

TABLE 6
RACER Trust - Coldwater Road Landfill & Peregrine Facilities
Per-and Polyfluoroalkyl Substances Sampling Results - November/December 2018 PFAS Investigation

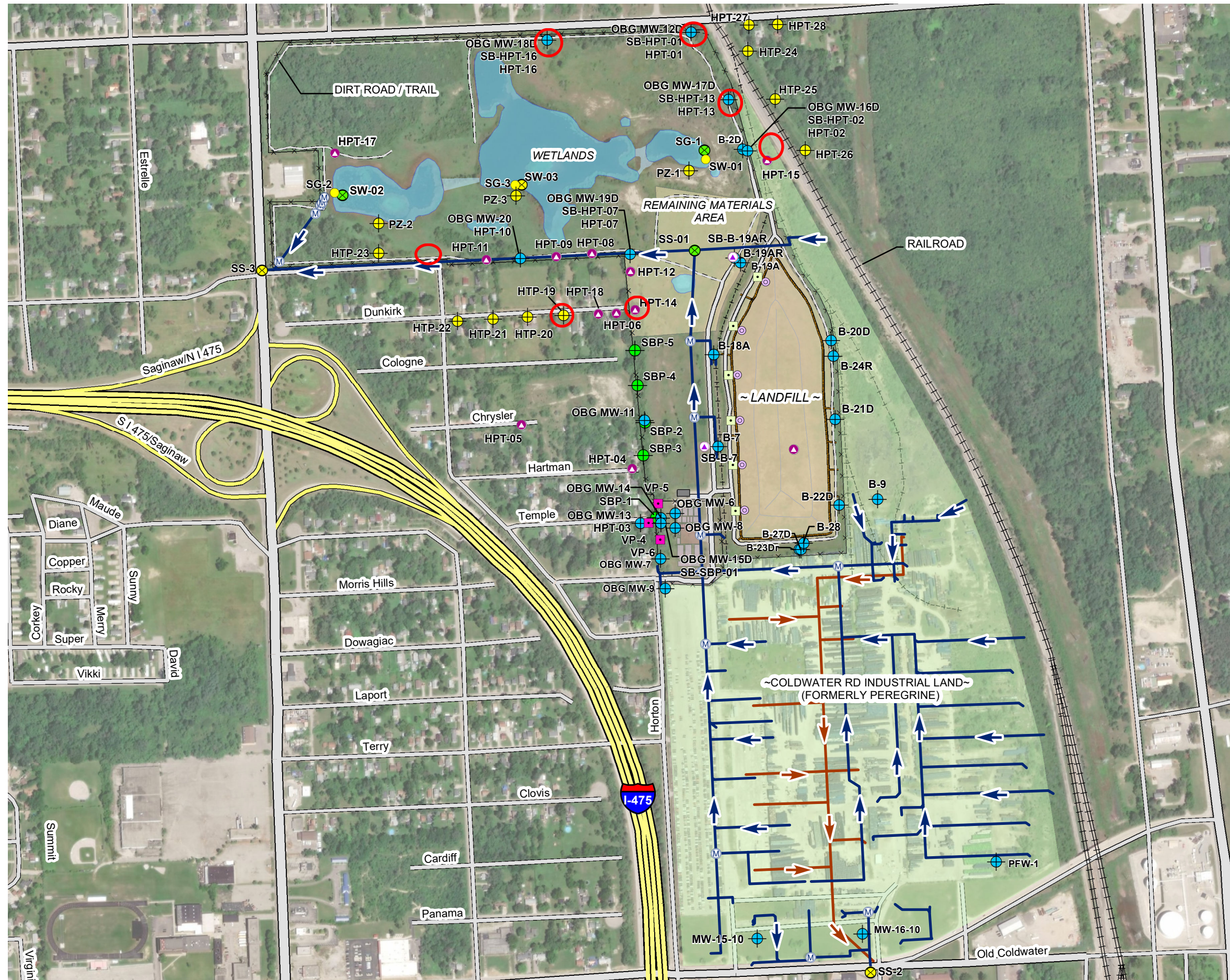
Coldwater Road Landfill - PFAS Investigation - Perched Aquifer

Perfluorinated Compound	Well/Sample ID: HPT-19-GW-18.5	HPT-20-GW-20	HPT-21-GW-26	HPT-22-GW-24	HPT-23-GW-28	HPT-23-GW-37.5	HPT-23-GW-37.5 DUP-02	HPT-27-GW-35	HPT-28-GW-40	HPT-29-GW-42	
Sample Date:	11/12/2018	11/13/2018	11/13/2018	11/13/2018	11/13/2018	11/13/2018	11/13/2018	11/15/2018	11/15/2018	11/15/2018	
Perfluorobutanoic Acid (PFBA)	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	
Perfluoropentanoic Acid (PFPeA)	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
4:2 Fluorotelomer Sulfonic Acid (4:2 FTSA)	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
Perfluorohexanoic Acid (PFHxA)	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
Perfluorobutane Sulfonic Acid (PFBS)	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
Perfluoroheptanoic Acid (PFHpA)	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
Perfluoropentane Sulfonic Acid (PFPeS)	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
6:2 Fluorotelomer Sulfonic Acid (6:2 FTSA)	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
Perfluorooctanoic Acid (PFOA)	10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
Perfluorohexane Sulfonic Acid (PFHxS)	10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
Perfluorohexane Sulfonic Acid - LN (PFHxS-LN)	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
Perfluorohexane Sulfonic Acid - BR (PFHxS-BR)	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
Perfluorononanoic Acid (PFNA)	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
8:2 Fluorotelomer Sulfonic Acid (8:2 FTSA)	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
Perfluoroheptane Sulfonic Acid (PFHpS)	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
Perfluorodecanoic Acid (PFDA)	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
N-methyl Perfluorooctanesulfonamidoacetic Acid (N-MeFOSAA)	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
N-Ethyl Perfluorooctane Sulfonamidoacetic Acid (EtFOSAA)	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
Perfluorooctane Sulfonic Acid (PFOS)	30	<10	<10	<10	<10	<10	<10	<10	<10	<10	
Perfluorooctane Sulfonic Acid (PFOS-LN)	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
Perfluorooctane Sulfonic Acid (PFOS-BR)	10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
Perfluoroundecanoic Acid (PFUnDA)	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
Perfluorononane Sulfonic Acid (PFNS)	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
Perfluorododecanoic Acid (PFDoDA)	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
Perfluorodecane Sulfonic Acid (PFDS)	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
Perfluorotridecanoic Acid (PFTTrDA)	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
Perfluorooctane Sulfonamide (FOSA)	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
Perfluorotetradecanoic Acid (PFTeDA)	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	





New sample locations have not been surveyed and are approximated.

**LEGEND**

- LEACHATE COLLECTION SUMP
- ACCESS PORT FOR LEAK DETECTION VAULT
- MONITORING WELL
- DEEP BORING LOCATION
- SHALLOW BORING LOCATION
- VAPOR PROBE LOCATION
- TEMPORARY MONITORING WELL LOCATION
- SURFACE/STORM WATER SAMPLE LOCATION
- STORM SEWER MANHOLE
- STORM SEWER LINE
- SANITARY SEWER LINE
- PROPOSED SURFACE/STORM WATER SAMPLING LOCATION
- PROPOSED SHALLOW BORING LOCATION

RACER TRUST
COLDWATER ROAD
LANDFILL FACILITY
FLINT, MICHIGAN

**PROPOSED PFAS
SAMPLING LOCATIONS**

OCTOBER 2018
15388/68545/002



O'BRIEN & GERE ENGINEERS, INC.



Analytical Laboratory Report

Report ID: S96712.01(01)
Generated on 11/21/2018

Report to

Attention: Clifford Yantz
O'Brien & Gere Engineers, Inc.
2260 E Saginaw St
East Lansing, MI 48823

Phone: 248-477-5701 FAX:
Email: Clifford.Yantz@obg.com

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
John Lavery (johnlavery@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S96712.01-S96712.04
Project: 68545 RACER Coldwater Rd - PFAS
Collected Date: 11/12/2018 - 11/13/2018
Submitted Date/Time: 11/13/2018 12:45
Sampled by: Kevin Schneider
P.O. #: PO

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Maya Murshak
Technical Director



Analytical Laboratory Report

General Report Notes

Analytical results relate only to the samples tested, in the condition received by the laboratory.

Methods may be modified for improved performance.

Results reported on a dry weight basis where applicable.

'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).

40 CFR Part 136 Table II Required Containers, Preservation Techniques and Holding Times for the Clean Water Act specify that samples for acrolein and acrylonitrile need to be preserved at a pH in the range of 4 to 5 or if not preserved, analyzed within 3 days of sampling.

QA/QC corresponding to this analytical report is a separate document with the same Merit ID reference and is available upon request.

Full accreditation certificates are available upon request. Starred (*) analytes are not NELAP accredited.

Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.

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Limits for drinking water samples, are listed as the MCL Limits (Maximum Contaminant Level Concentrations)

Report Narrative

Samples .01 and .04 contained silt. The samples had to be centrifuged and poured off prior to PFC analysis.



Analytical Laboratory Report

Laboratory Certifications

Authority	Certification ID
Michigan DEQ	#9956
DOD ELAP/ISO 17025	#69699
WBENC	#2005110032
Ohio VAP	#CL0002
Indiana DOH	#C-MI-07
New York NELAC	#11814
North Carolina DENR	#680
North Carolina DOH	#26702
Alaska CSLAP	#17-001

Qualifier Descriptions

Qualifier	Description
!	Result is outside of stated limit criteria
B	Compound also found in associated method blank
E	Concentration exceeds calibration range
F	Analysis run outside of holding time
G	Estimated result due to extraction run outside of holding time
H	Sample submitted and run outside of holding time
I	Matrix interference with internal standard
J	Estimated value less than reporting limit, but greater than MDL
L	Elevated reporting limit due to low sample amount
M	Result reported to MDL not RDL
O	Analysis performed by outside laboratory. See attached report.
R	Preliminary result
S	Surrogate recovery outside of control limits
T	No correction for total solids
X	Elevated reporting limit due to matrix interference
Y	Elevated reporting limit due to high target concentration
b	Value detected less than reporting limit, but greater than MDL
e	Reported value estimated due to interference
j	Analyte also found in associated method blank
p	Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.
x	Preserved from bulk sample

Glossary of Abbreviations

Abbreviation	Description
RL/RDL	Reporting Limit
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
SW	EPA SW 846 (Soil and Wastewater) Methods
E	EPA Methods
SM	Standard Methods
LN	Linear
BR	Branched

Method Summary

Method	Version
ASTMD7979-17M	ASTM Method D7979 - 17 Modified (Isotopic Dilution)

Parameter Summary

Parameter	Synonym	Cas #
PFBA	Perfluorobutanoic Acid	375-22-4
PFPeA	Perfluoropentanoic Acid	2706-90-3
4:2 FTSA	4:2 Fluorotelomer Sulfonic Acid	757124-72-4
PFHxA	Perfluorohexanoic Acid	307-24-4
PFBS	Perfluorobutane sulfonic Acid	375-73-5
PFHpA	Perfluoroheptanoic Acid	375-85-9
PFPeS	Perfluoropentane Sulfonic Acid	2706-91-4
6:2 FTSA	6:2 Fluorotelomer Sulfonic Acid	27619-97-2
PFOA	Perfluorooctanoic Acid	335-67-1
PFHxS	Perfluorohexane Sulfonic Acid	355-46-4
PFHxS-LN	Perfluorohexane Sulfonic Acid - LN	355-46-4-LN
PFHxS-BR	Perfluorohexane Sulfonic Acid - BR	355-46-4-BR
PFNA	Perfluorononanoic Acid	375-95-1
8:2 FTSA	8:2 Fluorotelomer Sulfonic Acid	39108-34-4
PFHpS	Perfluoroheptane Sulfonic Acid	375-92-8
PFDA	Perfluorodecanoic Acid	335-76-2
N-MeFOSAA	N-methyl perfluorooctanesulfonamidoacetic acid	2355-31-9
EtFOSAA	N-Ethyl Perfluorooctane Sulfonamidoacetic Acid	2991-50-6
PFOS	Perfluorooctane Sulfonic Acid	1763-23-1
PFOS-LN	Perfluorooctane Sulfonic Acid - LN	1763-23-1-LN
PFOS-BR	Perfluorooctane Sulfonic Acid - BR	1763-23-1-BR
PFUnDA	Perfluoroundecanoic Acid	2058-94-8
PFNS	Perfluorononane Sulfonic Acid	474511-07-4
PFDoDA	Perfluorododecanoic Acid	307-55-1
PFDS	Perfluorodecane Sulfonic Acid	335-77-3
PFTTrDA	Perfluorotridecanoic Acid	72629-94-8
FOSA	Perfluorooctane Sulfonamide	754-91-6
PFTeDA	Perfluorotetradecanoic Acid	376-06-7



Analytical Laboratory Report

Sample Summary (4 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S96712.01	HPT-19-GW-18.5	Groundwater	11/12/18 11:30
S96712.02	HPT-20-GW-20	Groundwater	11/13/18 09:05
S96712.03	FB-03	Water	11/13/18 09:10
S96712.04	HPT-21-GW-26	Groundwater	11/13/18 10:25



Analytical Laboratory Report

Lab Sample ID: S96712.01

Sample Tag: HPT-19-GW-18.5

Collected Date/Time: 11/12/2018 11:30

Matrix: Groundwater

COC Reference: 119902

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	5.3	IR

Organics

24 PFAs, Method: ASTMD7979-17M, Run Date: 11/20/18 10:40, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PFBA*	Not detected	20		ng/L	1.9608	375-22-4	
PFPeA*	Not detected	10		ng/L	1.9608	2706-90-3	
4:2 FTSA*	Not detected	10		ng/L	1.9608	757124-72-4	
PFHxA*	Not detected	10		ng/L	1.9608	307-24-4	
PFBS*	Not detected	10		ng/L	1.9608	375-73-5	
PFHpA*	Not detected	10		ng/L	1.9608	375-85-9	
PFPeS*	Not detected	10		ng/L	1.9608	2706-91-4	
6:2 FTSA*	Not detected	10		ng/L	1.9608	27619-97-2	
PFOA*	10	10		ng/L	1.9608	335-67-1	
PFHxS*	10	10		ng/L	1.9608	355-46-4	
PFHxS-LN*	Not detected	10		ng/L	1.9608	355-46-4-LN	
PFHxS-BR*	Not detected	10		ng/L	1.9608	355-46-4-BR	
PFNA*	Not detected	10		ng/L	1.9608	375-95-1	
8:2 FTSA*	Not detected	10		ng/L	1.9608	39108-34-4	
PFHpS*	Not detected	10		ng/L	1.9608	375-92-8	
PFDA*	Not detected	10		ng/L	1.9608	335-76-2	
N-MeFOSAA*	Not detected	10		ng/L	1.9608	2355-31-9	
EtFOSAA*	Not detected	10		ng/L	1.9608	2991-50-6	
PFOS*	30	10		ng/L	1.9608	1763-23-1	
PFOS-LN*	Not detected	10		ng/L	1.9608	1763-23-1-LN	
PFOS-BR*	10	10		ng/L	1.9608	1763-23-1-BR	
PFUnDA*	Not detected	10		ng/L	1.9608	2058-94-8	
PFNS*	Not detected	10		ng/L	1.9608	474511-07-4	
PFDODA*	Not detected	10		ng/L	1.9608	307-55-1	
PFDS*	Not detected	10		ng/L	1.9608	335-77-3	
PFTTrDA*	Not detected	10		ng/L	1.9608	72629-94-8	
FOSA*	Not detected	10		ng/L	1.9608	754-91-6	
PFTeDA*	Not detected	10		ng/L	1.9608	376-06-7	



Analytical Laboratory Report

Lab Sample ID: S96712.02

Sample Tag: HPT-20-GW-20

Collected Date/Time: 11/13/2018 09:05

Matrix: Groundwater

COC Reference: 119902

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	5.3	IR
1	250ml Plastic	None	Yes	5.3	IR

Organics

24 PFAs, Method: ASTMD7979-17M, Run Date: 11/20/18 11:00, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PFBA*	Not detected	20		ng/L	1.8395	375-22-4	
PFPeA*	Not detected	10		ng/L	1.8395	2706-90-3	
4:2 FTSA*	Not detected	10		ng/L	1.8395	757124-72-4	
PFHxA*	Not detected	10		ng/L	1.8395	307-24-4	
PFBS*	Not detected	10		ng/L	1.8395	375-73-5	
PFHpA*	Not detected	10		ng/L	1.8395	375-85-9	
PFPeS*	Not detected	10		ng/L	1.8395	2706-91-4	
6:2 FTSA*	Not detected	10		ng/L	1.8395	27619-97-2	
PFOA*	Not detected	10		ng/L	1.8395	335-67-1	
PFHxS*	Not detected	10		ng/L	1.8395	355-46-4	
PFHxS-LN*	Not detected	10		ng/L	1.8395	355-46-4-LN	
PFHxS-BR*	Not detected	10		ng/L	1.8395	355-46-4-BR	
PFNA*	Not detected	10		ng/L	1.8395	375-95-1	
8:2 FTSA*	Not detected	10		ng/L	1.8395	39108-34-4	
PFHpS*	Not detected	10		ng/L	1.8395	375-92-8	
PFDA*	Not detected	10		ng/L	1.8395	335-76-2	
N-MeFOSAA*	Not detected	10		ng/L	1.8395	2355-31-9	
EtFOSAA*	Not detected	10		ng/L	1.8395	2991-50-6	
PFOS*	Not detected	10		ng/L	1.8395	1763-23-1	
PFOS-LN*	Not detected	10		ng/L	1.8395	1763-23-1-LN	
PFOS-BR*	Not detected	10		ng/L	1.8395	1763-23-1-BR	
PFUnDA*	Not detected	10		ng/L	1.8395	2058-94-8	
PFNS*	Not detected	10		ng/L	1.8395	474511-07-4	
PFDODA*	Not detected	10		ng/L	1.8395	307-55-1	
PFDS*	Not detected	10		ng/L	1.8395	335-77-3	
PFTTrDA*	Not detected	10		ng/L	1.8395	72629-94-8	
FOSA*	Not detected	10		ng/L	1.8395	754-91-6	
PFTeDA*	Not detected	10		ng/L	1.8395	376-06-7	



Analytical Laboratory Report

Lab Sample ID: S96712.03

Sample Tag: FB-03

Collected Date/Time: 11/13/2018 09:10

Matrix: Water

COC Reference: 119902

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	5.3	IR

Organics

24 PFAs, Method: ASTMD7979-17M, Run Date: 11/20/18 11:19, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PFBA*	Not detected	20		ng/L	1.9608	375-22-4	
PFPeA*	Not detected	10		ng/L	1.9608	2706-90-3	
4:2 FTSA*	Not detected	10		ng/L	1.9608	757124-72-4	
PFHxA*	Not detected	10		ng/L	1.9608	307-24-4	
PFBS*	Not detected	10		ng/L	1.9608	375-73-5	
PFHpA*	Not detected	10		ng/L	1.9608	375-85-9	
PFPeS*	Not detected	10		ng/L	1.9608	2706-91-4	
6:2 FTSA*	Not detected	10		ng/L	1.9608	27619-97-2	
PFOA*	Not detected	10		ng/L	1.9608	335-67-1	
PFHxS*	Not detected	10		ng/L	1.9608	355-46-4	
PFHxS-LN*	Not detected	10		ng/L	1.9608	355-46-4-LN	
PFHxS-BR*	Not detected	10		ng/L	1.9608	355-46-4-BR	
PFNA*	Not detected	10		ng/L	1.9608	375-95-1	
8:2 FTSA*	Not detected	10		ng/L	1.9608	39108-34-4	
PFHpS*	Not detected	10		ng/L	1.9608	375-92-8	
PFDA*	Not detected	10		ng/L	1.9608	335-76-2	
N-MeFOSAA*	Not detected	10		ng/L	1.9608	2355-31-9	
EtFOSAA*	Not detected	10		ng/L	1.9608	2991-50-6	
PFOS*	Not detected	10		ng/L	1.9608	1763-23-1	
PFOS-LN*	Not detected	10		ng/L	1.9608	1763-23-1-LN	
PFOS-BR*	Not detected	10		ng/L	1.9608	1763-23-1-BR	
PFUnDA*	Not detected	10		ng/L	1.9608	2058-94-8	
PFNS*	Not detected	10		ng/L	1.9608	474511-07-4	
PFDODA*	Not detected	10		ng/L	1.9608	307-55-1	
PFDS*	Not detected	10		ng/L	1.9608	335-77-3	
PFTTrDA*	Not detected	10		ng/L	1.9608	72629-94-8	
FOSA*	Not detected	10		ng/L	1.9608	754-91-6	
PFTeDA*	Not detected	10		ng/L	1.9608	376-06-7	



Analytical Laboratory Report

Lab Sample ID: S96712.04

Sample Tag: HPT-21-GW-26

Collected Date/Time: 11/13/2018 10:25

Matrix: Groundwater

COC Reference: 119902

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	5.3	IR
1	250ml Plastic	None	Yes	5.3	IR

Organics

24 PFAs, Method: ASTMD7979-17M, Run Date: 11/20/18 11:39, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PFBA*	Not detected	20		ng/L	1.992	375-22-4	
PFPeA*	Not detected	10		ng/L	1.992	2706-90-3	
4:2 FTSA*	Not detected	10		ng/L	1.992	757124-72-4	
PFHxA*	Not detected	10		ng/L	1.992	307-24-4	
PFBS*	Not detected	10		ng/L	1.992	375-73-5	
PFHpA*	Not detected	10		ng/L	1.992	375-85-9	
PFPeS*	Not detected	10		ng/L	1.992	2706-91-4	
6:2 FTSA*	Not detected	10		ng/L	1.992	27619-97-2	
PFOA*	Not detected	10		ng/L	1.992	335-67-1	
PFHxS*	Not detected	10		ng/L	1.992	355-46-4	
PFHxS-LN*	Not detected	10		ng/L	1.992	355-46-4-LN	
PFHxS-BR*	Not detected	10		ng/L	1.992	355-46-4-BR	
PFNA*	Not detected	10		ng/L	1.992	375-95-1	
8:2 FTSA*	Not detected	10		ng/L	1.992	39108-34-4	
PFHpS*	Not detected	10		ng/L	1.992	375-92-8	
PFDA*	Not detected	10		ng/L	1.992	335-76-2	
N-MeFOSAA*	Not detected	10		ng/L	1.992	2355-31-9	
EtFOSAA*	Not detected	10		ng/L	1.992	2991-50-6	
PFOS*	Not detected	10		ng/L	1.992	1763-23-1	
PFOS-LN*	Not detected	10		ng/L	1.992	1763-23-1-LN	
PFOS-BR*	Not detected	10		ng/L	1.992	1763-23-1-BR	
PFUnDA*	Not detected	10		ng/L	1.992	2058-94-8	
PFNS*	Not detected	10		ng/L	1.992	474511-07-4	
PFDODA*	Not detected	10		ng/L	1.992	307-55-1	
PFDS*	Not detected	10		ng/L	1.992	335-77-3	
PFTTrDA*	Not detected	10		ng/L	1.992	72629-94-8	
FOSA*	Not detected	10		ng/L	1.992	754-91-6	
PFTeDA*	Not detected	10		ng/L	1.992	376-06-7	

Merit Laboratories Login Checklist

Lab Set ID:S96712

Client:OBG02 (O'Brien & Gere Engineers, Inc.)

Project: 68545 RACER Coldwater Rd - PFAS

Submitted: 11/13/2018 12:45 Login User: SRS

Attention: Clifford Yantz

Address: O'Brien & Gere Engineers, Inc.
2260 E Saginaw St
East Lansing, MI 48823

Phone: 248-477-5701 FAX:

Email: Clifford.Yantz@obg.com

Selection	Description	Note
Sample Receiving		
01. ☒ Yes ☐ No ☐ N/A	Samples are received at 4C +/- 2C	Thermometer # IR 5.3
02. ☒ Yes ☐ No ☐ N/A	Received on ice/ cooling process begun	
03. ☐ Yes ☒ No ☐ N/A	Samples shipped	
04. ☐ Yes ☒ No ☐ N/A	Samples left in 24 hr. drop box	
05. ☐ Yes ☐ No ☒ N/A	Are there custody seals/tape or is the drop box locked	
Chain of Custody		
06. ☒ Yes ☐ No ☐ N/A	COC adequately filled out	
07. ☒ Yes ☐ No ☐ N/A	COC signed and relinquished to the lab	
08. ☒ Yes ☐ No ☐ N/A	Sample tag on bottles match COC	
09. ☐ Yes ☒ No ☐ N/A	Subcontracting needed? Subcontracted to:	
Preservation		
10. ☐ Yes ☐ No ☒ N/A	Do sample have correct chemical preservation	
11. ☐ Yes ☐ No ☒ N/A	Completed pH checks on preserved samples? (no VOAs)	
12. ☐ Yes ☒ No ☐ N/A	Did any samples need to be preserved in the lab?	
Bottle Conditions		
13. ☒ Yes ☐ No ☐ N/A	All bottles intact	
14. ☒ Yes ☐ No ☐ N/A	Appropriate analytical bottles are used	
15. ☒ Yes ☐ No ☐ N/A	Merit bottles used	
16. ☒ Yes ☐ No ☐ N/A	Sufficient sample volume received	
17. ☐ Yes ☒ No ☐ N/A	Samples require laboratory filtration	
18. ☒ Yes ☐ No ☐ N/A	Samples submitted within holding time	
19. ☐ Yes ☐ No ☒ N/A	Do water VOC or TOX bottles contain headspace	

Corrective action for all exceptions is to call the client and to notify the project manager.

Client Review By: _____ Date: _____



2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # 1 OF 1

119902

REPORT TO

CHAIN OF CUSTODY RECORD

INVOICE TO

CONTACT NAME <i>Clifford Vantz</i>	
COMPANY <i>O'Brien & Gere</i>	
ADDRESS <i>2260 East Saginaw</i>	
CITY <i>East Lansing</i>	STATE <i>MI</i> ZIP CODE <i>48823</i>
PHONE NO. <i>313-333-0211</i>	FAX NO.
E-MAIL ADDRESS <i>clifford.vantz@obg.com</i>	QUOTE NO.

CONTACT NAME <i>X SAME</i>	
COMPANY	
ADDRESS	
CITY	STATE ZIP CODE
PHONE NO.	E-MAIL ADDRESS

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

PROJECT NO./NAME <i>68545 RACER COLDWATER RD - PFAS</i>	SAMPLER(S) - PLEASE PRINT/SIGN NAME <i>Kwin Schneider</i>
TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER	
DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☒ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER	

MATRIX CODE:	GW=GROUNDWATER	WW=WASTEWATER	S=SOIL	L=LIQUID	SD=SOLID
	SL=SLUDGE	DW=DRINKING WATER	O=OIL	WP=WIPE	A=AIR

Containers & Preservatives

Certifications

☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations

☐ Detroit ☐ New York

☐ Other

Special Instructions

MERIT LAB NO. FOR LAB USE ONLY	YEAR DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	NONE	HCl	HNO ₃	H ₂ SO ₄	NaOH	MeOH	OTHER
<i>96712.01</i>	<i>11/13/18</i>	<i>1130</i>	<i>HPT-19-GW-18.5</i>	<i>GW</i>	<i>3</i>	<i>3</i>						
<i>.02</i>	<i>11/13/18</i>	<i>9105</i>	<i>HPT-20-GW-20</i>	<i>GW</i>	<i>3</i>	<i>3</i>						
<i>.03</i>	<i>11/13/18</i>	<i>9110</i>	<i>FB-03</i>	<i>QC</i>	<i>1</i>	<i>1</i>						
<i>.04</i>	<i>11/13/18</i>	<i>1025</i>	<i>HPT-21-GW-26</i>	<i>GW</i>	<i>3</i>	<i>3</i>						
<i>XBS</i>												

RELINQUISHED BY: SIGNATURE/ORGANIZATION <i>XBS</i>	DATE <i>11/13/18</i>	TIME <i>1133</i>
RECEIVED BY: SIGNATURE/ORGANIZATION <i>John Miller</i>	DATE <i>11/13/18</i>	TIME <i>11:33</i>
RELINQUISHED BY: SIGNATURE/ORGANIZATION <i>John Miller</i>	DATE <i>11/13/18</i>	TIME <i>10:45</i>
RECEIVED BY: SIGNATURE/ORGANIZATION <i>John Miller</i>	DATE <i>11/13/18</i>	TIME <i>1045</i>

RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE	TIME
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS

NOTES: TEMP. ON ARRIVAL

5.3

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE



Analytical Laboratory Report

Report ID: S96773.01(01)
Generated on 11/21/2018

Report to

Attention: Clifford Yantz
O'Brien & Gere Engineers, Inc.
2260 E Saginaw St
East Lansing, MI 48823

Phone: 248-477-5701 FAX:
Email: Clifford.Yantz@obg.com

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
John Lavery (johnlavery@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S96773.01-S96773.04
Project: 68545 RACER Coldwater Rd LF - PFAS
Collected Date: 11/13/2018
Submitted Date/Time: 11/14/2018 14:15
Sampled by: Kevin Schneider
P.O. #: PO

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Maya Murshak
Technical Director



Analytical Laboratory Report

General Report Notes

Analytical results relate only to the samples tested, in the condition received by the laboratory.

Methods may be modified for improved performance.

Results reported on a dry weight basis where applicable.

'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).

40 CFR Part 136 Table II Required Containers, Preservation Techniques and Holding Times for the Clean Water Act specify that samples for acrolein and acrylonitrile need to be preserved at a pH in the range of 4 to 5 or if not preserved, analyzed within 3 days of sampling.

QA/QC corresponding to this analytical report is a separate document with the same Merit ID reference and is available upon request.

Full accreditation certificates are available upon request. Starred (*) analytes are not NELAP accredited.

Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.

Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc.

Limits for drinking water samples, are listed as the MCL Limits (Maximum Contaminant Level Concentrations)

Report Narrative

There is no additional narrative for this analytical report



Analytical Laboratory Report

Laboratory Certifications

Authority	Certification ID
Michigan DEQ	#9956
DOD ELAP/ISO 17025	#69699
WBENC	#2005110032
Ohio VAP	#CL0002
Indiana DOH	#C-MI-07
New York NELAC	#11814
North Carolina DENR	#680
North Carolina DOH	#26702
Alaska CSLAP	#17-001

Qualifier Descriptions

Qualifier	Description
!	Result is outside of stated limit criteria
B	Compound also found in associated method blank
E	Concentration exceeds calibration range
F	Analysis run outside of holding time
G	Estimated result due to extraction run outside of holding time
H	Sample submitted and run outside of holding time
I	Matrix interference with internal standard
J	Estimated value less than reporting limit, but greater than MDL
L	Elevated reporting limit due to low sample amount
M	Result reported to MDL not RDL
O	Analysis performed by outside laboratory. See attached report.
R	Preliminary result
S	Surrogate recovery outside of control limits
T	No correction for total solids
X	Elevated reporting limit due to matrix interference
Y	Elevated reporting limit due to high target concentration
b	Value detected less than reporting limit, but greater than MDL
e	Reported value estimated due to interference
j	Analyte also found in associated method blank
p	Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.
x	Preserved from bulk sample

Glossary of Abbreviations

Abbreviation	Description
RL/RDL	Reporting Limit
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
SW	EPA SW 846 (Soil and Wastewater) Methods
E	EPA Methods
SM	Standard Methods
LN	Linear
BR	Branched

Method Summary

Method	Version
ASTMD7979-17M	ASTM Method D7979 - 17 Modified (Isotopic Dilution)

Parameter Summary

Parameter	Synonym	Cas #
PFBA	Perfluorobutanoic Acid	375-22-4
PFPeA	Perfluoropentanoic Acid	2706-90-3
4:2 FTSA	4:2 Fluorotelomer Sulfonic Acid	757124-72-4
PFHxA	Perfluorohexanoic Acid	307-24-4
PFBS	Perfluorobutane sulfonic Acid	375-73-5
PFHpA	Perfluoroheptanoic Acid	375-85-9
PFPeS	Perfluoropentane Sulfonic Acid	2706-91-4
6:2 FTSA	6:2 Fluorotelomer Sulfonic Acid	27619-97-2
PFOA	Perfluorooctanoic Acid	335-67-1
PFHxS	Perfluorohexane Sulfonic Acid	355-46-4
PFHxS-LN	Perfluorohexane Sulfonic Acid - LN	355-46-4-LN
PFHxS-BR	Perfluorohexane Sulfonic Acid - BR	355-46-4-BR
PFNA	Perfluorononanoic Acid	375-95-1
8:2 FTSA	8:2 Fluorotelomer Sulfonic Acid	39108-34-4
PFHpS	Perfluoroheptane Sulfonic Acid	375-92-8
PFDA	Perfluorodecanoic Acid	335-76-2
N-MeFOSAA	N-methyl perfluorooctanesulfonamidoacetic acid	2355-31-9
EtFOSAA	N-Ethyl Perfluorooctane Sulfonamidoacetic Acid	2991-50-6
PFOS	Perfluorooctane Sulfonic Acid	1763-23-1
PFOS-LN	Perfluorooctane Sulfonic Acid - LN	1763-23-1-LN
PFOS-BR	Perfluorooctane Sulfonic Acid - BR	1763-23-1-BR
PFUnDA	Perfluoroundecanoic Acid	2058-94-8
PFNS	Perfluorononane Sulfonic Acid	474511-07-4
PFDoDA	Perfluorododecanoic Acid	307-55-1
PFDS	Perfluorodecane Sulfonic Acid	335-77-3
PFTTrDA	Perfluorotridecanoic Acid	72629-94-8
FOSA	Perfluorooctane Sulfonamide	754-91-6
PFTeDA	Perfluorotetradecanoic Acid	376-06-7



Analytical Laboratory Report

Sample Summary (4 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S96773.01	HPT-22-GW-24	Groundwater	11/13/18 12:15
S96773.02	HPT-23-GW-28	Groundwater	11/13/18 14:30
S96773.03	HPT-23-GW-37.5	Groundwater	11/13/18 16:20
S96773.04	DUP-02	Groundwater	11/13/18 00:01



Analytical Laboratory Report

Lab Sample ID: S96773.01

Sample Tag: HPT-22-GW-24

Collected Date/Time: 11/13/2018 12:15

Matrix: Groundwater

COC Reference: 81848

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	5.7	IR
1	250ml Plastic	None	Yes	5.7	IR

Organics

24 PFAs, Method: ASTMD7979-17M, Run Date: 11/20/18 13:55, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PFBA*	Not detected	20		ng/L	1.9538	375-22-4	
PFPeA*	Not detected	10		ng/L	1.9538	2706-90-3	
4:2 FTSA*	Not detected	10		ng/L	1.9538	757124-72-4	
PFHxA*	Not detected	10		ng/L	1.9538	307-24-4	
PFBS*	Not detected	10		ng/L	1.9538	375-73-5	
PFHpA*	Not detected	10		ng/L	1.9538	375-85-9	
PFPeS*	Not detected	10		ng/L	1.9538	2706-91-4	
6:2 FTSA*	Not detected	10		ng/L	1.9538	27619-97-2	
PFOA*	Not detected	10		ng/L	1.9538	335-67-1	
PFHxS*	Not detected	10		ng/L	1.9538	355-46-4	
PFHxS-LN*	Not detected	10		ng/L	1.9538	355-46-4-LN	
PFHxS-BR*	Not detected	10		ng/L	1.9538	355-46-4-BR	
PFNA*	Not detected	10		ng/L	1.9538	375-95-1	
8:2 FTSA*	Not detected	10		ng/L	1.9538	39108-34-4	
PFHpS*	Not detected	10		ng/L	1.9538	375-92-8	
PFDA*	Not detected	10		ng/L	1.9538	335-76-2	
N-MeFOSAA*	Not detected	10		ng/L	1.9538	2355-31-9	
EtFOSAA*	Not detected	10		ng/L	1.9538	2991-50-6	
PFOS*	Not detected	10		ng/L	1.9538	1763-23-1	
PFOS-LN*	Not detected	10		ng/L	1.9538	1763-23-1-LN	
PFOS-BR*	Not detected	10		ng/L	1.9538	1763-23-1-BR	
PFUnDA*	Not detected	10		ng/L	1.9538	2058-94-8	
PFNS*	Not detected	10		ng/L	1.9538	474511-07-4	
PFDODA*	Not detected	10		ng/L	1.9538	307-55-1	
PFDS*	Not detected	10		ng/L	1.9538	335-77-3	
PFTTrDA*	Not detected	10		ng/L	1.9538	72629-94-8	
FOSA*	Not detected	10		ng/L	1.9538	754-91-6	
PFTeDA*	Not detected	10		ng/L	1.9538	376-06-7	



Analytical Laboratory Report

Lab Sample ID: S96773.02

Sample Tag: HPT-23-GW-28

Collected Date/Time: 11/13/2018 14:30

Matrix: Groundwater

COC Reference: 81848

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	5.7	IR
1	250ml Plastic	None	Yes	5.7	IR

Organics

24 PFAs, Method: ASTMD7979-17M, Run Date: 11/20/18 14:15, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PFBA*	Not detected	20		ng/L	1.8587	375-22-4	
PFPeA*	Not detected	10		ng/L	1.8587	2706-90-3	
4:2 FTSA*	Not detected	10		ng/L	1.8587	757124-72-4	
PFHxA*	Not detected	10		ng/L	1.8587	307-24-4	
PFBS*	Not detected	10		ng/L	1.8587	375-73-5	
PFHpA*	Not detected	10		ng/L	1.8587	375-85-9	
PFPeS*	Not detected	10		ng/L	1.8587	2706-91-4	
6:2 FTSA*	Not detected	10		ng/L	1.8587	27619-97-2	
PFOA*	Not detected	10		ng/L	1.8587	335-67-1	
PFHxS*	Not detected	10		ng/L	1.8587	355-46-4	
PFHxS-LN*	Not detected	10		ng/L	1.8587	355-46-4-LN	
PFHxS-BR*	Not detected	10		ng/L	1.8587	355-46-4-BR	
PFNA*	Not detected	10		ng/L	1.8587	375-95-1	
8:2 FTSA*	Not detected	10		ng/L	1.8587	39108-34-4	
PFHpS*	Not detected	10		ng/L	1.8587	375-92-8	
PFDA*	Not detected	10		ng/L	1.8587	335-76-2	
N-MeFOSAA*	Not detected	10		ng/L	1.8587	2355-31-9	
EtFOSAA*	Not detected	10		ng/L	1.8587	2991-50-6	
PFOS*	Not detected	10		ng/L	1.8587	1763-23-1	
PFOS-LN*	Not detected	10		ng/L	1.8587	1763-23-1-LN	
PFOS-BR*	Not detected	10		ng/L	1.8587	1763-23-1-BR	
PFUnDA*	Not detected	10		ng/L	1.8587	2058-94-8	
PFNS*	Not detected	10		ng/L	1.8587	474511-07-4	
PFDODA*	Not detected	10		ng/L	1.8587	307-55-1	
PFDS*	Not detected	10		ng/L	1.8587	335-77-3	
PFTTrDA*	Not detected	10		ng/L	1.8587	72629-94-8	
FOSA*	Not detected	10		ng/L	1.8587	754-91-6	
PFTeDA*	Not detected	10		ng/L	1.8587	376-06-7	



Analytical Laboratory Report

Lab Sample ID: S96773.03

Sample Tag: HPT-23-GW-37.5

Collected Date/Time: 11/13/2018 16:20

Matrix: Groundwater

COC Reference: 81848

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	5.7	IR
1	250ml Plastic	None	Yes	5.7	IR

Organics

24 PFAs, Method: ASTMD7979-17M, Run Date: 11/20/18 14:34, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PFBA*	Not detected	20		ng/L	1.8382	375-22-4	
PFPeA*	Not detected	10		ng/L	1.8382	2706-90-3	
4:2 FTSA*	Not detected	10		ng/L	1.8382	757124-72-4	
PFHxA*	Not detected	10		ng/L	1.8382	307-24-4	
PFBS*	Not detected	10		ng/L	1.8382	375-73-5	
PFHpA*	Not detected	10		ng/L	1.8382	375-85-9	
PFPeS*	Not detected	10		ng/L	1.8382	2706-91-4	
6:2 FTSA*	Not detected	10		ng/L	1.8382	27619-97-2	
PFOA*	Not detected	10		ng/L	1.8382	335-67-1	
PFHxS*	Not detected	10		ng/L	1.8382	355-46-4	
PFHxS-LN*	Not detected	10		ng/L	1.8382	355-46-4-LN	
PFHxS-BR*	Not detected	10		ng/L	1.8382	355-46-4-BR	
PFNA*	Not detected	10		ng/L	1.8382	375-95-1	
8:2 FTSA*	Not detected	10		ng/L	1.8382	39108-34-4	
PFHpS*	Not detected	10		ng/L	1.8382	375-92-8	
PFDA*	Not detected	10		ng/L	1.8382	335-76-2	
N-MeFOSAA*	Not detected	10		ng/L	1.8382	2355-31-9	
EtFOSAA*	Not detected	10		ng/L	1.8382	2991-50-6	
PFOS*	Not detected	10		ng/L	1.8382	1763-23-1	
PFOS-LN*	Not detected	10		ng/L	1.8382	1763-23-1-LN	
PFOS-BR*	Not detected	10		ng/L	1.8382	1763-23-1-BR	
PFUnDA*	Not detected	10		ng/L	1.8382	2058-94-8	
PFNS*	Not detected	10		ng/L	1.8382	474511-07-4	
PFDODA*	Not detected	10		ng/L	1.8382	307-55-1	
PFDS*	Not detected	10		ng/L	1.8382	335-77-3	
PFTTrDA*	Not detected	10		ng/L	1.8382	72629-94-8	
FOSA*	Not detected	10		ng/L	1.8382	754-91-6	
PFTeDA*	Not detected	10		ng/L	1.8382	376-06-7	



Analytical Laboratory Report

Lab Sample ID: S96773.04

Sample Tag: DUP-02

Collected Date/Time: 11/13/2018 00:01

Matrix: Groundwater

COC Reference: 81848

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	5.7	IR
1	250ml Plastic	None	Yes	5.7	IR

Organics

24 PFAs, Method: ASTMD7979-17M, Run Date: 11/20/18 14:54, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PFBA*	Not detected	20		ng/L	1.8553	375-22-4	
PFPeA*	Not detected	10		ng/L	1.8553	2706-90-3	
4:2 FTSA*	Not detected	10		ng/L	1.8553	757124-72-4	
PFHxA*	Not detected	10		ng/L	1.8553	307-24-4	
PFBS*	Not detected	10		ng/L	1.8553	375-73-5	
PFHpA*	Not detected	10		ng/L	1.8553	375-85-9	
PFPeS*	Not detected	10		ng/L	1.8553	2706-91-4	
6:2 FTSA*	Not detected	10		ng/L	1.8553	27619-97-2	
PFOA*	Not detected	10		ng/L	1.8553	335-67-1	
PFHxS*	Not detected	10		ng/L	1.8553	355-46-4	
PFHxS-LN*	Not detected	10		ng/L	1.8553	355-46-4-LN	
PFHxS-BR*	Not detected	10		ng/L	1.8553	355-46-4-BR	
PFNA*	Not detected	10		ng/L	1.8553	375-95-1	
8:2 FTSA*	Not detected	10		ng/L	1.8553	39108-34-4	
PFHpS*	Not detected	10		ng/L	1.8553	375-92-8	
PFDA*	Not detected	10		ng/L	1.8553	335-76-2	
N-MeFOSAA*	Not detected	10		ng/L	1.8553	2355-31-9	
EtFOSAA*	Not detected	10		ng/L	1.8553	2991-50-6	
PFOS*	Not detected	10		ng/L	1.8553	1763-23-1	
PFOS-LN*	Not detected	10		ng/L	1.8553	1763-23-1-LN	
PFOS-BR*	Not detected	10		ng/L	1.8553	1763-23-1-BR	
PFUnDA*	Not detected	10		ng/L	1.8553	2058-94-8	
PFNS*	Not detected	10		ng/L	1.8553	474511-07-4	
PFDODA*	Not detected	10		ng/L	1.8553	307-55-1	
PFDS*	Not detected	10		ng/L	1.8553	335-77-3	
PFTTrDA*	Not detected	10		ng/L	1.8553	72629-94-8	
FOSA*	Not detected	10		ng/L	1.8553	754-91-6	
PFTeDA*	Not detected	10		ng/L	1.8553	376-06-7	

Merit Laboratories Login Checklist

Lab Set ID:S96773

Client:OBG02 (O'Brien & Gere Engineers, Inc.)

Project: 68545 RACER Coldwater Rd LF - PFAS

Submitted: 11/14/2018 14:15 Login User: MMC

Attention: Clifford Yantz

Address: O'Brien & Gere Engineers, Inc.
2260 E Saginaw St
East Lansing, MI 48823

Phone: 248-477-5701 FAX:

Email: Clifford.Yantz@obg.com

Selection	Description	Note
Sample Receiving		
01.	☒ Yes ☐ No ☐ N/A	Samples are received at 4C +/- 2C Thermometer # IR 5.7
02.	☒ Yes ☐ No ☐ N/A	Received on ice/ cooling process begun
03.	☐ Yes ☒ No ☐ N/A	Samples shipped
04.	☐ Yes ☒ No ☐ N/A	Samples left in 24 hr. drop box
05.	☐ Yes ☐ No ☒ N/A	Are there custody seals/tape or is the drop box locked
Chain of Custody		
06.	☒ Yes ☐ No ☐ N/A	COC adequately filled out
07.	☒ Yes ☐ No ☐ N/A	COC signed and relinquished to the lab
08.	☒ Yes ☐ No ☐ N/A	Sample tag on bottles match COC
09.	☐ Yes ☒ No ☐ N/A	Subcontracting needed? Subcontacted to:
Preservation		
10.	☒ Yes ☐ No ☐ N/A	Do sample have correct chemical preservation
11.	☐ Yes ☐ No ☒ N/A	Completed pH checks on preserved samples? (no VOAs)
12.	☐ Yes ☒ No ☐ N/A	Did any samples need to be preserved in the lab?
Bottle Conditions		
13.	☒ Yes ☐ No ☐ N/A	All bottles intact
14.	☒ Yes ☐ No ☐ N/A	Appropriate analytical bottles are used
15.	☒ Yes ☐ No ☐ N/A	Merit bottles used
16.	☒ Yes ☐ No ☐ N/A	Sufficient sample volume received
17.	☐ Yes ☒ No ☐ N/A	Samples require laboratory filtration
18.	☒ Yes ☐ No ☐ N/A	Samples submitted within holding time
19.	☐ Yes ☐ No ☒ N/A	Do water VOC or TOX bottles contain headspace

Corrective action for all exceptions is to call the client and to notify the project manager.

Client Review By: _____ Date: _____

REPORT TO

CONTACT NAME Clifford Yantz			
COMPANY O'Brien & Gere			
ADDRESS 2260 East Saginaw			
CITY East Lansing		STATE MI	ZIP CODE 48823
PHONE NO. 313-333-0211		FAX NO.	P.O. NO.
E-MAIL ADDRESS Clifford.Yantz@obg.com		QUOTE NO.	

CHAIN OF CUSTODY RECORD

CONTACT NAME		XXXX SAME	
COMPANY			
ADDRESS			
CITY		STATE	ZIP CODE
PHONE NO.		E-MAIL ADDRESS	

INVOICE TO

PROJECT NO./NAME	68545 RALER Coldwater Rd LF - PFAs	SAMPLER(S) - PLEASE PRINT/SIGN NAME	Kevin Schneider
TURNAROUND TIME REQUIRED	☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER		
DELIVERABLES REQUIRED	☐ STD ☐ LEVEL II ☒ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER		

MATRIX CODE:	GW=GROUNDWATER SL=SLUDGE	WW=WASTEWATER DW=DRINKING WATER	S=SOIL O=OIL	L=LIQUID WP=WIPE	SD=SOLID A=AIR W=WASTE
--------------	-----------------------------	------------------------------------	-----------------	---------------------	------------------------------

Containers & Preservatives

[illegible]

RELINQUISHED BY: SIGNATURE/ORGANIZATION	<i>[Signature]</i> <i>036</i>	☒ Sampler	DATE 11/14/18	TIME 13:22
RECEIVED BY: SIGNATURE/ORGANIZATION	<i>[Signature]</i>		DATE 11/14/18	TIME 13:32
RELINQUISHED BY: SIGNATURE/ORGANIZATION	<i>[Signature]</i>		DATE 11/14/18	TIME 14:15
RECEIVED BY: SIGNATURE/ORGANIZATION	<i>[Signature]</i>		DATE 11/14/18	TIME 14:15

RELINQUISHED BY:			DATE	TIME
SIGNATURE/ORGANIZATION				
RECEIVED BY:			DATE	TIME
SIGNATURE/ORGANIZATION				
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	NOTES: TEMP. ON ARRIVAL _____ 5.7	
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS		

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE



Analytical Laboratory Report

Report ID: S96823.01(01)
Generated on 11/21/2018

Report to

Attention: Clifford Yantz
O'Brien & Gere Engineers, Inc.
1203 Mallow Street
Wolverine Lake, MI 48390

Phone: 248-477-5701 FAX:
Email: Clifford.Yantz@obg.com

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
John Lavery (johnlavery@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S96823.01-S96823.04
Project: 68545.031.130 / Coldwater Rd LF
Collected Date: 11/15/2018
Submitted Date/Time: 11/15/2018 15:40
Sampled by: Clifford Yantz
P.O. #: PO

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Maya Murshak
Technical Director



Analytical Laboratory Report

General Report Notes

Analytical results relate only to the samples tested, in the condition received by the laboratory.

Methods may be modified for improved performance.

Results reported on a dry weight basis where applicable.

'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).

40 CFR Part 136 Table II Required Containers, Preservation Techniques and Holding Times for the Clean Water Act specify that samples for acrolein and acrylonitrile need to be preserved at a pH in the range of 4 to 5 or if not preserved, analyzed within 3 days of sampling.

QA/QC corresponding to this analytical report is a separate document with the same Merit ID reference and is available upon request.

Full accreditation certificates are available upon request. Starred (*) analytes are not NELAP accredited.

Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.

Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc.

Limits for drinking water samples, are listed as the MCL Limits (Maximum Contaminant Level Concentrations)

Report Narrative

Samples .02, .03 and .04 contained silt. The samples had to be centrifuged and poured off prior to PFC analysis.



Analytical Laboratory Report

Laboratory Certifications

Authority	Certification ID
Michigan DEQ	#9956
DOD ELAP/ISO 17025	#69699
WBENC	#2005110032
Ohio VAP	#CL0002
Indiana DOH	#C-MI-07
New York NELAC	#11814
North Carolina DENR	#680
North Carolina DOH	#26702
Alaska CSLAP	#17-001

Qualifier Descriptions

Qualifier	Description
!	Result is outside of stated limit criteria
B	Compound also found in associated method blank
E	Concentration exceeds calibration range
F	Analysis run outside of holding time
G	Estimated result due to extraction run outside of holding time
H	Sample submitted and run outside of holding time
I	Matrix interference with internal standard
J	Estimated value less than reporting limit, but greater than MDL
L	Elevated reporting limit due to low sample amount
M	Result reported to MDL not RDL
O	Analysis performed by outside laboratory. See attached report.
R	Preliminary result
S	Surrogate recovery outside of control limits
T	No correction for total solids
X	Elevated reporting limit due to matrix interference
Y	Elevated reporting limit due to high target concentration
b	Value detected less than reporting limit, but greater than MDL
e	Reported value estimated due to interference
j	Analyte also found in associated method blank
p	Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.
x	Preserved from bulk sample

Glossary of Abbreviations

Abbreviation	Description
RL/RDL	Reporting Limit
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
SW	EPA SW 846 (Soil and Wastewater) Methods
E	EPA Methods
SM	Standard Methods
LN	Linear
BR	Branched

Method Summary

Method	Version
ASTMD7979-17M	ASTM Method D7979 - 17 Modified (Isotopic Dilution)

Parameter Summary

Parameter	Synonym	Cas #
PFBA	Perfluorobutanoic Acid	375-22-4
PFPeA	Perfluoropentanoic Acid	2706-90-3
4:2 FTSA	4:2 Fluorotelomer Sulfonic Acid	757124-72-4
PFHxA	Perfluorohexanoic Acid	307-24-4
PFBS	Perfluorobutane sulfonic Acid	375-73-5
PFHpA	Perfluoroheptanoic Acid	375-85-9
PFPeS	Perfluoropentane Sulfonic Acid	2706-91-4
6:2 FTSA	6:2 Fluorotelomer Sulfonic Acid	27619-97-2
PFOA	Perfluorooctanoic Acid	335-67-1
PFHxS	Perfluorohexane Sulfonic Acid	355-46-4
PFHxS-LN	Perfluorohexane Sulfonic Acid - LN	355-46-4-LN
PFHxS-BR	Perfluorohexane Sulfonic Acid - BR	355-46-4-BR
PFNA	Perfluorononanoic Acid	375-95-1
8:2 FTSA	8:2 Fluorotelomer Sulfonic Acid	39108-34-4
PFHpS	Perfluoroheptane Sulfonic Acid	375-92-8
PFDA	Perfluorodecanoic Acid	335-76-2
N-MeFOSAA	N-methyl perfluorooctanesulfonamidoacetic acid	2355-31-9
EtFOSAA	N-Ethyl Perfluorooctane Sulfonamidoacetic Acid	2991-50-6
PFOS	Perfluorooctane Sulfonic Acid	1763-23-1
PFOS-LN	Perfluorooctane Sulfonic Acid - LN	1763-23-1-LN
PFOS-BR	Perfluorooctane Sulfonic Acid - BR	1763-23-1-BR
PFUnDA	Perfluoroundecanoic Acid	2058-94-8
PFNS	Perfluorononane Sulfonic Acid	474511-07-4
PFDoDA	Perfluorododecanoic Acid	307-55-1
PFDS	Perfluorodecane Sulfonic Acid	335-77-3
PFTTrDA	Perfluorotridecanoic Acid	72629-94-8
FOSA	Perfluorooctane Sulfonamide	754-91-6
PFTeDA	Perfluorotetradecanoic Acid	376-06-7



Analytical Laboratory Report

Sample Summary (4 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S96823.01	FB-04	Water	11/15/18 10:22
S96823.02	HPT-29-GW-42	Groundwater	11/15/18 10:25
S96823.03	HPT-27-GW-35	Groundwater	11/15/18 14:00
S96823.04	HPT-28-GW-40	Groundwater	11/15/18 14:25



Analytical Laboratory Report

Lab Sample ID: S96823.01

Sample Tag: FB-04

Collected Date/Time: 11/15/2018 10:22

Matrix: Water

COC Reference: 81847

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	5.0	IR

Organics

24 PFAs, Method: ASTMD7979-17M, Run Date: 11/20/18 15:13, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PFBA*	Not detected	20		ng/L	2.0036	375-22-4	
PFPeA*	Not detected	10		ng/L	2.0036	2706-90-3	
4:2 FTSA*	Not detected	10		ng/L	2.0036	757124-72-4	
PFHxA*	Not detected	10		ng/L	2.0036	307-24-4	
PFBS*	Not detected	10		ng/L	2.0036	375-73-5	
PFHpA*	Not detected	10		ng/L	2.0036	375-85-9	
PFPeS*	Not detected	10		ng/L	2.0036	2706-91-4	
6:2 FTSA*	Not detected	10		ng/L	2.0036	27619-97-2	
PFOA*	Not detected	10		ng/L	2.0036	335-67-1	
PFHxS*	Not detected	10		ng/L	2.0036	355-46-4	
PFHxS-LN*	Not detected	10		ng/L	2.0036	355-46-4-LN	
PFHxS-BR*	Not detected	10		ng/L	2.0036	355-46-4-BR	
PFNA*	Not detected	10		ng/L	2.0036	375-95-1	
8:2 FTSA*	Not detected	10		ng/L	2.0036	39108-34-4	
PFHpS*	Not detected	10		ng/L	2.0036	375-92-8	
PFDA*	Not detected	10		ng/L	2.0036	335-76-2	
N-MeFOSAA*	Not detected	10		ng/L	2.0036	2355-31-9	
EtFOSAA*	Not detected	10		ng/L	2.0036	2991-50-6	
PFOS*	Not detected	10		ng/L	2.0036	1763-23-1	
PFOS-LN*	Not detected	10		ng/L	2.0036	1763-23-1-LN	
PFOS-BR*	Not detected	10		ng/L	2.0036	1763-23-1-BR	
PFUnDA*	Not detected	10		ng/L	2.0036	2058-94-8	
PFNS*	Not detected	10		ng/L	2.0036	474511-07-4	
PFDODA*	Not detected	10		ng/L	2.0036	307-55-1	
PFDS*	Not detected	10		ng/L	2.0036	335-77-3	
PFTTrDA*	Not detected	10		ng/L	2.0036	72629-94-8	
FOSA*	Not detected	10		ng/L	2.0036	754-91-6	
PFTeDA*	Not detected	10		ng/L	2.0036	376-06-7	



Analytical Laboratory Report

Lab Sample ID: S96823.02

Sample Tag: HPT-29-GW-42

Collected Date/Time: 11/15/2018 10:25

Matrix: Groundwater

COC Reference: 81847

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	5.0	IR
1	250ml Plastic	None	Yes	5.0	IR

Organics

24 PFAs, Method: ASTMD7979-17M, Run Date: 11/20/18 15:33, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PFBA*	Not detected	20		ng/L	1.9194	375-22-4	
PFPeA*	Not detected	10		ng/L	1.9194	2706-90-3	
4:2 FTSA*	Not detected	10		ng/L	1.9194	757124-72-4	
PFHxA*	Not detected	10		ng/L	1.9194	307-24-4	
PFBS*	Not detected	10		ng/L	1.9194	375-73-5	
PFHpA*	Not detected	10		ng/L	1.9194	375-85-9	
PFPeS*	Not detected	10		ng/L	1.9194	2706-91-4	
6:2 FTSA*	Not detected	10		ng/L	1.9194	27619-97-2	
PFOA*	Not detected	10		ng/L	1.9194	335-67-1	
PFHxS*	Not detected	10		ng/L	1.9194	355-46-4	
PFHxS-LN*	Not detected	10		ng/L	1.9194	355-46-4-LN	
PFHxS-BR*	Not detected	10		ng/L	1.9194	355-46-4-BR	
PFNA*	Not detected	10		ng/L	1.9194	375-95-1	
8:2 FTSA*	Not detected	10		ng/L	1.9194	39108-34-4	
PFHpS*	Not detected	10		ng/L	1.9194	375-92-8	
PFDA*	Not detected	10		ng/L	1.9194	335-76-2	
N-MeFOSAA*	Not detected	10		ng/L	1.9194	2355-31-9	
EtFOSAA*	Not detected	10		ng/L	1.9194	2991-50-6	
PFOS*	Not detected	10		ng/L	1.9194	1763-23-1	
PFOS-LN*	Not detected	10		ng/L	1.9194	1763-23-1-LN	
PFOS-BR*	Not detected	10		ng/L	1.9194	1763-23-1-BR	
PFUnDA*	Not detected	10		ng/L	1.9194	2058-94-8	
PFNS*	Not detected	10		ng/L	1.9194	474511-07-4	
PFDODA*	Not detected	10		ng/L	1.9194	307-55-1	
PFDS*	Not detected	10		ng/L	1.9194	335-77-3	
PFTTrDA*	Not detected	10		ng/L	1.9194	72629-94-8	
FOSA*	Not detected	10		ng/L	1.9194	754-91-6	
PFTeDA*	Not detected	10		ng/L	1.9194	376-06-7	



Analytical Laboratory Report

Lab Sample ID: S96823.03

Sample Tag: HPT-27-GW-35

Collected Date/Time: 11/15/2018 14:00

Matrix: Groundwater

COC Reference: 81847

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	5.0	IR
1	250ml Plastic	None	Yes	5.0	IR

Organics

24 PFAs, Method: ASTMD7979-17M, Run Date: 11/20/18 15:52, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PFBA*	Not detected	20		ng/L	1.9763	375-22-4	
PFPeA*	Not detected	10		ng/L	1.9763	2706-90-3	
4:2 FTSA*	Not detected	10		ng/L	1.9763	757124-72-4	
PFHxA*	Not detected	10		ng/L	1.9763	307-24-4	
PFBS*	Not detected	10		ng/L	1.9763	375-73-5	
PFHpA*	Not detected	10		ng/L	1.9763	375-85-9	
PFPeS*	Not detected	10		ng/L	1.9763	2706-91-4	
6:2 FTSA*	Not detected	10		ng/L	1.9763	27619-97-2	
PFOA*	Not detected	10		ng/L	1.9763	335-67-1	
PFHxS*	Not detected	10		ng/L	1.9763	355-46-4	
PFHxS-LN*	Not detected	10		ng/L	1.9763	355-46-4-LN	
PFHxS-BR*	Not detected	10		ng/L	1.9763	355-46-4-BR	
PFNA*	Not detected	10		ng/L	1.9763	375-95-1	
8:2 FTSA*	Not detected	10		ng/L	1.9763	39108-34-4	
PFHpS*	Not detected	10		ng/L	1.9763	375-92-8	
PFDA*	Not detected	10		ng/L	1.9763	335-76-2	
N-MeFOSAA*	Not detected	10		ng/L	1.9763	2355-31-9	
EtFOSAA*	Not detected	10		ng/L	1.9763	2991-50-6	
PFOS*	Not detected	10		ng/L	1.9763	1763-23-1	
PFOS-LN*	Not detected	10		ng/L	1.9763	1763-23-1-LN	
PFOS-BR*	Not detected	10		ng/L	1.9763	1763-23-1-BR	
PFUnDA*	Not detected	10		ng/L	1.9763	2058-94-8	
PFNS*	Not detected	10		ng/L	1.9763	474511-07-4	
PFDODA*	Not detected	10		ng/L	1.9763	307-55-1	
PFDS*	Not detected	10		ng/L	1.9763	335-77-3	
PFTTrDA*	Not detected	10		ng/L	1.9763	72629-94-8	
FOSA*	Not detected	10		ng/L	1.9763	754-91-6	
PFTeDA*	Not detected	10		ng/L	1.9763	376-06-7	



Analytical Laboratory Report

Lab Sample ID: S96823.04

Sample Tag: HPT-28-GW-40

Collected Date/Time: 11/15/2018 14:25

Matrix: Groundwater

COC Reference: 81847

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	5.0	IR
1	250ml Plastic	None	Yes	5.0	IR

Organics

24 PFAs, Method: ASTMD7979-17M, Run Date: 11/20/18 16:12, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PFBA*	Not detected	20		ng/L	1.8832	375-22-4	
PFPeA*	Not detected	10		ng/L	1.8832	2706-90-3	
4:2 FTSA*	Not detected	10		ng/L	1.8832	757124-72-4	
PFHxA*	Not detected	10		ng/L	1.8832	307-24-4	
PFBS*	Not detected	10		ng/L	1.8832	375-73-5	
PFHpA*	Not detected	10		ng/L	1.8832	375-85-9	
PFPeS*	Not detected	10		ng/L	1.8832	2706-91-4	
6:2 FTSA*	Not detected	10		ng/L	1.8832	27619-97-2	
PFOA*	Not detected	10		ng/L	1.8832	335-67-1	
PFHxS*	Not detected	10		ng/L	1.8832	355-46-4	
PFHxS-LN*	Not detected	10		ng/L	1.8832	355-46-4-LN	
PFHxS-BR*	Not detected	10		ng/L	1.8832	355-46-4-BR	
PFNA*	Not detected	10		ng/L	1.8832	375-95-1	
8:2 FTSA*	Not detected	10		ng/L	1.8832	39108-34-4	
PFHpS*	Not detected	10		ng/L	1.8832	375-92-8	
PFDA*	Not detected	10		ng/L	1.8832	335-76-2	
N-MeFOSAA*	Not detected	10		ng/L	1.8832	2355-31-9	
EtFOSAA*	Not detected	10		ng/L	1.8832	2991-50-6	
PFOS*	Not detected	10		ng/L	1.8832	1763-23-1	
PFOS-LN*	Not detected	10		ng/L	1.8832	1763-23-1-LN	
PFOS-BR*	Not detected	10		ng/L	1.8832	1763-23-1-BR	
PFUnDA*	Not detected	10		ng/L	1.8832	2058-94-8	
PFNS*	Not detected	10		ng/L	1.8832	474511-07-4	
PFDODA*	Not detected	10		ng/L	1.8832	307-55-1	
PFDS*	Not detected	10		ng/L	1.8832	335-77-3	
PFTTrDA*	Not detected	10		ng/L	1.8832	72629-94-8	
FOSA*	Not detected	10		ng/L	1.8832	754-91-6	
PFTeDA*	Not detected	10		ng/L	1.8832	376-06-7	

Merit Laboratories Login Checklist

Lab Set ID:S96823

Client:OBG02 (O'Brien & Gere Engineers, Inc.)

Project: 68545.031.130 / Coldwater Rd LF

Submitted: 11/15/2018 15:40 Login User: MMC

Attention: Clifford Yantz

Address: O'Brien & Gere Engineers, Inc.
1203 Mallow Street
Wolverine Lake, MI 48390

Phone: 248-477-5701

FAX:

Email: Clifford.Yantz@obg.com

Selection	Description	Note
Sample Receiving		
01. ☒ Yes ☐ No ☐ N/A	Samples are received at 4C +/- 2C Thermometer #	IR 5.0
02. ☒ Yes ☐ No ☐ N/A	Received on ice/ cooling process begun	
03. ☐ Yes ☒ No ☐ N/A	Samples shipped	
04. ☐ Yes ☒ No ☐ N/A	Samples left in 24 hr. drop box	
05. ☐ Yes ☐ No ☒ N/A	Are there custody seals/tape or is the drop box locked	
Chain of Custody		
06. ☒ Yes ☐ No ☐ N/A	COC adequately filled out	
07. ☒ Yes ☐ No ☐ N/A	COC signed and relinquished to the lab	
08. ☒ Yes ☐ No ☐ N/A	Sample tag on bottles match COC	
09. ☐ Yes ☒ No ☐ N/A	Subcontracting needed? Subcontracted to:	
Preservation		
10. ☒ Yes ☐ No ☐ N/A	Do sample have correct chemical preservation	
11. ☐ Yes ☐ No ☒ N/A	Completed pH checks on preserved samples? (no VOAs)	
12. ☐ Yes ☒ No ☐ N/A	Did any samples need to be preserved in the lab?	
Bottle Conditions		
13. ☒ Yes ☐ No ☐ N/A	All bottles intact	
14. ☒ Yes ☐ No ☐ N/A	Appropriate analytical bottles are used	
15. ☒ Yes ☐ No ☐ N/A	Merit bottles used	
16. ☒ Yes ☐ No ☐ N/A	Sufficient sample volume received	
17. ☐ Yes ☒ No ☐ N/A	Samples require laboratory filtration	
18. ☒ Yes ☐ No ☐ N/A	Samples submitted within holding time	
19. ☐ Yes ☐ No ☒ N/A	Do water VOC or TOX bottles contain headspace	

Corrective action for all exceptions is to call the client and to notify the project manager.

Client Review By: _____ Date: _____

REPORT TO

CHAIN OF CUSTODY RECORD

INVOICE TO

CONTACT NAME Clifford S. Yantz			
COMPANY OBG			
ADDRESS 1203 Mallow St.,			
CITY Wolverine Lake		STATE MI	ZIP CODE 48392
PHONE NO. 313 3330211		FAX NO.	P.O. NO.
E-MAIL ADDRESS Clifford.Yantz@obg.com		QUOTE NO.	

CONTACT NAME		X SAME	
COMPANY			
ADDRESS			
CITY		STATE	ZIP CODE
PHONE NO.		E-MAIL ADDRESS	

PROJECT NO./NAME	09545.031.130 / CD/Ku SURF <u>11th Ford Vents / 11th St</u>	SAMPLER(S) - PLEASE PRINT/SIGN NAME	
TURNAROUND TIME REQUIRED	☐ 1 DAY	☐ 2 DAYS	☐ 3 DAYS
	☒ STANDARD	☐ OTHER	
DELIVERABLES REQUIRED	☐ STD	☒ LEVEL II	☐ LEVEL III
	☐ LEVEL IV	☐ EDD	☐ OTHER

MATRIX	GW=GROUNDWATER	WW=WASTEWATER	S=SOIL	L=LIQUID	SD=SOLID
CODE:	SL=SLUDGE	DW=DRINKING WATER	O=OIL	WP=WIPE	A=AIR
					W=WASTE

Containers & Preservatives[illegible]

RELINQUISHED BY: SIGNATURE/ORGANIZATION	<i>Asaph J. Smith</i>	☒ Sampler	DATE 11/15/18	TIME 14:35
RECEIVED BY: SIGNATURE/ORGANIZATION	<i>Asaph J. Smith</i>		DATE 11/15/18	TIME 14:35
RELINQUISHED BY: SIGNATURE/ORGANIZATION	<i>Asaph J. Smith</i>		DATE 11/15/18	TIME 13:40
RECEIVED BY: SIGNATURE/ORGANIZATION	<i>Asaph J. Smith</i>		DATE 11/15/18	TIME 13:40

RELINQUISHED BY: SIGNATURE/ORGANIZATION			DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION			DATE	TIME
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	NOTES:	TEMP. ON ARRIVAL <u>5.0</u>
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS		