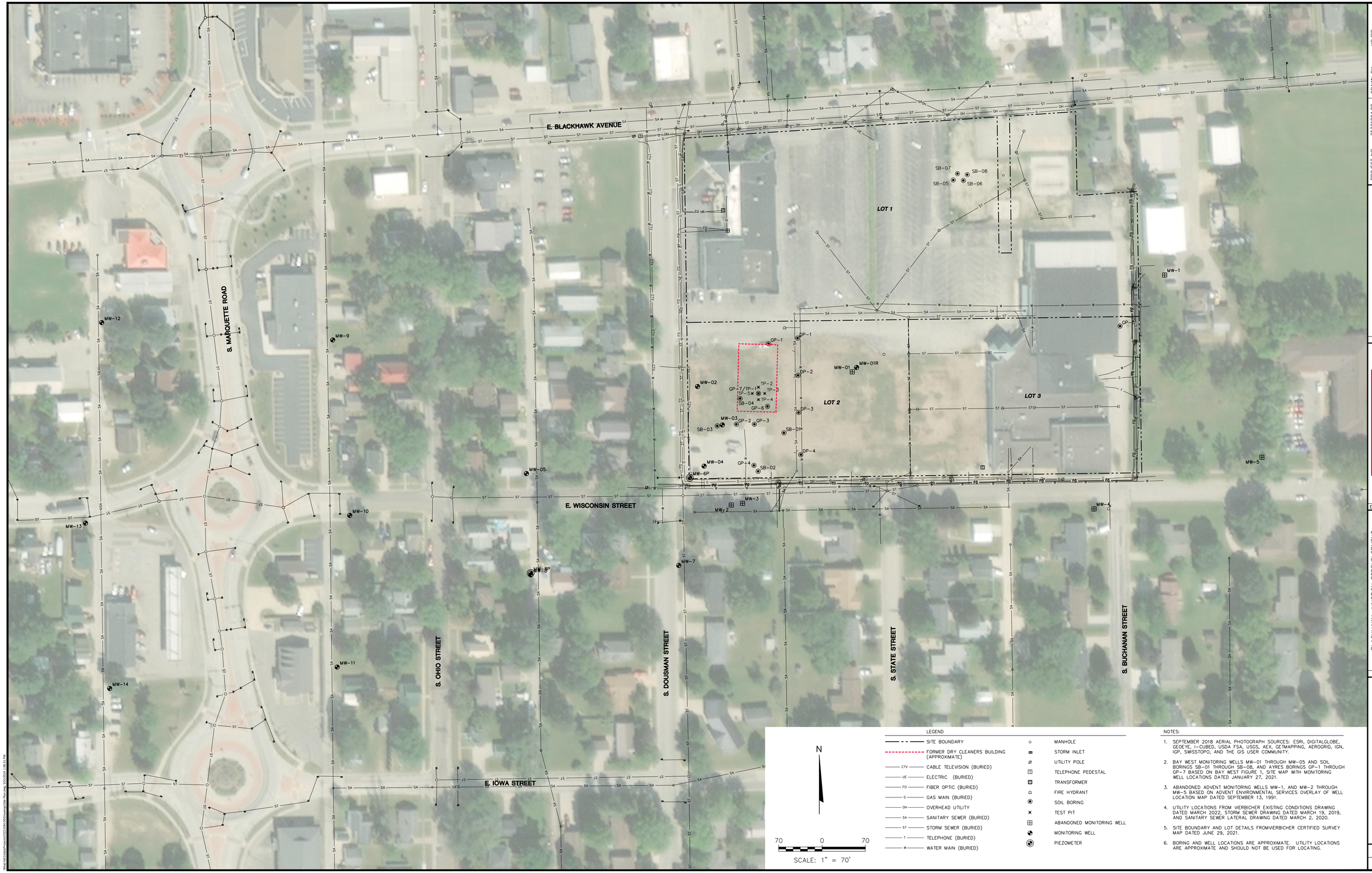
Select which agency: (●) Natural Resources ( ) Agriculture, Trade and Consumer Protection

State of Wisconsin Department of Natural Resources

Contact Person Last Name	First Name	Phone # (inc. area code)
Vitale	Matt	(715) 492-1222

Address	City	State	ZIP Code
1300 West Clairemont Avenue	Eau Claire	WI	54701-6127

Email
Matthew.Vitale@wisconsin.gov



LEGEND

- SITE BOUNDARY
- FORMER DRY CLEANERS BUILDING (APPROXIMATE)
- CTV — CABLE TELEVISION (BURIED)
- UE — ELECTRIC (BURIED)
- FO — FIBER OPTIC (BURIED)
- G — GAS MAIN (BURIED)
- OH — OVERHEAD UTILITY
- SA — SANITARY SEWER (BURIED)
- ST — STORM SEWER (BURIED)
- T — TELEPHONE (BURIED)
- W — WATER MAIN (BURIED)
- MANHOLE
- STORM INLET
- UTILITY POLE
- TELEPHONE PEDESTAL
- TRANSFORMER
- FIRE HYDRANT
- SOIL BORING
- TEST PIT
- ABANDONED MONITORING WELL
- MONITORING WELL
- PIEZOMETER

NOTES:

1. SEPTEMBER 2018 AERIAL PHOTOGRAPH SOURCES: ESRI, DIGITALGLOBE, GEOEYE, I-CUBED, USDA FSA, USGS, AEX, GETMAPPING, AEROGRID, IGN, IGP, SWISSTOPO, AND THE GIS USER COMMUNITY.
2. BAY WEST MONITORING WELLS MW-01 THROUGH MW-05 AND SOIL BORINGS SB-01 THROUGH SB-08, AND AYRES BORINGS GP-1 THROUGH GP-7 BASED ON BAY WEST FIGURE 1, SITE MAP WITH MONITORING WELL LOCATIONS DATED JANUARY 27, 2021.
3. ABANDONED ADVENT MONITORING WELLS MW-1, AND MW-2 THROUGH MW-5 BASED ON ADVENT ENVIRONMENTAL SERVICES OVERLAY OF WELL LOCATION MAP DATED SEPTEMBER 13, 1991.
4. UTILITY LOCATIONS FROM VIERBICHER EXISTING CONDITIONS DRAWING DATED MARCH 2022, STORM SEWER DRAWING DATED MARCH 19, 2019, AND SANITARY SEWER LATERAL DRAWING DATED MARCH 2, 2020.
5. SITE BOUNDARY AND LOT DETAILS FROM VIERBICHER CERTIFIED SURVEY MAP DATED JUNE 29, 2021.
6. BORING AND WELL LOCATIONS ARE APPROXIMATE. UTILITY LOCATIONS ARE APPROXIMATE AND SHOULD NOT BE USED FOR LOCATING.

SCS ENGINEERS
2830 DAIRY DRIVE MADISON, WI 53718-6751
PHONE: (608) 224-2830

ENGINEER

CLIENT
PRAIRIE DU CHIEN REDEVELOPMENT AUTHORITY

PROJECT NO.	25221094.00
DRAWN:	04/05/2021
REVISED:	05/31/2024
DRAWN BY:	KP/SB
CHECKED BY:	RM 6/6/2024
APPROVED BY:	REL 6/6/2024

SITE
BLACKHAWK JUNCTION REDEVELOPMENT
700 EAST BLACKHAWK AVENUE
PRAIRIE DU CHIEN, WISCONSIN

SITE PLAN

FIGURE
2

Table 2. Groundwater Analytical Results Summary - PFAS
Blackhawk Junction - Prairie du Chien, WI / SCS Engineers Project #25221094.00
(Results are in ng/L)

Free Acid Name			Perfluorobutanoic acid	Perfluoropentanoic acid	Perfluorohexanoic acid	Perfluoroheptanoic acid	Perfluorooctanoic acid	Perfluorononanoic acid	Perfluorodecanoic acid	Perfluoroundecanoic acid	Perfluorododecanoic acid	Perfluorotridecanoic acid	Perfluorotetradecanoic acid	Perfluorobutanesulfonic acid	Perfluoropentanesulfonic acid	Perfluorohexanesulfonic acid	Perfluoroheptanesulfonic acid	Perfluorooctanesulfonic acid	Perfluorononanesulfonic acid	Perfluorodecanesulfonic acid
Acronym:			PFBA	PFPeA	PFHxA	PFHpA	PFOA	PFNA	PFDA	PFUnA	PFDoA	PFTriA	PFTeA	PFBS	PFPeS	PFHxS	PFHpS	PFOS	PFNS	PFDS
Sample	Date	CAS #	375-22-4	2706-90-3	307-24-4	375-85-9	335-67-1	375-95-1	335-76-2	2058-94-8	307-55-1	72629-94-8	376-06-7	375-73-5	2706-91-4	355-46-4	375-92-8	1763-23-1	68259-12-1	335-77-3
MW-1	2/17/2022		5.9	6.6	4.0	3.0	6.5	<0.24	<0.28	<0.99	<0.49	<1.2	<0.65	3.5	<0.27	6.2	0.37 J	15	<0.33	<0.29
	2/17/2022 (Dup)		5.4	6.7	3.8	2.8	6.7	<0.24	<0.28	<0.99	<0.50	<1.2	<0.66	3.2	<0.27	5.9	0.51 J	16	<0.33	<0.29
MW-1R	5/12/2022		3.3 J	3.4	2.4	2.6	5.7	<0.24	<0.28	<1.0	<0.50	<1.2	<0.66	4.4	<0.27	16	0.43 J	11	<0.34	<0.29
	8/11/2022		5.3	5.8	2.8	2.9	4.3	<0.25	<0.28	<1.0	<0.50	<1.2	<0.66	7.1	<0.27	1.4 J	0.27 J	9 C	<0.34	<0.29
	8/11/2022 (Dup)		3.5 J	3.8	2.2	2.9	3.5	<0.22	<0.26	<0.91	<0.45	<1.1	<0.60	6.9	<0.25	0.96 J	0.2 J	6.6 C	<0.31	<0.26
MW-2	2/13/2021		3.7	1.6 J	2.9	2.8	11	<0.70	<0.53	<0.51	<0.46	<0.59	<0.45	2.1	<0.45	3.6	1.5 J	3.0 I	<0.42	<0.43
	5/12/2022		7.1	6.1	4	4.1	7.8	<0.23	<0.27	<0.94	<0.47	<1.1	<0.62	3.1	0.33 J	6.9	0.45 J	7.8 C	<0.32	<0.27
	8/11/2022		3.5 J	2.8	2.3	4	5.7	<0.24	<0.28	<1.0	<0.50	<1.2	<0.66	2.7	0.42 J	9.3	0.36 J	2.5 C	<0.34	<0.29
MW-3	12/13/2021		6.4	10	7.9	5.4	19	0.86 J	<0.56	<0.54	<0.48	<0.62	<0.47	4.2	<0.47	4.1	2.6	**58**	<0.44	<0.45
	12/13/2021 (Dup)		6.4	9.9	7.0	5.7	**22**	1.0 J	<0.54	<0.51	<0.46	<0.59	<0.45	3.7	<0.45	4.1	2.3	**55**	<0.43	<0.43
	5/12/2022		5.1	3.6	12.0	6.3	**33**	0.52 J	<0.27	<0.97	<0.49	<1.1	<0.65	11	1.7 J	220	2.9	**26** C	<0.33	<0.28
	5/12/2022 (Dup)		4.5	3.4	12.0	6.3	**36**	0.64 J	<0.27	<0.95	<0.47	<1.1	<0.63	11	1.7	220	3.8	**26** C	<0.32	<0.28
	8/11/2022		4.8	5.1	5.6	3.9	13	0.36 J	<0.28	<0.99	<0.50	<1.2	<0.66	7.9	0.57 J	33	2.3	19	<0.33	<0.29
MW-4	12/13/2021		9.0	12	16	14	**30**	7.4	<0.55	<0.52	<0.47	<0.60	<0.46	39	1.1 J	46	0.67 J	6.8	<0.43	<0.44
	5/12/2022		9.3	6.1	34	15	**71**	<0.24	<0.27	<0.97	<0.48	<1.1	<0.64	17	7.8	820	4.8	**45** C	<0.33	<0.28
	8/11/2022		11.0	10	24	15	**46**	0.93 J	<0.27	<0.98	<0.49	<1.2	<0.65	85	5	460	1.8	**29** C	<0.33	<0.28
MW-5	2/17/2022		3.5 J	1.8	12	3.2	14	<0.24	<0.27	<0.97	<0.48	<1.1	<0.64	5.6	2.5	140	0.28 J	17 C	<0.33	<0.28
	5/12/2022		3.3 J	1.3 J	6.6	2.6	8.4	<0.24	<0.28	<0.99	<0.50	<1.2	<0.66	4.7	1.5 J	98	<0.17	15 C	<0.33	<0.29
	8/11/2022		9.2	5.6	27	11	**50**	<0.23	<0.26	<0.93	<0.47	<1.1	<0.62	18	7.1	470	1.6 J	**58** C	<0.31	<0.27
MW-6P	2/16/2022		<2.2	<0.44	0.63 J	<0.23	0.92 J	<0.24	<0.28	<0.99	<0.50	<1.2	<0.66	0.47 J	<0.27	4.7	<0.17	3.4 C	<0.33	<0.29
MW-7	2/17/2022		2.6 J	<0.44	1.3 J	0.24 J	1.5 J	<0.25	<0.28	<1.0	<0.50	<1.2	<0.66	2.9	0.72 J	21	<0.17	<0.49	<0.34	<0.29
MW-8	2/17/2022		2.6 J	0.7 J	0.89 J	0.35 J	0.86 J	<0.24	<0.27	<0.97	<0.49	<1.1	<0.64	1.6 J	<0.26	4.9	<0.17	2.5 C	<0.33	<0.28
	5/12/2022		3.3 J	0.52 J	0.64 J	0.44 J	1.1 J	<0.24	<0.27	<0.96	<0.48	<1.1	<0.64	2.5	<0.26	8.4	<0.17	2.9	<0.32	<0.28
	8/11/2022		4.3	1 J	1.6 J	0.77 J	1.7	<0.23	<0.27	<0.95	<0.48	<1.1	<0.63	43	0.28 J	9.6	<0.16	4.4	<0.32	<0.28
MW-8P	2/17/2022		<2.2	<0.44	<0.52	<0.22	<0.76	<0.24	<0.28	<0.99	<0.49	<1.2	<0.66	<0.18	<0.27	<0.51	<0.17	<0.49	<0.33	<0.29
MW-9	2/6/2023		7.9	3.4	4.7	2.7	12	<0.25	<0.29	<1.0	<0.52	<1.2	<0.69	14	0.33 J	14	0.68 J	10 C	<0.35	<0.30
MW-10	2/6/2023		5.1	2.0	2.6	1.0 J	4.2	0.27 J	<0.29	<1.0	<0.51	<1.2	<0.68	6.7	0.84 J	25	0.48 J	**78**	<0.35	<0.30
MW-10 DUP	2/6/2023		5.4	2.1	2.8	0.97 J	4.2	0.29 J	<0.29	<1.0	<0.52	<1.2	<0.69	6.7	0.65 J	26	0.56 J	**88**	<0.35	<0.30
MW-11	2/6/2023		5.8	5.0	6.1	2.3	5.9	<0.25	<0.29	<1.0	<0.52	<1.2	<0.69	7.1	0.48 J	10	0.38 J	14	<0.35	<0.30
MW-12	5/23/2024		5.1	3.7	5.1	3.2	16	<0.24	<0.28	<0.98	<0.49	<1.2	<0.65	14	0.44 J	30	1.2 J	**28** C	<0.33	<0.29
MW-13	5/23/2024		7.2	2.5	2.5	1.6 J	8.2	<0.24	<0.28	<0.98	<0.49	<1.2	<0.65	8.2	<0.27	14	0.71 J	**28**	<0.33	<0.28
MW-13 DUP	5/23/2024		7.6	2.1	2.6	1.4 J	7.6	<0.24	<0.28	<0.98	<0.49	<1.2	<0.65	8.5	0.39 J	14	0.74 J	**27**	<0.33	<0.29

Table 2. Groundwater Analytical Results Summary - PFAS
Blackhawk Junction - Prairie du Chien, WI / SCS Engineers Project #25221094.00
(Results are in ng/L)

Free Acid Name			Perfluorooctanesulfonamide	2-(N-Methylperfluorooctanesulfonamido) acetic acid	2-(N-Ethylperfluorooctanesulfonamido) acetic acid	4:2 Fluorotelomer sulfonic acid	6:2 Fluorotelomer sulfonic acid	8:2 Fluorotelomer sulfonic acid	N-Ethylperfluorooctanesulfonamide	N-Methylperfluorooctanesulfonamide	Perfluorododecanesulfonic acid	N-Methyl perfluorooctanesulfonamidoethanol	N-Ethyl perfluorooctanesulfonamidoethanol	Perfluoro(2-((6-chlorohexyl)oxy)ethanesulfonic acid)	Perfluoro-2-methyl-3-oxahexanoic acid (HFPO-DA)	2-[(8-Chloro-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8-hexadecafluorooctyl)oxy]-1,1,2,2-tetrafluoroethanesulfonic acid	DONA [a.k.a. 4,8-Dioxa-3H-perfluorononanoic acid (ADONA)]	PFOA + PFOS Combined
Acronym:			FOSA	N-MeFOSAA	N-EtFOSAA	4:2 FTS	6:2 FTS	8:2 FTS	N-EtFOSA	N-MeFOSA	PFDoS	N-MeFOSE	N-EtFOSE	F-53B Major/ 9Cl-PF3ONS	GenX	F-53B Minor/ 11Cl-PF3OUdS	DONA/ ADONA	--
Sample	**Date**	**CAS #**	754-91-6	2355-31-9	2991-50-6	757124-72-4	27619-97-2	39108-34-4	4151-50-2	31506-32-8	79780-39-5	24448-09-7	1691-99-2	756426-58-1	13252-13-6	763051-92-9	919005-14-4	--
MW-1	2/17/2022		<0.88	<1.1	<1.2	<0.21	<2.2	<0.41	<0.78	<0.39	<0.87	<1.3	<0.76	<0.21	<1.3	<0.29	<0.36	**22**
	2/17/2022 (Dup)		1.5 J	<1.1	<1.2	<0.22	<2.3	<0.41	<0.78	<0.39	<0.87	<1.3	<0.77	<0.22	<1.4	<0.29	<0.36	**23**
MW-1R	5/12/2022		<0.89	<1.1	<1.2	<0.22	<2.3	<0.42	<0.79	<0.39	<0.88	<1.3	<0.77	<0.22	<1.4	<0.29	<0.36	17
	8/11/2022		<0.89	<1.1	<1.2	<0.22	<2.3	<0.42	<0.79	<0.39	<0.88	<1.3	<0.77	<0.22	<1.4	<0.29	<0.36	13
	8/11/2022 (Dup)		<0.81	<0.99	<1.1	<0.20	<2.1	<0.38	<0.72	<0.35	<0.80	<1.2	<0.70	<0.20	<1.2	<0.26	<0.33	10
MW-2	2/13/2021		<0.78	<0.41	<0.53	<0.53	<0.61	<0.62	<0.58	<0.48	<0.44	<0.31	<0.47	<0.29	<0.50	<0.41	<0.49	14
	5/12/2022		0.94 J	<1.0	<1.1	<0.21	<2.1	<0.39	<0.74	<0.37	<0.83	<1.2	<0.73	<0.21	<1.3	<0.27	<0.34	16
	8/11/2022		<0.89	<1.1	<1.2	<0.22	<2.3	<0.42	<0.79	<0.39	<0.88	<1.3	<0.77	<0.22	<1.4	<0.29	<0.36	8
MW-3	12/13/2021		<0.81	<0.43	<0.55	<0.55	2.6	<0.65	<0.60	<0.51	<0.46	<0.33	<0.49	<0.30	<0.52	<0.43	<0.51	**77**
	12/13/2021 (Dup)		<0.78	<0.41	<0.53	<0.53	4.2	0.72 J	<0.58	<0.49	<0.44	<0.31	<0.47	<0.29	<0.50	<0.42	<0.49	**77**
	5/12/2022		<0.87	<1.1	<1.1	<0.21	<2.2	<0.41	<0.77	<0.38	<0.86	<1.2	<0.75	<0.21	<1.3	<0.28	<0.35	**59**
	5/12/2022 (Dup)		1.1 J	<1.0	<1.1	<0.21	<2.2	<0.40	<0.75	<0.37	<0.84	<1.2	<0.73	<0.21	<1.3	<0.28	<0.34	**62**
	8/11/2022		<0.89	<1.1	<1.2	<0.22	<2.3	<0.42	<0.79	<0.39	<0.88	<1.3	<0.77	<0.22	<1.4	<0.29	<0.36	**32**
MW-4	12/13/2021		<0.79	<0.42	<0.54	<0.54	1.2 J	<0.63	<0.59	<0.50	<0.45	<0.32	<0.48	<0.30	<0.51	<0.42	<0.50	**37**
	5/12/2022		<0.86	<1.1	<1.1	<0.21	<2.2	<0.40	<0.76	<0.38	<0.85	<1.2	<0.75	<0.21	<1.3	<0.28	<0.35	**116**
	8/11/2022		<0.87	<1.1	<1.2	<0.21	<2.2	<0.41	<0.77	<0.38	<0.86	<1.2	<0.75	<0.21	<1.3	<0.28	<0.35	**75**
MW-5	2/17/2022		<0.86	<1.1	<1.1	<0.21	<2.2	<0.40	<0.77	<0.38	<0.85	<1.2	<0.75	<0.21	<1.3	<0.28	<0.35	**31**
	5/12/2022		<0.88	<1.1	<1.2	<0.22	<2.3	<0.41	<0.78	<0.39	<0.87	<1.3	<0.77	<0.22	<1.4	<0.29	<0.36	**23**
	8/11/2022		<0.83	<1.0	<1.1	<0.20	<2.1	<0.39	<0.74	<0.36	<0.82	<1.2	<0.72	<0.20	<1.3	<0.27	<0.34	**108**
MW-6P	2/16/2022		<0.88	<1.1	<1.2	<0.22	<2.3	<0.42	<0.79	<0.39	<0.88	<1.3	<0.77	<0.22	<1.4	<0.29	<0.36	4
MW-7	2/17/2022		<0.89	<1.1	<1.2	<0.22	<2.3	<0.42	<0.79	<0.39	<0.88	<1.3	<0.77	<0.22	<1.4	<0.29	<0.36	2
MW-8	2/17/2022		<0.87	<1.1	<1.1	<0.21	<2.2	<0.41	<0.77	<0.38	<0.86	<1.2	<0.75	<0.21	<1.3	<0.28	<0.35	3
	5/12/2022		<0.86	<1.0	<1.1	<0.21	<2.2	<0.40	<0.76	<0.38	<0.85	<1.2	<0.74	<0.21	<1.3	<0.28	<0.35	4
	8/11/2022		<0.85	<1.0	<1.1	<0.21	<2.2	<0.40	<0.75	<0.37	<0.84	<1.2	<0.74	<0.21	<1.3	<0.28	<0.35	6
MW-8P	2/17/2022		<0.88	<1.1	<1.2	<0.22	<2.2	<0.41	<0.78	<0.39	<0.87	<1.3	<0.76	<0.22	<1.3	<0.29	<0.36	ND
MW-9	2/6/2023		<0.92	<1.1	<1.2	<0.23	<2.3	<0.43	<0.82	<0.40	<0.91	<1.3	<0.80	<0.23	<1.4	<0.30	<0.38	**22**
MW-10	2/6/2023		<0.92	<1.1	<1.2	<0.22	<2.3	<0.43	<0.81	<0.40	<0.91	<1.3	<0.80	<0.22	<1.4	<0.30	<0.37	**82**
MW-10 DUP	2/6/2023		<0.92	<1.1	<1.2	<0.23	<2.3	<0.43	<0.82	<0.40	<0.91	<1.3	<0.80	<0.23	<1.4	<0.30	<0.38	**92**
MW-11	2/6/2023		<0.92	<1.1	<1.2	<0.23	<2.4	<0.43	<0.82	<0.41	<0.91	<1.3	<0.80	<0.23	<1.4	<0.30	<0.38	20
MW-12	5/23/2024		9.8	<1.1	<1.2	<0.21	<2.2	<0.41	<0.78	<0.39	<0.87	<1.3	<0.76	<0.21	<1.3	<0.29	<0.36	**44**
MW-13	5/23/2024		<0.87	<1.1	<1.2	<0.21	<2.2	<0.41	<0.77	<0.38	<0.86	<1.2	<0.76	<0.21	<1.3	<0.28	<0.36	**36**
MW-13 DUP	5/23/2024		<0.87	<1.1	<1.2	<0.21	<2.2	<0.41	<0.78	<0.38	<0.87	<1.2	<0.76	<0.21	<1.3	<0.29	<0.36	**35**

Free Acid Name			Perfluorobutanoic acid	Perfluoropentanoic acid	Perfluorohexanoic acid	Perfluoroheptanoic acid	Perfluorooctanoic acid	Perfluorononanoic acid	Perfluorodecanoic acid	Perfluoroundecanoic acid	Perfluorododecanoic acid	Perfluorotridecanoic acid	Perfluorotetradecanoic acid	Perfluorobutanesulfonic acid	Perfluoropentanesulfonic acid	Perfluorohexanesulfonic acid	Perfluoroheptanesulfonic acid	Perfluorooctanesulfonic acid	Perfluorononanesulfonic acid	Perfluorodecanesulfonic acid
Acronym:			PFBA	PFPeA	PFHxA	PFHpA	PFOA	PFNA	PFDA	PFUnA	PFDoA	PFTriA	PFTeA	PFBS	PFPeS	PFHxS	PFHpS	PFOS	PFNS	PFDS
MW-14	5/23/2024		7.6	5.8	5.8	2.4	8	<0.25	<0.28	<1.0	<0.5	<1.2	<0.66	9.4	0.75 J	9.1	<0.17	10	<0.34	<0.29
Equipment Blank	12/13/2021		<0.43	<0.42	<0.42	<0.53	<0.57	<0.72	<0.55	<0.52	<0.47	<0.60	<0.46	<0.46	<0.46	<0.49	<0.40	<0.53	<0.43	<0.44
	5/12/2022		<2.2	<0.45	<0.54	<0.23	<0.79	<0.25	<0.29	<1.0	<0.51	<1.2	<0.68	<0.19	<0.28	<0.53	<0.18	<0.50	<0.34	<0.30
	8/11/2022		<2.2	<0.46	<0.54	<0.23	<0.79	<0.25	<0.29	<1.0	<0.51	<1.2	<0.68	<0.19	<0.28	<0.53	<0.18	<0.50	<0.35	<0.30
	2/6/2023		<2.3	<0.46	<0.55	<0.24	<0.80	<0.26	<0.29	<1.0	<0.52	<1.2	<0.69	<0.19	<0.28	<0.54	<0.18	<0.51	<0.35	<0.30
	5/23/2024		<2.3	<0.47	<0.56	<0.24	<0.82	<0.26	<0.30	<1.1	<0.53	<1.3	<0.71	<0.19	<0.29	<0.55	<0.18	<0.52	<0.36	<0.31
Equipment Blank - Tube	2/16/2022		<2.2	<0.45	<0.54	<0.23	<0.79	<0.25	<0.29	<1.0	<0.51	<1.2	<0.68	<0.19	<0.28	<0.53	<0.18	<0.50	<0.34	<0.30
Equipment Blank - Pipe	2/17/2022		<2.5	<0.50	<0.60	<0.26	<0.87	<0.28	<0.32	<1.1	<0.57	<1.3	<0.75	<0.21	<0.31	<0.59	<0.20	<0.56	<0.38	<0.33
Field Blank	12/13/2021		<0.48	<0.47	<0.47	<0.60	<0.63	<0.80	<0.61	<0.59	<0.52	<0.67	<0.52	<0.51	<0.51	<0.55	<0.45	<0.59	<0.48	<0.49
	2/16/2022		<2.2	<0.44	<0.52	<0.22	<0.76	<0.24	<0.28	<0.99	<0.49	<1.2	<0.65	<0.18	<0.27	<0.51	<0.17	<0.48	<0.33	<0.29
	5/12/2022		<2.1	<0.43	<0.50	<0.22	<0.74	<0.23	<0.27	<0.96	<0.48	<1.1	<0.63	<0.17	<0.26	<0.50	<0.17	<0.47	<0.32	<0.28
	8/11/2022		<2.1	<0.43	<0.51	<0.22	<0.75	<0.24	<0.27	<0.97	<0.49	<1.1	<0.64	<0.18	<0.26	<0.50	<0.17	<0.48	<0.33	<0.28
	2/6/2023		<2.3	<0.46	<0.55	<0.24	<0.81	<0.26	<0.29	<1.0	<0.52	<1.2	<0.69	<0.19	<0.28	<0.54	<0.18	<0.51	<0.35	<0.30
	5/23/2024		<2.2	<0.45	<0.54	<0.23	<0.79	<0.25	<0.29	<1.0	<0.51	<1.2	<0.68	<0.19	<0.28	<0.53	<0.18	<0.50	<0.34	<0.30
WDNR Proposed PFOA + PFOS Standard			NE	NE	NE	NE	20	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	20	NE	NE

Abbreviations:
ng/L = nanogram per liter
CAS No. = Chemical Abstracts Service Number
PFAS = Per- and Polyfluoroalkyl Substances
-- = Not Applicable
Dup = Duplicate Sample
NE = Not Established
ND = Not Detected at the reporting limit

Notes:
Bold+Underlined results exceed Wisconsin Department of Natural Resources 20 ppt proposed standard for PFOA + PFOS.

Laboratory Notes/Qualifiers:
C = Method 537 (modified): The "C" qualifier means the transition mass ratio for the indicated analyte was outside the established ratio limits. The qualitative identification of the analyte has some degree of uncertainty. However, analyst judgment was used to positively identify the analyte: MW-12 (500-251180-1).
I = Interference present
J = Reported value was between the limit of detection and the limit of quantitation.

Free Acid Name			Perfluorooctanesulfonamide	2-(N-Methylperfluorooctanesulfonamido) acetic acid	2-(N-Ethylperfluorooctanesulfonamido) acetic acid	4:2 Fluorotelomer sulfonic acid	6:2 Fluorotelomer sulfonic acid	8:2 Fluorotelomer sulfonic acid	N-Ethylperfluorooctanesulfonamide	N-Methylperfluorooctanesulfonamide	Perfluorododecanesulfonic acid	N-Methyl perfluorooctanesulfonamidoethanol	N-Ethyl perfluorooctanesulfonamidoethanol	Perfluoro(2-((6-chlorohexyl)oxy)ethanesulfonic acid)	Perfluoro-2-methyl-3-oxahexanoic acid (HFPO-DA)	2-[(8-Chloro-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8-hexadecafluorooctyl)oxy]-1,1,2,2-tetrafluoroethanesulfonic acid	DONA [a.k.a. 4,8-Dioxa-3H-perfluorononanoic acid (ADONA)]	PFOA + PFOS Combined
Acronym:			FOSA	N-MeFOSAA	N-EtFOSAA	4:2 FTS	6:2 FTS	8:2 FTS	N-EtFOSA	N-MeFOSA	PFDoS	N-MeFOSE	N-EtFOSE	F-53B Major/ 9Cl-PF3ONS	GenX	F-53B Minor/ 11Cl-PF3OUdS	DONA/ ADONA	--
MW-14	5/23/2024		1.1 J	<1.1	<1.2	<0.22	<2.3	<0.42	<0.79	<0.39	<0.88	<1.3	<0.77	<0.22	<1.4	<0.29	<0.36	18
Equipment Blank	12/13/2021		<0.79	<0.42	<0.54	<0.54	0.90 J	<0.63	<0.59	<0.49	<0.45	<0.32	<0.48	<0.30	<0.51	<0.42	<0.50	ND
	5/12/2022		<0.91	<1.1	<1.2	<0.22	<2.3	<0.43	<0.81	<0.40	<0.90	<1.3	<0.79	<0.22	<1.4	<0.30	<0.37	ND
	8/11/2022		<0.91	<1.1	<1.2	<0.22	<2.3	<0.43	<0.81	<0.40	<0.90	<1.3	<0.79	<0.22	<1.4	<0.30	<0.37	ND
	2/6/2023		<0.93	<1.1	<1.2	<0.23	<2.4	<0.44	<0.82	<0.41	<0.92	<1.3	<0.80	<0.23	<1.4	<0.30	<0.38	ND
	5/23/2024		<0.95	<1.2	<1.3	<0.23	<2.4	<0.44	<0.84	<0.42	<0.94	<1.4	<0.82	<0.23	<1.5	<0.31	<0.39	ND
Equipment Blank - Tube	2/16/2022		<0.91	<1.1	<1.2	<0.22	<2.3	<0.43	<0.81	<0.40	<0.90	<1.3	<0.79	<0.22	<1.4	<0.30	<0.37	ND
Equipment Blank - Pipe	2/17/2022		<1.0	<1.2	<1.3	<0.25	<2.6	<0.47	<0.89	<0.44	<1.0	<1.4	<0.87	<0.25	<1.5	<0.33	<0.41	ND
Field Blank	12/13/2021		<0.89	<0.47	<0.60	<0.60	<0.70	<0.71	<0.66	<0.55	<0.50	<0.36	<0.54	<0.33	<0.57	<0.47	<0.56	ND
	2/16/2022		<0.88	<1.1	<1.2	<0.22	<2.2	<0.41	<0.78	<0.39	<0.87	<1.3	<0.76	<0.22	<1.3	<0.29	<0.36	ND
	5/12/2022		<0.85	<1.0	<1.1	<0.21	<2.2	<0.40	<0.76	<0.37	<0.84	<1.2	<0.74	<0.21	<1.3	<0.28	<0.35	ND
	8/11/2022		<0.87	<1.1	<1.1	<0.21	<2.2	<0.41	<0.77	<0.38	<0.86	<1.2	<0.75	<0.21	<1.3	<0.28	<0.35	ND
	2/6/2023		<0.93	<1.1	<1.2	<0.23	<2.4	<0.44	<0.83	<0.41	<0.92	<1.3	<0.81	<0.23	<1.4	<0.30	<0.38	ND
	5/23/2024		<0.91	<1.1	<1.2	<0.22	<2.3	<0.43	<0.81	<0.40	<0.90	<1.3	<0.79	<0.22	<1.4	<0.30	<0.37	ND
WDNR Proposed PFOA + PFOS Standard			NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	20

Abbreviations:
ng/L = nanogram per liter
CAS No. = Chemical Abstracts Service Number
PFAS = Per- and Polyfluoroalkyl Substances
-- = Not Applicable
Dup = Duplicate Sample
NE = Not Established
ND = Not Detected at the reporting limit

Notes:
Bold+Underlined results exceed NR 809 drinking water maximum contaminant level (MCL).

Laboratory Notes/Qualifiers:
C = Method 537 (modified): The "C" qualifier means the transition mass ratio for the indicated analyte was outside the established ratio limits. The qualitative identification of the analyte has some degree of uncertainty. However, analyst judgment was used to positively identify the analyte: MW-12 (500-251180-1).
I = Interference present
J = Reported value was between the limit of detection and the limit of quantitation.

Created by:	LMH	Date:	1/20/2022
Last revision by:	REO	Date:	5/31/2024
Checked by:	AJR	Date:	6/3/2024
Proj Mgr QA/QC:	REL	Date:	6/6/2024

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ANALYTICAL REPORT

PREPARED FOR

Attn: Mr. Robert Langdon
SCS Engineers
2830 Dairy Dr
Madison, Wisconsin 53718

Generated 5/29/2024 11:47:03 AM

JOB DESCRIPTION

Blackhawk Junction 25221094.00

JOB NUMBER

500-251180-1

Eurofins Chicago
2417 Bond Street
University Park IL 60484

See page two for job notes and contact information.

Job Notes

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of Eurofins Environment Testing North Central, LLC and its client. All questions regarding this report should be directed to the Eurofins Environment Testing North Central, LLC Project Manager who has signed this report.

Results relate only to the items tested and the sample(s) as received by the laboratory. The results, detection limits (LOD) and Quantitation Limits (LOQ) have been adjusted for sample dilutions and/or solids content.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Chicago Project Manager.

Compliance Statement

The LOD and LOQ reported are adjusted by the dilution factor when a dilution factor greater than 1 is needed. Additionally, where results are indicated as being reported on a dry weight basis, the LOD and LOQ are adjusted for moisture content as well.

Definitions of Limits
- LOD = Limit of Detection = MDL as defined by 40 CFR part 136 Appendix B
- LOQ = Limit of Quantitation = 3.33 x LOD as defined by Wisconsin
- RL = Report Limit = a concentration supported by a standard in the calibration curves

Authorization

Generated
5/29/2024 11:47:03 AM

Authorized for release by
Sandie Fredrick, Senior Project Manager
Sandra.Fredrick@et.eurofinsus.com
(920)261-1660

Table of Contents

Job Narrative
500-251180-1

Receipt
The samples were received on 5/24/2024 9:40 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 0.9º C.

LCMS
Method 537 (modified): The "C" qualifier means the transition mass ratio for the indicated analyte was outside the established ratio limits. The qualitative identification of the analyte has some degree of uncertainty. However, analyst judgment was used to positively identify the analyte: MW-12 (500-251180-1).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep
Method 3535: During the solid phase extraction process, the following samples contained non-settable particulates which clogged the solid phase extraction column: MW-12 (500-251180-1).

Method 3535: The following samples were yellow and brown in color prior to extraction: MW-12 (500-251180-1) and MW-14 (500-251180-4)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: SCS Engineers
Project/Site: Blackhawk Junction 25221094.00

Job ID: 500-251180-1

Client Sample ID: MW-12 — Lab Sample ID: 500-251180-1

Analyte	Result	Qualifier	LOQ	LOD	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	5.1		4.5	2.1	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	3.7		1.8	0.44	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	5.1		1.8	0.52	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	3.2		1.8	0.22	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	16		1.8	0.76	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	14		1.8	0.18	ng/L	1		537 (modified)	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	0.44	J	1.8	0.27	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	30		1.8	0.51	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanesulfonic acid (PFHpS)	1.2	J	1.8	0.17	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	28	C	1.8	0.48	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonamide (FOSA)	9.8		1.8	0.88	ng/L	1		537 (modified)	Total/NA

Client Sample ID: MW-13 — Lab Sample ID: 500-251180-2

Analyte	Result	Qualifier	LOQ	LOD	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	7.2		4.4	2.1	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	2.5		1.8	0.44	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	2.5		1.8	0.52	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	1.6	J	1.8	0.22	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	8.2		1.8	0.76	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	8.2		1.8	0.18	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	14		1.8	0.51	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanesulfonic acid (PFHpS)	0.71	J	1.8	0.17	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	28		1.8	0.48	ng/L	1		537 (modified)	Total/NA

Client Sample ID: MW-13 DUP — Lab Sample ID: 500-251180-3

Analyte	Result	Qualifier	LOQ	LOD	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	7.6		4.5	2.1	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	2.1		1.8	0.44	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	2.6		1.8	0.52	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	1.4	J	1.8	0.22	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	7.6		1.8	0.76	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	8.5		1.8	0.18	ng/L	1		537 (modified)	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	0.39	J	1.8	0.27	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	14		1.8	0.51	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanesulfonic acid (PFHpS)	0.74	J	1.8	0.17	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	27		1.8	0.48	ng/L	1		537 (modified)	Total/NA

Client Sample ID: MW-14 — Lab Sample ID: 500-251180-4

Analyte	Result	Qualifier	LOQ	LOD	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	7.6		4.6	2.2	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	5.8		1.8	0.45	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	5.8		1.8	0.53	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	2.4		1.8	0.23	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	8.0		1.8	0.77	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	9.4		1.8	0.18	ng/L	1		537 (modified)	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: SCS Engineers
Job ID: 500-251180-1
Project/Site: Blackhawk Junction 25221094.00

Client Sample ID: MW-14 (Continued) — Lab Sample ID: 500-251180-4

Analyte	Result	Qualifier	LOQ	LOD	Unit	Dil Fac	D	Method	Prep Type
Perfluoropentanesulfonic acid (PFPeS)	0.75	J	1.8	0.27	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	9.1		1.8	0.52	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	10		1.8	0.49	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonamide (FOSA)	1.1	J	1.8	0.89	ng/L	1		537 (modified)	Total/NA

Client Sample ID: Field Blank — Lab Sample ID: 500-251180-5

No Detections.

Client Sample ID: Equipment Blank — Lab Sample ID: 500-251180-6

No Detections.

This Detection Summary does not include radiochemical test results.

Method Summary

Client: SCS Engineers
Project/Site: Blackhawk Junction 25221094.00

Job ID: 500-251180-1

Method	Method Description	Protocol	Laboratory
537 (modified)	Fluorinated Alkyl Substances	EPA	EET SAC
3535	Solid-Phase Extraction (SPE)	SW846	EET SAC

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: SCS Engineers
Project/Site: Blackhawk Junction 25221094.00

Job ID: 500-251180-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-251180-1	MW-12	Water	05/23/24 12:20	05/24/24 09:40
500-251180-2	MW-13	Water	05/23/24 15:20	05/24/24 09:40
500-251180-3	MW-13 DUP	Water	05/23/24 15:25	05/24/24 09:40
500-251180-4	MW-14	Water	05/23/24 14:10	05/24/24 09:40
500-251180-5	Field Blank	Water	05/23/24 11:05	05/24/24 09:40
500-251180-6	Equipment Blank	Water	05/23/24 11:10	05/24/24 09:40

Client: SCS Engineers
Project/Site: Blackhawk Junction 25221094.00

Job ID: 500-251180-1

Client Sample ID: MW-12
Date Collected: 05/23/24 12:20
Date Received: 05/24/24 09:40

Lab Sample ID: 500-251180-1
Matrix: Water

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**5.1**		4.5	2.1	ng/L		05/28/24 05:40	05/28/24 17:33	1
Perfluoropentanoic acid (PFPeA)	**3.7**		1.8	0.44	ng/L		05/28/24 05:40	05/28/24 17:33	1
Perfluorohexanoic acid (PFHxA)	**5.1**		1.8	0.52	ng/L		05/28/24 05:40	05/28/24 17:33	1
Perfluoroheptanoic acid (PFHpA)	**3.2**		1.8	0.22	ng/L		05/28/24 05:40	05/28/24 17:33	1
Perfluorooctanoic acid (PFOA)	**16**		1.8	0.76	ng/L		05/28/24 05:40	05/28/24 17:33	1
Perfluorononanoic acid (PFNA)	<0.24		1.8	0.24	ng/L		05/28/24 05:40	05/28/24 17:33	1
Perfluorodecanoic acid (PFDA)	<0.28		1.8	0.28	ng/L		05/28/24 05:40	05/28/24 17:33	1
Perfluoroundecanoic acid (PFUnA)	<0.98		1.8	0.98	ng/L		05/28/24 05:40	05/28/24 17:33	1
Perfluorododecanoic acid (PFDoA)	<0.49		1.8	0.49	ng/L		05/28/24 05:40	05/28/24 17:33	1
Perfluorotridecanoic acid (PFTrDA)	<1.2		1.8	1.2	ng/L		05/28/24 05:40	05/28/24 17:33	1
Perfluorotetradecanoic acid (PFTeA)	<0.65		1.8	0.65	ng/L		05/28/24 05:40	05/28/24 17:33	1
Perfluorobutanesulfonic acid (PFBS)	**14**		1.8	0.18	ng/L		05/28/24 05:40	05/28/24 17:33	1
Perfluoropentanesulfonic acid (PFPeS)	**0.44**	**J**	1.8	0.27	ng/L		05/28/24 05:40	05/28/24 17:33	1
Perfluorohexanesulfonic acid (PFHxS)	**30**		1.8	0.51	ng/L		05/28/24 05:40	05/28/24 17:33	1
Perfluoroheptanesulfonic acid (PFHpS)	**1.2**	**J**	1.8	0.17	ng/L		05/28/24 05:40	05/28/24 17:33	1
Perfluorooctanesulfonic acid (PFOS)	**28**	**C**	1.8	0.48	ng/L		05/28/24 05:40	05/28/24 17:33	1
Perfluorononanesulfonic acid (PFNS)	<0.33		1.8	0.33	ng/L		05/28/24 05:40	05/28/24 17:33	1
Perfluorodecanesulfonic acid (PFDS)	<0.29		1.8	0.29	ng/L		05/28/24 05:40	05/28/24 17:33	1
Perfluorododecanesulfonic acid (PFDoS)	<0.87		1.8	0.87	ng/L		05/28/24 05:40	05/28/24 17:33	1
Perfluorooctanesulfonamide (FOSA)	**9.8**		1.8	0.88	ng/L		05/28/24 05:40	05/28/24 17:33	1
NEtFOSA	<0.78		1.8	0.78	ng/L		05/28/24 05:40	05/28/24 17:33	1
NMeFOSA	<0.39		1.8	0.39	ng/L		05/28/24 05:40	05/28/24 17:33	1
NMeFOSAA	<1.1		4.5	1.1	ng/L		05/28/24 05:40	05/28/24 17:33	1
NEtFOSAA	<1.2		4.5	1.2	ng/L		05/28/24 05:40	05/28/24 17:33	1
NMeFOSE	<1.3		3.6	1.3	ng/L		05/28/24 05:40	05/28/24 17:33	1
NEtFOSE	<0.76		1.8	0.76	ng/L		05/28/24 05:40	05/28/24 17:33	1
4:2 FTS	<0.21		1.8	0.21	ng/L		05/28/24 05:40	05/28/24 17:33	1
6:2 FTS	<2.2		4.5	2.2	ng/L		05/28/24 05:40	05/28/24 17:33	1
8:2 FTS	<0.41		1.8	0.41	ng/L		05/28/24 05:40	05/28/24 17:33	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.36		1.8	0.36	ng/L		05/28/24 05:40	05/28/24 17:33	1
HFPO-DA (GenX)	<1.3		3.6	1.3	ng/L		05/28/24 05:40	05/28/24 17:33	1
9Cl-PF3ONS	<0.21		1.8	0.21	ng/L		05/28/24 05:40	05/28/24 17:33	1
11Cl-PF3OUdS	<0.29		1.8	0.29	ng/L		05/28/24 05:40	05/28/24 17:33	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*104*		*25 - 150*	*05/28/24 05:40*	*05/28/24 17:33*	*1*
13C5 PFPeA	*101*		*25 - 150*	*05/28/24 05:40*	*05/28/24 17:33*	*1*
13C2 PFHxA	*93*		*25 - 150*	*05/28/24 05:40*	*05/28/24 17:33*	*1*
13C4 PFHpA	*96*		*25 - 150*	*05/28/24 05:40*	*05/28/24 17:33*	*1*
13C4 PFOA	*95*		*25 - 150*	*05/28/24 05:40*	*05/28/24 17:33*	*1*
13C5 PFNA	*97*		*25 - 150*	*05/28/24 05:40*	*05/28/24 17:33*	*1*
13C2 PFDA	*86*		*25 - 150*	*05/28/24 05:40*	*05/28/24 17:33*	*1*
13C2 PFUnA	*78*		*25 - 150*	*05/28/24 05:40*	*05/28/24 17:33*	*1*
13C2 PFDoA	*70*		*25 - 150*	*05/28/24 05:40*	*05/28/24 17:33*	*1*

Client: SCS Engineers
Project/Site: Blackhawk Junction 25221094.00

Job ID: 500-251180-1

Client Sample ID: MW-12
Date Collected: 05/23/24 12:20
Date Received: 05/24/24 09:40

Lab Sample ID: 500-251180-1
Matrix: Water

Method: EPA 537 (modified) - Fluorinated Alkyl Substances (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFTeDA	69		25 - 150	05/28/24 05:40	05/28/24 17:33	1
13C3 PFBS	101		25 - 150	05/28/24 05:40	05/28/24 17:33	1
18O2 PFHxS	96		25 - 150	05/28/24 05:40	05/28/24 17:33	1
13C4 PFOS	90		25 - 150	05/28/24 05:40	05/28/24 17:33	1
13C8 FOSA	96		10 - 150	05/28/24 05:40	05/28/24 17:33	1
d3-NMeFOSAA	86		25 - 150	05/28/24 05:40	05/28/24 17:33	1
d5-NEtFOSAA	79		25 - 150	05/28/24 05:40	05/28/24 17:33	1
d-N-MeFOSA-M	70		10 - 150	05/28/24 05:40	05/28/24 17:33	1
d-N-EtFOSA-M	64		10 - 150	05/28/24 05:40	05/28/24 17:33	1
d7-N-MeFOSE-M	70		10 - 150	05/28/24 05:40	05/28/24 17:33	1
d9-N-EtFOSE-M	69		10 - 150	05/28/24 05:40	05/28/24 17:33	1
M2-4:2 FTS	110		25 - 150	05/28/24 05:40	05/28/24 17:33	1
M2-6:2 FTS	101		25 - 150	05/28/24 05:40	05/28/24 17:33	1
M2-8:2 FTS	118		25 - 150	05/28/24 05:40	05/28/24 17:33	1
13C3 HFPO-DA	84		25 - 150	05/28/24 05:40	05/28/24 17:33	1
13C2 10:2 FTS	125		25 - 150	05/28/24 05:40	05/28/24 17:33	1

Client Sample ID: MW-13
Date Collected: 05/23/24 15:20
Date Received: 05/24/24 09:40

Lab Sample ID: 500-251180-2
Matrix: Water

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**7.2**		4.4	2.1	ng/L		05/28/24 05:40	05/28/24 18:05	1
Perfluoropentanoic acid (PFPeA)	**2.5**		1.8	0.44	ng/L		05/28/24 05:40	05/28/24 18:05	1
Perfluorohexanoic acid (PFHxA)	**2.5**		1.8	0.52	ng/L		05/28/24 05:40	05/28/24 18:05	1
Perfluoroheptanoic acid (PFHpA)	**1.6**	**J**	1.8	0.22	ng/L		05/28/24 05:40	05/28/24 18:05	1
Perfluorooctanoic acid (PFOA)	**8.2**		1.8	0.76	ng/L		05/28/24 05:40	05/28/24 18:05	1
Perfluorononanoic acid (PFNA)	<0.24		1.8	0.24	ng/L		05/28/24 05:40	05/28/24 18:05	1
Perfluorodecanoic acid (PFDA)	<0.28		1.8	0.28	ng/L		05/28/24 05:40	05/28/24 18:05	1
Perfluoroundecanoic acid (PFUnA)	<0.98		1.8	0.98	ng/L		05/28/24 05:40	05/28/24 18:05	1
Perfluorododecanoic acid (PFDoA)	<0.49		1.8	0.49	ng/L		05/28/24 05:40	05/28/24 18:05	1
Perfluorotridecanoic acid (PFTrDA)	<1.2		1.8	1.2	ng/L		05/28/24 05:40	05/28/24 18:05	1
Perfluorotetradecanoic acid (PFTeA)	<0.65		1.8	0.65	ng/L		05/28/24 05:40	05/28/24 18:05	1
Perfluorobutanesulfonic acid (PFBS)	**8.2**		1.8	0.18	ng/L		05/28/24 05:40	05/28/24 18:05	1
Perfluoropentanesulfonic acid (PFPeS)	<0.27		1.8	0.27	ng/L		05/28/24 05:40	05/28/24 18:05	1
Perfluorohexanesulfonic acid (PFHxS)	**14**		1.8	0.51	ng/L		05/28/24 05:40	05/28/24 18:05	1
Perfluoroheptanesulfonic acid (PFHpS)	**0.71**	**J**	1.8	0.17	ng/L		05/28/24 05:40	05/28/24 18:05	1
Perfluorooctanesulfonic acid (PFOS)	**28**		1.8	0.48	ng/L		05/28/24 05:40	05/28/24 18:05	1
Perfluorononanesulfonic acid (PFNS)	<0.33		1.8	0.33	ng/L		05/28/24 05:40	05/28/24 18:05	1
Perfluorodecanesulfonic acid (PFDS)	<0.28		1.8	0.28	ng/L		05/28/24 05:40	05/28/24 18:05	1
Perfluorododecanesulfonic acid (PFDoS)	<0.86		1.8	0.86	ng/L		05/28/24 05:40	05/28/24 18:05	1
Perfluorooctanesulfonamide (FOSA)	<0.87		1.8	0.87	ng/L		05/28/24 05:40	05/28/24 18:05	1
NEtFOSA	<0.77		1.8	0.77	ng/L		05/28/24 05:40	05/28/24 18:05	1
NMeFOSA	<0.38		1.8	0.38	ng/L		05/28/24 05:40	05/28/24 18:05	1
NMeFOSAA	<1.1		4.4	1.1	ng/L		05/28/24 05:40	05/28/24 18:05	1
NEtFOSAA	<1.2		4.4	1.2	ng/L		05/28/24 05:40	05/28/24 18:05	1
NMeFOSE	<1.2		3.6	1.2	ng/L		05/28/24 05:40	05/28/24 18:05	1
NEtFOSE	<0.76		1.8	0.76	ng/L		05/28/24 05:40	05/28/24 18:05	1
4:2 FTS	<0.21		1.8	0.21	ng/L		05/28/24 05:40	05/28/24 18:05	1
6:2 FTS	<2.2		4.4	2.2	ng/L		05/28/24 05:40	05/28/24 18:05	1
8:2 FTS	<0.41		1.8	0.41	ng/L		05/28/24 05:40	05/28/24 18:05	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.36		1.8	0.36	ng/L		05/28/24 05:40	05/28/24 18:05	1
HFPO-DA (GenX)	<1.3		3.6	1.3	ng/L		05/28/24 05:40	05/28/24 18:05	1
9Cl-PF3ONS	<0.21		1.8	0.21	ng/L		05/28/24 05:40	05/28/24 18:05	1
11Cl-PF3OUdS	<0.28		1.8	0.28	ng/L		05/28/24 05:40	05/28/24 18:05	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*101*		*25 - 150*	*05/28/24 05:40*	*05/28/24 18:05*	*1*
13C5 PFPeA	*99*		*25 - 150*	*05/28/24 05:40*	*05/28/24 18:05*	*1*
13C2 PFHxA	*99*		*25 - 150*	*05/28/24 05:40*	*05/28/24 18:05*	*1*
13C4 PFHpA	*97*		*25 - 150*	*05/28/24 05:40*	*05/28/24 18:05*	*1*
13C4 PFOA	*102*		*25 - 150*	*05/28/24 05:40*	*05/28/24 18:05*	*1*
13C5 PFNA	*90*		*25 - 150*	*05/28/24 05:40*	*05/28/24 18:05*	*1*
13C2 PFDA	*85*		*25 - 150*	*05/28/24 05:40*	*05/28/24 18:05*	*1*
13C2 PFUnA	*89*		*25 - 150*	*05/28/24 05:40*	*05/28/24 18:05*	*1*
13C2 PFDoA	*97*		*25 - 150*	*05/28/24 05:40*	*05/28/24 18:05*	*1*
13C2 PFTeDA	*87*		*25 - 150*	*05/28/24 05:40*	*05/28/24 18:05*	*1*

Client: SCS Engineers
Job ID: 500-251180-1
Project/Site: Blackhawk Junction 25221094.00

Client Sample ID: MW-13
Lab Sample ID: 500-251180-2
Date Collected: 05/23/24 15:20
Matrix: Water
Date Received: 05/24/24 09:40

Method: EPA 537 (modified) - Fluorinated Alkyl Substances (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 PFBS	98		25 - 150	05/28/24 05:40	05/28/24 18:05	1
18O2 PFHxS	102		25 - 150	05/28/24 05:40	05/28/24 18:05	1
13C4 PFOS	93		25 - 150	05/28/24 05:40	05/28/24 18:05	1
13C8 FOSA	98		10 - 150	05/28/24 05:40	05/28/24 18:05	1
d3-NMeFOSAA	94		25 - 150	05/28/24 05:40	05/28/24 18:05	1
d5-NEtFOSAA	96		25 - 150	05/28/24 05:40	05/28/24 18:05	1
d-N-MeFOSA-M	90		10 - 150	05/28/24 05:40	05/28/24 18:05	1
d-N-EtFOSA-M	81		10 - 150	05/28/24 05:40	05/28/24 18:05	1
d7-N-MeFOSE-M	89		10 - 150	05/28/24 05:40	05/28/24 18:05	1
d9-N-EtFOSE-M	92		10 - 150	05/28/24 05:40	05/28/24 18:05	1
M2-4:2 FTS	136		25 - 150	05/28/24 05:40	05/28/24 18:05	1
M2-6:2 FTS	115		25 - 150	05/28/24 05:40	05/28/24 18:05	1
M2-8:2 FTS	111		25 - 150	05/28/24 05:40	05/28/24 18:05	1
13C3 HFPO-DA	86		25 - 150	05/28/24 05:40	05/28/24 18:05	1
13C2 10:2 FTS	109		25 - 150	05/28/24 05:40	05/28/24 18:05	1

Client: SCS Engineers
Project/Site: Blackhawk Junction 25221094.00

Job ID: 500-251180-1

Client Sample ID: MW-13 DUP

Date Collected: 05/23/24 15:25
Date Received: 05/24/24 09:40

Lab Sample ID: 500-251180-3

Matrix: Water

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**7.6**		4.5	2.1	ng/L		05/28/24 05:40	05/28/24 18:15	1
Perfluoropentanoic acid (PFPeA)	**2.1**		1.8	0.44	ng/L		05/28/24 05:40	05/28/24 18:15	1
Perfluorohexanoic acid (PFHxA)	**2.6**		1.8	0.52	ng/L		05/28/24 05:40	05/28/24 18:15	1
Perfluoroheptanoic acid (PFHpA)	**1.4**	**J**	1.8	0.22	ng/L		05/28/24 05:40	05/28/24 18:15	1
Perfluorooctanoic acid (PFOA)	**7.6**		1.8	0.76	ng/L		05/28/24 05:40	05/28/24 18:15	1
Perfluorononanoic acid (PFNA)	<0.24		1.8	0.24	ng/L		05/28/24 05:40	05/28/24 18:15	1
Perfluorodecanoic acid (PFDA)	<0.28		1.8	0.28	ng/L		05/28/24 05:40	05/28/24 18:15	1
Perfluoroundecanoic acid (PFUnA)	<0.98		1.8	0.98	ng/L		05/28/24 05:40	05/28/24 18:15	1
Perfluorododecanoic acid (PFDoA)	<0.49		1.8	0.49	ng/L		05/28/24 05:40	05/28/24 18:15	1
Perfluorotridecanoic acid (PFTrDA)	<1.2		1.8	1.2	ng/L		05/28/24 05:40	05/28/24 18:15	1
Perfluorotetradecanoic acid (PFTeA)	<0.65		1.8	0.65	ng/L		05/28/24 05:40	05/28/24 18:15	1
Perfluorobutanesulfonic acid (PFBS)	**8.5**		1.8	0.18	ng/L		05/28/24 05:40	05/28/24 18:15	1
Perfluoropentanesulfonic acid (PFPeS)	**0.39**	**J**	1.8	0.27	ng/L		05/28/24 05:40	05/28/24 18:15	1
Perfluorohexanesulfonic acid (PFHxS)	**14**		1.8	0.51	ng/L		05/28/24 05:40	05/28/24 18:15	1
Perfluoroheptanesulfonic acid (PFHpS)	**0.74**	**J**	1.8	0.17	ng/L		05/28/24 05:40	05/28/24 18:15	1
Perfluorooctanesulfonic acid (PFOS)	**27**		1.8	0.48	ng/L		05/28/24 05:40	05/28/24 18:15	1
Perfluorononanesulfonic acid (PFNS)	<0.33		1.8	0.33	ng/L		05/28/24 05:40	05/28/24 18:15	1
Perfluorodecanesulfonic acid (PFDS)	<0.29		1.8	0.29	ng/L		05/28/24 05:40	05/28/24 18:15	1
Perfluorododecanesulfonic acid (PFDoS)	<0.87		1.8	0.87	ng/L		05/28/24 05:40	05/28/24 18:15	1
Perfluorooctanesulfonamide (FOSA)	<0.87		1.8	0.87	ng/L		05/28/24 05:40	05/28/24 18:15	1
NEtFOSA	<0.78		1.8	0.78	ng/L		05/28/24 05:40	05/28/24 18:15	1
NMeFOSA	<0.38		1.8	0.38	ng/L		05/28/24 05:40	05/28/24 18:15	1
NMeFOSAA	<1.1		4.5	1.1	ng/L		05/28/24 05:40	05/28/24 18:15	1
NEtFOSAA	<1.2		4.5	1.2	ng/L		05/28/24 05:40	05/28/24 18:15	1
NMeFOSE	<1.2		3.6	1.2	ng/L		05/28/24 05:40	05/28/24 18:15	1
NEtFOSE	<0.76		1.8	0.76	ng/L		05/28/24 05:40	05/28/24 18:15	1
4:2 FTS	<0.21		1.8	0.21	ng/L		05/28/24 05:40	05/28/24 18:15	1
6:2 FTS	<2.2		4.5	2.2	ng/L		05/28/24 05:40	05/28/24 18:15	1
8:2 FTS	<0.41		1.8	0.41	ng/L		05/28/24 05:40	05/28/24 18:15	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.36		1.8	0.36	ng/L		05/28/24 05:40	05/28/24 18:15	1
HFPO-DA (GenX)	<1.3		3.6	1.3	ng/L		05/28/24 05:40	05/28/24 18:15	1
9Cl-PF3ONS	<0.21		1.8	0.21	ng/L		05/28/24 05:40	05/28/24 18:15	1
11Cl-PF3OUdS	<0.29		1.8	0.29	ng/L		05/28/24 05:40	05/28/24 18:15	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*112*		*25 - 150*	*05/28/24 05:40*	*05/28/24 18:15*	*1*
13C5 PFPeA	*104*		*25 - 150*	*05/28/24 05:40*	*05/28/24 18:15*	*1*
13C2 PFHxA	*92*		*25 - 150*	*05/28/24 05:40*	*05/28/24 18:15*	*1*
13C4 PFHpA	*108*		*25 - 150*	*05/28/24 05:40*	*05/28/24 18:15*	*1*
13C4 PFOA	*105*		*25 - 150*	*05/28/24 05:40*	*05/28/24 18:15*	*1*
13C5 PFNA	*92*		*25 - 150*	*05/28/24 05:40*	*05/28/24 18:15*	*1*
13C2 PFDA	*89*		*25 - 150*	*05/28/24 05:40*	*05/28/24 18:15*	*1*
13C2 PFUnA	*95*		*25 - 150*	*05/28/24 05:40*	*05/28/24 18:15*	*1*
13C2 PFDoA	*96*		*25 - 150*	*05/28/24 05:40*	*05/28/24 18:15*	*1*
13C2 PFTeDA	*104*		*25 - 150*	*05/28/24 05:40*	*05/28/24 18:15*	*1*

Client: SCS Engineers
Job ID: 500-251180-1
Project/Site: Blackhawk Junction 25221094.00

Client Sample ID: MW-13 DUP
Lab Sample ID: 500-251180-3
Date Collected: 05/23/24 15:25
Matrix: Water
Date Received: 05/24/24 09:40

Method: EPA 537 (modified) - Fluorinated Alkyl Substances (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 PFBS	107		25 - 150	05/28/24 05:40	05/28/24 18:15	1
18O2 PFHxS	109		25 - 150	05/28/24 05:40	05/28/24 18:15	1
13C4 PFOS	94		25 - 150	05/28/24 05:40	05/28/24 18:15	1
13C8 FOSA	97		10 - 150	05/28/24 05:40	05/28/24 18:15	1
d3-NMeFOSAA	95		25 - 150	05/28/24 05:40	05/28/24 18:15	1
d5-NEtFOSAA	108		25 - 150	05/28/24 05:40	05/28/24 18:15	1
d-N-MeFOSA-M	93		10 - 150	05/28/24 05:40	05/28/24 18:15	1
d-N-EtFOSA-M	91		10 - 150	05/28/24 05:40	05/28/24 18:15	1
d7-N-MeFOSE-M	91		10 - 150	05/28/24 05:40	05/28/24 18:15	1
d9-N-EtFOSE-M	96		10 - 150	05/28/24 05:40	05/28/24 18:15	1
M2-4:2 FTS	123		25 - 150	05/28/24 05:40	05/28/24 18:15	1
M2-6:2 FTS	121		25 - 150	05/28/24 05:40	05/28/24 18:15	1
M2-8:2 FTS	116		25 - 150	05/28/24 05:40	05/28/24 18:15	1
13C3 HFPO-DA	103		25 - 150	05/28/24 05:40	05/28/24 18:15	1
13C2 10:2 FTS	108		25 - 150	05/28/24 05:40	05/28/24 18:15	1

Client Sample ID: MW-14
Date Collected: 05/23/24 14:10
Date Received: 05/24/24 09:40

Lab Sample ID: 500-251180-4
Matrix: Water

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**7.6**		4.6	2.2	ng/L		05/28/24 05:40	05/28/24 18:26	1
Perfluoropentanoic acid (PFPeA)	**5.8**		1.8	0.45	ng/L		05/28/24 05:40	05/28/24 18:26	1
Perfluorohexanoic acid (PFHxA)	**5.8**		1.8	0.53	ng/L		05/28/24 05:40	05/28/24 18:26	1
Perfluoroheptanoic acid (PFHpA)	**2.4**		1.8	0.23	ng/L		05/28/24 05:40	05/28/24 18:26	1
Perfluorooctanoic acid (PFOA)	**8.0**		1.8	0.77	ng/L		05/28/24 05:40	05/28/24 18:26	1
Perfluorononanoic acid (PFNA)	<0.25		1.8	0.25	ng/L		05/28/24 05:40	05/28/24 18:26	1
Perfluorodecanoic acid (PFDA)	<0.28		1.8	0.28	ng/L		05/28/24 05:40	05/28/24 18:26	1
Perfluoroundecanoic acid (PFUnA)	<1.0		1.8	1.0	ng/L		05/28/24 05:40	05/28/24 18:26	1
Perfluorododecanoic acid (PFDoA)	<0.50		1.8	0.50	ng/L		05/28/24 05:40	05/28/24 18:26	1
Perfluorotridecanoic acid (PFTrDA)	<1.2		1.8	1.2	ng/L		05/28/24 05:40	05/28/24 18:26	1
Perfluorotetradecanoic acid (PFTeA)	<0.66		1.8	0.66	ng/L		05/28/24 05:40	05/28/24 18:26	1
Perfluorobutanesulfonic acid (PFBS)	**9.4**		1.8	0.18	ng/L		05/28/24 05:40	05/28/24 18:26	1
Perfluoropentanesulfonic acid (PFPeS)	**0.75**	**J**	1.8	0.27	ng/L		05/28/24 05:40	05/28/24 18:26	1
Perfluorohexanesulfonic acid (PFHxS)	**9.1**		1.8	0.52	ng/L		05/28/24 05:40	05/28/24 18:26	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.17		1.8	0.17	ng/L		05/28/24 05:40	05/28/24 18:26	1
Perfluorooctanesulfonic acid (PFOS)	**10**		1.8	0.49	ng/L		05/28/24 05:40	05/28/24 18:26	1
Perfluorononanesulfonic acid (PFNS)	<0.34		1.8	0.34	ng/L		05/28/24 05:40	05/28/24 18:26	1
Perfluorodecanesulfonic acid (PFDS)	<0.29		1.8	0.29	ng/L		05/28/24 05:40	05/28/24 18:26	1
Perfluorododecanesulfonic acid (PFDoS)	<0.88		1.8	0.88	ng/L		05/28/24 05:40	05/28/24 18:26	1
Perfluorooctanesulfonamide (FOSA)	**1.1**	**J**	1.8	0.89	ng/L		05/28/24 05:40	05/28/24 18:26	1
NEtFOSA	<0.79		1.8	0.79	ng/L		05/28/24 05:40	05/28/24 18:26	1
NMeFOSA	<0.39		1.8	0.39	ng/L		05/28/24 05:40	05/28/24 18:26	1
NMeFOSAA	<1.1		4.6	1.1	ng/L		05/28/24 05:40	05/28/24 18:26	1
NEtFOSAA	<1.2		4.6	1.2	ng/L		05/28/24 05:40	05/28/24 18:26	1
NMeFOSE	<1.3		3.6	1.3	ng/L		05/28/24 05:40	05/28/24 18:26	1
NEtFOSE	<0.77		1.8	0.77	ng/L		05/28/24 05:40	05/28/24 18:26	1
4:2 FTS	<0.22		1.8	0.22	ng/L		05/28/24 05:40	05/28/24 18:26	1
6:2 FTS	<2.3		4.6	2.3	ng/L		05/28/24 05:40	05/28/24 18:26	1
8:2 FTS	<0.42		1.8	0.42	ng/L		05/28/24 05:40	05/28/24 18:26	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.36		1.8	0.36	ng/L		05/28/24 05:40	05/28/24 18:26	1
HFPO-DA (GenX)	<1.4		3.6	1.4	ng/L		05/28/24 05:40	05/28/24 18:26	1
9Cl-PF3ONS	<0.22		1.8	0.22	ng/L		05/28/24 05:40	05/28/24 18:26	1
11Cl-PF3OUdS	<0.29		1.8	0.29	ng/L		05/28/24 05:40	05/28/24 18:26	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*114*		*25 - 150*	*05/28/24 05:40*	*05/28/24 18:26*	*1*
13C5 PFPeA	*103*		*25 - 150*	*05/28/24 05:40*	*05/28/24 18:26*	*1*
13C2 PFHxA	*107*		*25 - 150*	*05/28/24 05:40*	*05/28/24 18:26*	*1*
13C4 PFHpA	*115*		*25 - 150*	*05/28/24 05:40*	*05/28/24 18:26*	*1*
13C4 PFOA	*108*		*25 - 150*	*05/28/24 05:40*	*05/28/24 18:26*	*1*
13C5 PFNA	*92*		*25 - 150*	*05/28/24 05:40*	*05/28/24 18:26*	*1*
13C2 PFDA	*95*		*25 - 150*	*05/28/24 05:40*	*05/28/24 18:26*	*1*
13C2 PFUnA	*96*		*25 - 150*	*05/28/24 05:40*	*05/28/24 18:26*	*1*
13C2 PFDoA	*96*		*25 - 150*	*05/28/24 05:40*	*05/28/24 18:26*	*1*

Client: SCS Engineers
Job ID: 500-251180-1
Project/Site: Blackhawk Junction 25221094.00

Client Sample ID: MW-14
Lab Sample ID: 500-251180-4
Date Collected: 05/23/24 14:10
Matrix: Water
Date Received: 05/24/24 09:40

Method: EPA 537 (modified) - Fluorinated Alkyl Substances (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFTeDA	91		25 - 150	05/28/24 05:40	05/28/24 18:26	1
13C3 PFBS	102		25 - 150	05/28/24 05:40	05/28/24 18:26	1
18O2 PFHxS	104		25 - 150	05/28/24 05:40	05/28/24 18:26	1
13C4 PFOS	93		25 - 150	05/28/24 05:40	05/28/24 18:26	1
13C8 FOSA	99		10 - 150	05/28/24 05:40	05/28/24 18:26	1
d3-NMeFOSAA	99		25 - 150	05/28/24 05:40	05/28/24 18:26	1
d5-NEtFOSAA	105		25 - 150	05/28/24 05:40	05/28/24 18:26	1
d-N-MeFOSA-M	85		10 - 150	05/28/24 05:40	05/28/24 18:26	1
d-N-EtFOSA-M	81		10 - 150	05/28/24 05:40	05/28/24 18:26	1
d7-N-MeFOSE-M	89		10 - 150	05/28/24 05:40	05/28/24 18:26	1
d9-N-EtFOSE-M	94		10 - 150	05/28/24 05:40	05/28/24 18:26	1
M2-4:2 FTS	124		25 - 150	05/28/24 05:40	05/28/24 18:26	1
M2-6:2 FTS	112		25 - 150	05/28/24 05:40	05/28/24 18:26	1
M2-8:2 FTS	129		25 - 150	05/28/24 05:40	05/28/24 18:26	1
13C3 HFPO-DA	98		25 - 150	05/28/24 05:40	05/28/24 18:26	1
13C2 10:2 FTS	122		25 - 150	05/28/24 05:40	05/28/24 18:26	1

Client: SCS Engineers
Project/Site: Blackhawk Junction 25221094.00

Job ID: 500-251180-1

Client Sample ID: Field Blank

Date Collected: 05/23/24 11:05
Date Received: 05/24/24 09:40

Lab Sample ID: 500-251180-5

Matrix: Water

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<2.2		4.6	2.2	ng/L		05/28/24 05:40	05/28/24 18:36	1
Perfluoropentanoic acid (PFPeA)	<0.45		1.9	0.45	ng/L		05/28/24 05:40	05/28/24 18:36	1
Perfluorohexanoic acid (PFHxA)	<0.54		1.9	0.54	ng/L		05/28/24 05:40	05/28/24 18:36	1
Perfluoroheptanoic acid (PFHpA)	<0.23		1.9	0.23	ng/L		05/28/24 05:40	05/28/24 18:36	1
Perfluorooctanoic acid (PFOA)	<0.79		1.9	0.79	ng/L		05/28/24 05:40	05/28/24 18:36	1
Perfluorononanoic acid (PFNA)	<0.25		1.9	0.25	ng/L		05/28/24 05:40	05/28/24 18:36	1
Perfluorodecanoic acid (PFDA)	<0.29		1.9	0.29	ng/L		05/28/24 05:40	05/28/24 18:36	1
Perfluoroundecanoic acid (PFUnA)	<1.0		1.9	1.0	ng/L		05/28/24 05:40	05/28/24 18:36	1
Perfluorododecanoic acid (PFDoA)	<0.51		1.9	0.51	ng/L		05/28/24 05:40	05/28/24 18:36	1
Perfluorotridecanoic acid (PFTrDA)	<1.2		1.9	1.2	ng/L		05/28/24 05:40	05/28/24 18:36	1
Perfluorotetradecanoic acid (PFTeA)	<0.68		1.9	0.68	ng/L		05/28/24 05:40	05/28/24 18:36	1
Perfluorobutanesulfonic acid (PFBS)	<0.19		1.9	0.19	ng/L		05/28/24 05:40	05/28/24 18:36	1
Perfluoropentanesulfonic acid (PFPeS)	<0.28		1.9	0.28	ng/L		05/28/24 05:40	05/28/24 18:36	1
Perfluorohexanesulfonic acid (PFHxS)	<0.53		1.9	0.53	ng/L		05/28/24 05:40	05/28/24 18:36	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.18		1.9	0.18	ng/L		05/28/24 05:40	05/28/24 18:36	1
Perfluorooctanesulfonic acid (PFOS)	<0.50		1.9	0.50	ng/L		05/28/24 05:40	05/28/24 18:36	1
Perfluorononanesulfonic acid (PFNS)	<0.34		1.9	0.34	ng/L		05/28/24 05:40	05/28/24 18:36	1
Perfluorodecanesulfonic acid (PFDS)	<0.30		1.9	0.30	ng/L		05/28/24 05:40	05/28/24 18:36	1
Perfluorododecanesulfonic acid (PFDoS)	<0.90		1.9	0.90	ng/L		05/28/24 05:40	05/28/24 18:36	1
Perfluorooctanesulfonamide (FOSA)	<0.91		1.9	0.91	ng/L		05/28/24 05:40	05/28/24 18:36	1
NEtFOSA	<0.81		1.9	0.81	ng/L		05/28/24 05:40	05/28/24 18:36	1
NMeFOSA	<0.40		1.9	0.40	ng/L		05/28/24 05:40	05/28/24 18:36	1
NMeFOSAA	<1.1		4.6	1.1	ng/L		05/28/24 05:40	05/28/24 18:36	1
NEtFOSAA	<1.2		4.6	1.2	ng/L		05/28/24 05:40	05/28/24 18:36	1
NMeFOSE	<1.3		3.7	1.3	ng/L		05/28/24 05:40	05/28/24 18:36	1
NEtFOSE	<0.79		1.9	0.79	ng/L		05/28/24 05:40	05/28/24 18:36	1
4:2 FTS	<0.22		1.9	0.22	ng/L		05/28/24 05:40	05/28/24 18:36	1
6:2 FTS	<2.3		4.6	2.3	ng/L		05/28/24 05:40	05/28/24 18:36	1
8:2 FTS	<0.43		1.9	0.43	ng/L		05/28/24 05:40	05/28/24 18:36	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.37		1.9	0.37	ng/L		05/28/24 05:40	05/28/24 18:36	1
HFPO-DA (GenX)	<1.4		3.7	1.4	ng/L		05/28/24 05:40	05/28/24 18:36	1
9Cl-PF3ONS	<0.22		1.9	0.22	ng/L		05/28/24 05:40	05/28/24 18:36	1
11Cl-PF3OUdS	<0.30		1.9	0.30	ng/L		05/28/24 05:40	05/28/24 18:36	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*116*		*25 - 150*	*05/28/24 05:40*	*05/28/24 18:36*	*1*
13C5 PFPeA	*109*		*25 - 150*	*05/28/24 05:40*	*05/28/24 18:36*	*1*
13C2 PFHxA	*105*		*25 - 150*	*05/28/24 05:40*	*05/28/24 18:36*	*1*
13C4 PFHpA	*112*		*25 - 150*	*05/28/24 05:40*	*05/28/24 18:36*	*1*
13C4 PFOA	*106*		*25 - 150*	*05/28/24 05:40*	*05/28/24 18:36*	*1*
13C5 PFNA	*100*		*25 - 150*	*05/28/24 05:40*	*05/28/24 18:36*	*1*
13C2 PFDA	*97*		*25 - 150*	*05/28/24 05:40*	*05/28/24 18:36*	*1*
13C2 PFUnA	*99*		*25 - 150*	*05/28/24 05:40*	*05/28/24 18:36*	*1*
13C2 PFDoA	*99*		*25 - 150*	*05/28/24 05:40*	*05/28/24 18:36*	*1*
13C2 PFTeDA	*91*		*25 - 150*	*05/28/24 05:40*	*05/28/24 18:36*	*1*
13C3 PFBS	*110*		*25 - 150*	*05/28/24 05:40*	*05/28/24 18:36*	*1*
18O2 PFHxS	*108*		*25 - 150*	*05/28/24 05:40*	*05/28/24 18:36*	*1*

Client: SCS Engineers
Job ID: 500-251180-1
Project/Site: Blackhawk Junction 25221094.00

Client Sample ID: Field Blank
Lab Sample ID: 500-251180-5
Date Collected: 05/23/24 11:05
Matrix: Water
Date Received: 05/24/24 09:40

Method: EPA 537 (modified) - Fluorinated Alkyl Substances (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFOS	105		25 - 150	05/28/24 05:40	05/28/24 18:36	1
13C8 FOSA	103		10 - 150	05/28/24 05:40	05/28/24 18:36	1
d3-NMeFOSAA	110		25 - 150	05/28/24 05:40	05/28/24 18:36	1
d5-NEtFOSAA	103		25 - 150	05/28/24 05:40	05/28/24 18:36	1
d-N-MeFOSA-M	96		10 - 150	05/28/24 05:40	05/28/24 18:36	1
d-N-EtFOSA-M	95		10 - 150	05/28/24 05:40	05/28/24 18:36	1
d7-N-MeFOSE-M	99		10 - 150	05/28/24 05:40	05/28/24 18:36	1
d9-N-EtFOSE-M	101		10 - 150	05/28/24 05:40	05/28/24 18:36	1
M2-4:2 FTS	118		25 - 150	05/28/24 05:40	05/28/24 18:36	1
M2-6:2 FTS	117		25 - 150	05/28/24 05:40	05/28/24 18:36	1
M2-8:2 FTS	127		25 - 150	05/28/24 05:40	05/28/24 18:36	1
13C3 HFPO-DA	93		25 - 150	05/28/24 05:40	05/28/24 18:36	1
13C2 10:2 FTS	143		25 - 150	05/28/24 05:40	05/28/24 18:36	1

Client: SCS Engineers
Project/Site: Blackhawk Junction 25221094.00

Job ID: 500-251180-1

Client Sample ID: Equipment Blank

Date Collected: 05/23/24 11:10
Date Received: 05/24/24 09:40

Lab Sample ID: 500-251180-6
Matrix: Water

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<2.3		4.8	2.3	ng/L		05/28/24 05:40	05/28/24 18:47	1
Perfluoropentanoic acid (PFPeA)	<0.47		1.9	0.47	ng/L		05/28/24 05:40	05/28/24 18:47	1
Perfluorohexanoic acid (PFHxA)	<0.56		1.9	0.56	ng/L		05/28/24 05:40	05/28/24 18:47	1
Perfluoroheptanoic acid (PFHpA)	<0.24		1.9	0.24	ng/L		05/28/24 05:40	05/28/24 18:47	1
Perfluorooctanoic acid (PFOA)	<0.82		1.9	0.82	ng/L		05/28/24 05:40	05/28/24 18:47	1
Perfluorononanoic acid (PFNA)	<0.26		1.9	0.26	ng/L		05/28/24 05:40	05/28/24 18:47	1
Perfluorodecanoic acid (PFDA)	<0.30		1.9	0.30	ng/L		05/28/24 05:40	05/28/24 18:47	1
Perfluoroundecanoic acid (PFUnA)	<1.1		1.9	1.1	ng/L		05/28/24 05:40	05/28/24 18:47	1
Perfluorododecanoic acid (PFDoA)	<0.53		1.9	0.53	ng/L		05/28/24 05:40	05/28/24 18:47	1
Perfluorotridecanoic acid (PFTrDA)	<1.3		1.9	1.3	ng/L		05/28/24 05:40	05/28/24 18:47	1
Perfluorotetradecanoic acid (PFTeA)	<0.71		1.9	0.71	ng/L		05/28/24 05:40	05/28/24 18:47	1
Perfluorobutanesulfonic acid (PFBS)	<0.19		1.9	0.19	ng/L		05/28/24 05:40	05/28/24 18:47	1
Perfluoropentanesulfonic acid (PFPeS)	<0.29		1.9	0.29	ng/L		05/28/24 05:40	05/28/24 18:47	1
Perfluorohexanesulfonic acid (PFHxS)	<0.55		1.9	0.55	ng/L		05/28/24 05:40	05/28/24 18:47	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.18		1.9	0.18	ng/L		05/28/24 05:40	05/28/24 18:47	1
Perfluorooctanesulfonic acid (PFOS)	<0.52		1.9	0.52	ng/L		05/28/24 05:40	05/28/24 18:47	1
Perfluorononanesulfonic acid (PFNS)	<0.36		1.9	0.36	ng/L		05/28/24 05:40	05/28/24 18:47	1
Perfluorodecanesulfonic acid (PFDS)	<0.31		1.9	0.31	ng/L		05/28/24 05:40	05/28/24 18:47	1
Perfluorododecanesulfonic acid (PFDoS)	<0.94		1.9	0.94	ng/L		05/28/24 05:40	05/28/24 18:47	1
Perfluorooctanesulfonamide (FOSA)	<0.95		1.9	0.95	ng/L		05/28/24 05:40	05/28/24 18:47	1
NEtFOSA	<0.84		1.9	0.84	ng/L		05/28/24 05:40	05/28/24 18:47	1
NMeFOSA	<0.42		1.9	0.42	ng/L		05/28/24 05:40	05/28/24 18:47	1
NMeFOSAA	<1.2		4.8	1.2	ng/L		05/28/24 05:40	05/28/24 18:47	1
NEtFOSAA	<1.3		4.8	1.3	ng/L		05/28/24 05:40	05/28/24 18:47	1
NMeFOSE	<1.4		3.9	1.4	ng/L		05/28/24 05:40	05/28/24 18:47	1
NEtFOSE	<0.82		1.9	0.82	ng/L		05/28/24 05:40	05/28/24 18:47	1
4:2 FTS	<0.23		1.9	0.23	ng/L		05/28/24 05:40	05/28/24 18:47	1
6:2 FTS	<2.4		4.8	2.4	ng/L		05/28/24 05:40	05/28/24 18:47	1
8:2 FTS	<0.44		1.9	0.44	ng/L		05/28/24 05:40	05/28/24 18:47	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.39		1.9	0.39	ng/L		05/28/24 05:40	05/28/24 18:47	1
HFPO-DA (GenX)	<1.5		3.9	1.5	ng/L		05/28/24 05:40	05/28/24 18:47	1
9Cl-PF3ONS	<0.23		1.9	0.23	ng/L		05/28/24 05:40	05/28/24 18:47	1
11Cl-PF3OUdS	<0.31		1.9	0.31	ng/L		05/28/24 05:40	05/28/24 18:47	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*104*		*25 - 150*	*05/28/24 05:40*	*05/28/24 18:47*	*1*
13C5 PFPeA	*100*		*25 - 150*	*05/28/24 05:40*	*05/28/24 18:47*	*1*
13C2 PFHxA	*99*		*25 - 150*	*05/28/24 05:40*	*05/28/24 18:47*	*1*
13C4 PFHpA	*103*		*25 - 150*	*05/28/24 05:40*	*05/28/24 18:47*	*1*
13C4 PFOA	*102*		*25 - 150*	*05/28/24 05:40*	*05/28/24 18:47*	*1*
13C5 PFNA	*98*		*25 - 150*	*05/28/24 05:40*	*05/28/24 18:47*	*1*
13C2 PFDA	*91*		*25 - 150*	*05/28/24 05:40*	*05/28/24 18:47*	*1*
13C2 PFUnA	*91*		*25 - 150*	*05/28/24 05:40*	*05/28/24 18:47*	*1*
13C2 PFDoA	*96*		*25 - 150*	*05/28/24 05:40*	*05/28/24 18:47*	*1*
13C2 PFTeDA	*95*		*25 - 150*	*05/28/24 05:40*	*05/28/24 18:47*	*1*
13C3 PFBS	*100*		*25 - 150*	*05/28/24 05:40*	*05/28/24 18:47*	*1*
18O2 PFHxS	*96*		*25 - 150*	*05/28/24 05:40*	*05/28/24 18:47*	*1*

Client: SCS Engineers
Project/Site: Blackhawk Junction 25221094.00

Job ID: 500-251180-1

Client Sample ID: Equipment Blank
Date Collected: 05/23/24 11:10
Date Received: 05/24/24 09:40

Lab Sample ID: 500-251180-6
Matrix: Water

Method: EPA 537 (modified) - Fluorinated Alkyl Substances (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFOS	95		25 - 150	05/28/24 05:40	05/28/24 18:47	1
13C8 FOSA	99		10 - 150	05/28/24 05:40	05/28/24 18:47	1
d3-NMeFOSAA	96		25 - 150	05/28/24 05:40	05/28/24 18:47	1
d5-NEtFOSAA	95		25 - 150	05/28/24 05:40	05/28/24 18:47	1
d-N-MeFOSA-M	92		10 - 150	05/28/24 05:40	05/28/24 18:47	1
d-N-EtFOSA-M	88		10 - 150	05/28/24 05:40	05/28/24 18:47	1
d7-N-MeFOSE-M	95		10 - 150	05/28/24 05:40	05/28/24 18:47	1
d9-N-EtFOSE-M	90		10 - 150	05/28/24 05:40	05/28/24 18:47	1
M2-4:2 FTS	130		25 - 150	05/28/24 05:40	05/28/24 18:47	1
M2-6:2 FTS	121		25 - 150	05/28/24 05:40	05/28/24 18:47	1
M2-8:2 FTS	124		25 - 150	05/28/24 05:40	05/28/24 18:47	1
13C3 HFPO-DA	87		25 - 150	05/28/24 05:40	05/28/24 18:47	1
13C2 10:2 FTS	115		25 - 150	05/28/24 05:40	05/28/24 18:47	1

Definitions/Glossary

Client: SCS Engineers
Project/Site: Blackhawk Junction 25221094.00

Job ID: 500-251180-1

Qualifiers

LCMS

Qualifier	Qualifier Description
C	See Case Narrative
J	Reported value was between the limit of detection and the limit of quantitation.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

QC Association Summary

Client: SCS Engineers
Project/Site: Blackhawk Junction 25221094.00

Job ID: 500-251180-1

LCMS

Prep Batch: 767178

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-251180-1	MW-12	Total/NA	Water	3535	
500-251180-2	MW-13	Total/NA	Water	3535	
500-251180-3	MW-13 DUP	Total/NA	Water	3535	
500-251180-4	MW-14	Total/NA	Water	3535	
500-251180-5	Field Blank	Total/NA	Water	3535	
500-251180-6	Equipment Blank	Total/NA	Water	3535	
MB 320-767178/1-A	Method Blank	Total/NA	Water	3535	
LLCS 320-767178/2-A	Lab Control Sample	Total/NA	Water	3535	

Analysis Batch: 767335

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-251180-1	MW-12	Total/NA	Water	537 (modified)	767178
500-251180-2	MW-13	Total/NA	Water	537 (modified)	767178
500-251180-3	MW-13 DUP	Total/NA	Water	537 (modified)	767178
500-251180-4	MW-14	Total/NA	Water	537 (modified)	767178
500-251180-5	Field Blank	Total/NA	Water	537 (modified)	767178
500-251180-6	Equipment Blank	Total/NA	Water	537 (modified)	767178
MB 320-767178/1-A	Method Blank	Total/NA	Water	537 (modified)	767178
LLCS 320-767178/2-A	Lab Control Sample	Total/NA	Water	537 (modified)	767178

Method: 537 (modified) - Fluorinated Alkyl Substances

Lab Sample ID: MB 320-767178/1-A
Matrix: Water
Analysis Batch: 767335

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 767178

Analyte	MB Result	MB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<2.4		5.0	2.4	ng/L		05/28/24 05:40	05/28/24 15:58	1
Perfluoropentanoic acid (PFPeA)	<0.49		2.0	0.49	ng/L		05/28/24 05:40	05/28/24 15:58	1
Perfluorohexanoic acid (PFHxA)	<0.58		2.0	0.58	ng/L		05/28/24 05:40	05/28/24 15:58	1
Perfluoroheptanoic acid (PFHpA)	<0.25		2.0	0.25	ng/L		05/28/24 05:40	05/28/24 15:58	1
Perfluorooctanoic acid (PFOA)	<0.85		2.0	0.85	ng/L		05/28/24 05:40	05/28/24 15:58	1
Perfluorononanoic acid (PFNA)	<0.27		2.0	0.27	ng/L		05/28/24 05:40	05/28/24 15:58	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	0.31	ng/L		05/28/24 05:40	05/28/24 15:58	1
Perfluoroundecanoic acid (PFUnA)	<1.1		2.0	1.1	ng/L		05/28/24 05:40	05/28/24 15:58	1
Perfluorododecanoic acid (PFDoA)	<0.55		2.0	0.55	ng/L		05/28/24 05:40	05/28/24 15:58	1
Perfluorotridecanoic acid (PFTrDA)	<1.3		2.0	1.3	ng/L		05/28/24 05:40	05/28/24 15:58	1
Perfluorotetradecanoic acid (PFTeA)	<0.73		2.0	0.73	ng/L		05/28/24 05:40	05/28/24 15:58	1
Perfluorobutanesulfonic acid (PFBS)	<0.20		2.0	0.20	ng/L		05/28/24 05:40	05/28/24 15:58	1
Perfluoropentanesulfonic acid (PFPeS)	<0.30		2.0	0.30	ng/L		05/28/24 05:40	05/28/24 15:58	1
Perfluorohexanesulfonic acid (PFHxS)	<0.57		2.0	0.57	ng/L		05/28/24 05:40	05/28/24 15:58	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.19		2.0	0.19	ng/L		05/28/24 05:40	05/28/24 15:58	1
Perfluorooctanesulfonic acid (PFOS)	<0.54		2.0	0.54	ng/L		05/28/24 05:40	05/28/24 15:58	1
Perfluorononanesulfonic acid (PFNS)	<0.37		2.0	0.37	ng/L		05/28/24 05:40	05/28/24 15:58	1
Perfluorodecanesulfonic acid (PFDS)	<0.32		2.0	0.32	ng/L		05/28/24 05:40	05/28/24 15:58	1
Perfluorododecanesulfonic acid (PFDoS)	<0.97		2.0	0.97	ng/L		05/28/24 05:40	05/28/24 15:58	1
Perfluorooctanesulfonamide (FOSA)	<0.98		2.0	0.98	ng/L		05/28/24 05:40	05/28/24 15:58	1
NEtFOSA	<0.87		2.0	0.87	ng/L		05/28/24 05:40	05/28/24 15:58	1
NMeFOSA	<0.43		2.0	0.43	ng/L		05/28/24 05:40	05/28/24 15:58	1
NMeFOSAA	<1.2		5.0	1.2	ng/L		05/28/24 05:40	05/28/24 15:58	1
NEtFOSAA	<1.3		5.0	1.3	ng/L		05/28/24 05:40	05/28/24 15:58	1
NMeFOSE	<1.4		4.0	1.4	ng/L		05/28/24 05:40	05/28/24 15:58	1
NEtFOSE	<0.85		2.0	0.85	ng/L		05/28/24 05:40	05/28/24 15:58	1
4:2 FTS	<0.24		2.0	0.24	ng/L		05/28/24 05:40	05/28/24 15:58	1
6:2 FTS	<2.5		5.0	2.5	ng/L		05/28/24 05:40	05/28/24 15:58	1
8:2 FTS	<0.46		2.0	0.46	ng/L		05/28/24 05:40	05/28/24 15:58	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.40		2.0	0.40	ng/L		05/28/24 05:40	05/28/24 15:58	1
HFPO-DA (GenX)	<1.5		4.0	1.5	ng/L		05/28/24 05:40	05/28/24 15:58	1
9Cl-PF3ONS	<0.24		2.0	0.24	ng/L		05/28/24 05:40	05/28/24 15:58	1
11Cl-PF3OUdS	<0.32		2.0	0.32	ng/L		05/28/24 05:40	05/28/24 15:58	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*109*		*25 - 150*	*05/28/24 05:40*	*05/28/24 15:58*	*1*
13C5 PFPeA	*100*		*25 - 150*	*05/28/24 05:40*	*05/28/24 15:58*	*1*
13C2 PFHxA	*101*		*25 - 150*	*05/28/24 05:40*	*05/28/24 15:58*	*1*
13C4 PFHpA	*108*		*25 - 150*	*05/28/24 05:40*	*05/28/24 15:58*	*1*
13C4 PFOA	*111*		*25 - 150*	*05/28/24 05:40*	*05/28/24 15:58*	*1*
13C5 PFNA	*99*		*25 - 150*	*05/28/24 05:40*	*05/28/24 15:58*	*1*
13C2 PFDA	*95*		*25 - 150*	*05/28/24 05:40*	*05/28/24 15:58*	*1*
13C2 PFUnA	*97*		*25 - 150*	*05/28/24 05:40*	*05/28/24 15:58*	*1*
13C2 PFDoA	*96*		*25 - 150*	*05/28/24 05:40*	*05/28/24 15:58*	*1*
13C2 PFTeDA	*94*		*25 - 150*	*05/28/24 05:40*	*05/28/24 15:58*	*1*

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: MB 320-767178/1-A
Matrix: Water
Analysis Batch: 767335

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 767178

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 PFBS	105		25 - 150	05/28/24 05:40	05/28/24 15:58	1
18O2 PFHxS	111		25 - 150	05/28/24 05:40	05/28/24 15:58	1
13C4 PFOS	104		25 - 150	05/28/24 05:40	05/28/24 15:58	1
13C8 FOSA	98		10 - 150	05/28/24 05:40	05/28/24 15:58	1
d3-NMeFOSAA	101		25 - 150	05/28/24 05:40	05/28/24 15:58	1
d5-NEtFOSAA	100		25 - 150	05/28/24 05:40	05/28/24 15:58	1
d-N-MeFOSA-M	88		10 - 150	05/28/24 05:40	05/28/24 15:58	1
d-N-EtFOSA-M	84		10 - 150	05/28/24 05:40	05/28/24 15:58	1
d7-N-MeFOSE-M	101		10 - 150	05/28/24 05:40	05/28/24 15:58	1
d9-N-EtFOSE-M	97		10 - 150	05/28/24 05:40	05/28/24 15:58	1
M2-4:2 FTS	117		25 - 150	05/28/24 05:40	05/28/24 15:58	1
M2-6:2 FTS	118		25 - 150	05/28/24 05:40	05/28/24 15:58	1
M2-8:2 FTS	131		25 - 150	05/28/24 05:40	05/28/24 15:58	1
13C3 HFPO-DA	87		25 - 150	05/28/24 05:40	05/28/24 15:58	1
13C2 10:2 FTS	146		25 - 150	05/28/24 05:40	05/28/24 15:58	1

Lab Sample ID: LLCS 320-767178/2-A
Matrix: Water
Analysis Batch: 767335

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 767178

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	8.00	8.32		ng/L		104	50 - 150
Perfluoropentanoic acid (PFPeA)	8.00	7.27		ng/L		91	50 - 150
Perfluorohexanoic acid (PFHxA)	8.00	8.16		ng/L		102	50 - 150
Perfluoroheptanoic acid (PFHpA)	8.00	7.95		ng/L		99	50 - 150
Perfluorooctanoic acid (PFOA)	8.00	7.62		ng/L		95	50 - 150
Perfluorononanoic acid (PFNA)	8.00	8.26		ng/L		103	50 - 150
Perfluorodecanoic acid (PFDA)	8.00	8.63		ng/L		108	50 - 150
Perfluoroundecanoic acid (PFUnA)	8.00	9.33		ng/L		117	50 - 150
Perfluorododecanoic acid (PFDoA)	8.00	8.26		ng/L		103	50 - 150
Perfluorotridecanoic acid (PFTrDA)	8.00	8.33		ng/L		104	50 - 150
Perfluorotetradecanoic acid (PFTeA)	8.00	7.35		ng/L		92	50 - 150
Perfluorobutanesulfonic acid (PFBS)	7.10	7.23		ng/L		102	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	7.52	7.94		ng/L		106	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	7.30	7.57		ng/L		104	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	7.63	9.04		ng/L		118	50 - 150
Perfluorooctanesulfonic acid (PFOS)	7.44	7.87		ng/L		106	50 - 150
Perfluorononanesulfonic acid (PFNS)	7.70	8.56		ng/L		111	50 - 150
Perfluorodecanesulfonic acid (PFDS)	7.71	7.68		ng/L		100	50 - 150
Perfluorododecanesulfonic acid (PFDoS)	7.76	8.05		ng/L		104	50 - 150

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LLCS 320-767178/2-A
Matrix: Water
Analysis Batch: 767335

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 767178

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorooctanesulfonamide (FOSA)	8.00	7.91		ng/L		99	50 - 150
NEtFOSA	8.00	8.40		ng/L		105	50 - 150
NMeFOSA	8.00	8.26		ng/L		103	50 - 150
NMeFOSAA	8.00	8.59		ng/L		107	50 - 150
NEtFOSAA	8.00	8.44		ng/L		105	50 - 150
NMeFOSE	8.00	8.55		ng/L		107	50 - 150
NEtFOSE	8.00	8.07		ng/L		101	50 - 150
4:2 FTS	7.50	6.76		ng/L		90	50 - 150
6:2 FTS	7.62	7.61		ng/L		100	50 - 150
8:2 FTS	7.68	7.22		ng/L		94	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	7.57	7.93		ng/L		105	50 - 150
HFPO-DA (GenX)	8.00	8.43		ng/L		105	50 - 150
9Cl-PF3ONS	7.47	7.82		ng/L		105	50 - 150
11Cl-PF3OUdS	7.55	7.66		ng/L		101	50 - 150

Isotope Dilution	*LLCS %Recovery*	*LLCS Qualifier*	*Limits*
13C4 PFBA	*110*		*25 - 150*
13C5 PFPeA	*100*		*25 - 150*
13C2 PFHxA	*98*		*25 - 150*
13C4 PFHpA	*103*		*25 - 150*
13C4 PFOA	*104*		*25 - 150*
13C5 PFNA	*95*		*25 - 150*
13C2 PFDA	*92*		*25 - 150*
13C2 PFUnA	*93*		*25 - 150*
13C2 PFDoA	*95*		*25 - 150*
13C2 PFTeDA	*96*		*25 - 150*
13C3 PFBS	*100*		*25 - 150*
18O2 PFHxS	*102*		*25 - 150*
13C4 PFOS	*94*		*25 - 150*
13C8 FOSA	*93*		*10 - 150*
d3-NMeFOSAA	*96*		*25 - 150*
d5-NEtFOSAA	*95*		*25 - 150*
d-N-MeFOSA-M	*82*		*10 - 150*
d-N-EtFOSA-M	*77*		*10 - 150*
d7-N-MeFOSE-M	*86*		*10 - 150*
d9-N-EtFOSE-M	*85*		*10 - 150*
M2-4:2 FTS	*128*		*25 - 150*
M2-6:2 FTS	*130*		*25 - 150*
M2-8:2 FTS	*127*		*25 - 150*
13C3 HFPO-DA	*87*		*25 - 150*
13C2 10:2 FTS	*120*		*25 - 150*

Lab Chronicle

Client: SCS Engineers
Job ID: 500-251180-1
Project/Site: Blackhawk Junction 25221094.00

Client Sample ID: MW-12
Lab Sample ID: 500-251180-1
Date Collected: 05/23/24 12:20
Matrix: Water
Date Received: 05/24/24 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3535			767178	SJ	EET SAC	05/28/24 05:40
Total/NA	Analysis	537 (modified)		1	767335	K1S	EET SAC	05/28/24 17:33

Client Sample ID: MW-13
Lab Sample ID: 500-251180-2
Date Collected: 05/23/24 15:20
Matrix: Water
Date Received: 05/24/24 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3535			767178	SJ	EET SAC	05/28/24 05:40
Total/NA	Analysis	537 (modified)		1	767335	K1S	EET SAC	05/28/24 18:05

Client Sample ID: MW-13 DUP
Lab Sample ID: 500-251180-3
Date Collected: 05/23/24 15:25
Matrix: Water
Date Received: 05/24/24 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3535			767178	SJ	EET SAC	05/28/24 05:40
Total/NA	Analysis	537 (modified)		1	767335	K1S	EET SAC	05/28/24 18:15

Client Sample ID: MW-14
Lab Sample ID: 500-251180-4
Date Collected: 05/23/24 14:10
Matrix: Water
Date Received: 05/24/24 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3535			767178	SJ	EET SAC	05/28/24 05:40
Total/NA	Analysis	537 (modified)		1	767335	K1S	EET SAC	05/28/24 18:26

Client Sample ID: Field Blank
Lab Sample ID: 500-251180-5
Date Collected: 05/23/24 11:05
Matrix: Water
Date Received: 05/24/24 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3535			767178	SJ	EET SAC	05/28/24 05:40
Total/NA	Analysis	537 (modified)		1	767335	K1S	EET SAC	05/28/24 18:36

Client Sample ID: Equipment Blank
Lab Sample ID: 500-251180-6
Date Collected: 05/23/24 11:10
Matrix: Water
Date Received: 05/24/24 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3535			767178	SJ	EET SAC	05/28/24 05:40
Total/NA	Analysis	537 (modified)		1	767335	K1S	EET SAC	05/28/24 18:47

Laboratory References:
EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Accreditation/Certification Summary

Client: SCS Engineers
Job ID: 500-251180-1
Project/Site: Blackhawk Junction 25221094.00

Laboratory: Eurofins Sacramento

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Wisconsin	State	998204680	08-31-25

Eurofins Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Phone. 916-373-5600 Fax: 916-372-1059

Chain of Custody Record

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Client Information	Sampler: Ryan Matzuk	Lab PM: Fredrick, Sandie	Carrier Tracking No(s):	COC No: 500-124472-49813 1
Client Contact: Mr Robert Langdon	Phone: 608 400 9297	E-Mail: Sandra Fredrick@et.eurofinsus.com	State of Origin:	Page: Page 1 of 1
Company: SCS Engineers	PWSID:	Analysis Requested		Job #:
Address: 2830 Dairy Dr	Due Date Requested			Preservation Codes: N - None
City: Madison	TAT Requested (days)			
State, Zip: WI, 53718	Compliance Project: Δ Yes Δ No			
Phone:	PO #: 25221094 00			
Email: rlangdon@scsengineers.com	WO #:			
Project Name: Blackhawk Junction 25221094 00	Project #: 50006561			
Site:	SSOW#:			Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	PFC_IDA_WI - PFAS, Standard List (33 analytes)	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N		
MW-12	5/23/24	220	G	Water			X		
MW-13		1520		Water			X		
MW-13 DUP		1525		Water			X		
MW-14		1410		Water			X		
Field Blank		1105		Water			X		
Equipment Blank		1110		Water			X		
				Water					
				Water					
				Water					

500-251180 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested I, II, III, IV, Other (specify)

Special Instructions/QC Requirements

Empty Kit Relinquished by:	Date:	Time	Method of Shipment:

	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	5/23/24 1330	SCS		5.24.24 940	EEN
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No 3390444 | Cooler Temperature(s) °C and Other Remarks: 0.6c

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: SCS Engineers

Job Number: 500-251180-1

Login Number: 251180
List Number: 2
Creator: Fisher, Jamyiah L

List Source: Eurofins Sacramento
List Creation: 05/24/24 04:31 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	2390444
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.9
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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Sacramento Sample Receiving Notes (SSRN)

500 251180 Field Sheet

Job _____

Tracking # 774140290 9895

SO / PO / FO / SAT / 2-Day / Ground / UPS / CDO / Courier

GSL / OnTrac / Goldstreak / USPS / Other _____

Use this form to record Sample Custody Seal, Cooler Custody Seal, Temperature & corrected Temperature & other observations.
File in the job folder with the COC

Therm. ID L-11 Corr. Factor (+ / -) _____ °C

Ice 1 Wet 1 Gel _____ Other _____

Cooler Custody Seal: 03904444

Cooler ID: _____

Temp Observed: 0.6 °C Corrected 0.6 °C

From Temp Blank ☐ Sample ☑

Opening/Processing The Shipment	Yes	No	NA
Cooler compromised/tampered with?	☐	☑	☐
Cooler Temperature is acceptable?	☑	☐	☐
Frozen samples show signs of thaw?	☐	☐	☑

Initials: _____ Date: 5.24.24

Unpacking/Labeling The Samples	Yes	No	NA
Containers are not broken or leaking?	☑	☐	☐
Samples compromised/tampered with?	☐	☑	☐
COC is complete w/o discrepancies	☑	☐	☐
Sample custody seal?	☐	☐	☑
Sample containers have legible labels?	☑	☐	☐
Sample date/times are provided?	☑	☐	☐
Appropriate containers are used?	☑	☐	☐
Sample bottles are completely filled?	☑	☐	☐
Sample preservatives verified?	☐	☐	☑
Is the Field Sampler's name on COC?	☐	☐	☑
Samples w/o discrepancies?	☑	☐	☐
Zero headspace?*	☐	☐	☑
Alkalinity has no headspace?	☐	☐	☑
Perchlorate has headspace? (Methods 314, 331, 6850)	☐	☐	☑
Multiphasic samples are not present?	☑	☐	☐

*Containers requiring zero headspace have no headspace, or bubble < 6 mm (1/4")

Initials _____ Date 5.24.24

Notes: _____

Trizma Lot #(s): _____

Ammonium Acetate Lot #(s) _____

Login Completion	Yes	No	NA
Receipt Temperature on COC?	☑	☐	☐
NCM Filed?	☐	☐	☑
Samples received within hold time?	☐	☐	☑
Log Release checked in TALS?	☐	☐	☑

Initials: _____ Date: 5.24.24

Isotope Dilution Summary

Client: SCS Engineers
Project/Site: Blackhawk Junction 25221094.00

Job ID: 500-251180-1

Method: 537 (modified) - Fluorinated Alkyl Substances

Matrix: Water **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFBA (25-150)	PFPeA (25-150)	PFHxA (25-150)	C4PFHA (25-150)	PFOA (25-150)	PFNA (25-150)	PFDA (25-150)	PFUnA (25-150)
500-251180-1	MW-12	104	101	93	96	95	97	86	78
500-251180-2	MW-13	101	99	99	97	102	90	85	89
500-251180-3	MW-13 DUP	112	104	92	108	105	92	89	95
500-251180-4	MW-14	114	103	107	115	108	92	95	96
500-251180-5	Field Blank	116	109	105	112	106	100	97	99
500-251180-6	Equipment Blank	104	100	99	103	102	98	91	91
LLCS 320-767178/2-A	Lab Control Sample	110	100	98	103	104	95	92	93
MB 320-767178/1-A	Method Blank	109	100	101	108	111	99	95	97

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFDoA (25-150)	PFTDA (25-150)	C3PFBS (25-150)	PFHxS (25-150)	PFOS (25-150)	PFOSA (10-150)	d3NMFOS (25-150)	d5NEFOS (25-150)
500-251180-1	MW-12	70	69	101	96	90	96	86	79
500-251180-2	MW-13	97	87	98	102	93	98	94	96
500-251180-3	MW-13 DUP	96	104	107	109	94	97	95	108
500-251180-4	MW-14	96	91	102	104	93	99	99	105
500-251180-5	Field Blank	99	91	110	108	105	103	110	103
500-251180-6	Equipment Blank	96	95	100	96	95	99	96	95
LLCS 320-767178/2-A	Lab Control Sample	95	96	100	102	94	93	96	95
MB 320-767178/1-A	Method Blank	96	94	105	111	104	98	101	100

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	dMeFOSA (10-150)	dEtFOSA (10-150)	NMFM (10-150)	NEFM (10-150)	M242FTS (25-150)	M262FTS (25-150)	M282FTS (25-150)	HFPODA (25-150)
500-251180-1	MW-12	70	64	70	69	110	101	118	84
500-251180-2	MW-13	90	81	89	92	136	115	111	86
500-251180-3	MW-13 DUP	93	91	91	96	123	121	116	103
500-251180-4	MW-14	85	81	89	94	124	112	129	98
500-251180-5	Field Blank	96	95	99	101	118	117	127	93
500-251180-6	Equipment Blank	92	88	95	90	130	121	124	87
LLCS 320-767178/2-A	Lab Control Sample	82	77	86	85	128	130	127	87
MB 320-767178/1-A	Method Blank	88	84	101	97	117	118	131	87

		Percent Isotope Dilution Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	M102FTS (25-150)
500-251180-1	MW-12	125
500-251180-2	MW-13	109
500-251180-3	MW-13 DUP	108
500-251180-4	MW-14	122
500-251180-5	Field Blank	143
500-251180-6	Equipment Blank	115
LLCS 320-767178/2-A	Lab Control Sample	120
MB 320-767178/1-A	Method Blank	146

Surrogate Legend

PFBA = 13C4 PFBA
PFPeA = 13C5 PFPeA
PFHxA = 13C2 PFHxA
C4PFHA = 13C4 PFHpA
PFOA = 13C4 PFOA
PFNA = 13C5 PFNA

Isotope Dilution Summary

Client: SCS Engineers
Job ID: 500-251180-1
Project/Site: Blackhawk Junction 25221094.00

PFDA = 13C2 PFDA
PFUnA = 13C2 PFUnA
PFDoA = 13C2 PFDoA
PFTDA = 13C2 PFTeDA
C3PFBS = 13C3 PFBS
PFHxS = 18O2 PFHxS
PFOS = 13C4 PFOS
PFOSA = 13C8 FOSA
d3NMFOS = d3-NMeFOSAA
d5NEFOS = d5-NEtFOSAA
dMeFOSA = d-N-MeFOSA-M
dEtFOSA = d-N-EtFOSA-M
NMFM = d7-N-MeFOSE-M
NEFM = d9-N-EtFOSE-M
M242FTS = M2-4:2 FTS
M262FTS = M2-6:2 FTS
M282FTS = M2-8:2 FTS
HFPODA = 13C3 HFPO-DA
M102FTS = 13C2 10:2 FTS