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

Notification For Hazardous Substance Discharge (Non-Emergency Only)

Form 4400-225 (R 05/21)

Emergency Discharges / Spills should be reported via the 24-Hour Hotline: 1-800-943-0003

Notice: Hazardous substance discharges must be reported immediately according to s. 292.11 Wis. Stats. Non-emergency hazardous substance discharges may be reported by telefaxing or e-mailing a completed report to the Department, or calling or visiting a Department office in person. If you choose to notify the Department by telefax or by email, you should use this form to be sure that all necessary information is included. However, use of this form is not mandatory. Under s. 292.99, Wis. Stats., the penalty for violating the reporting requirements of ch. 292 Wis. Stats., shall be no less than $10 nor more than $5000 for each violation. Each day of continued violation is a separate offense. It is not the Department's intention to use any personally identifiable information from this form for any purpose other than program administration. However, information submitted on this form may also be made available to requesters under Wisconsin's Public Records Law (ss. 19.31 – 19.39, Wis. Stats.).

Confirmatory laboratory data should be included with this form, to assist the DNR in processing this Hazardous Substance Release Notification.

Complete this form. **TYPE or PRINT LEGIBLY.** NOTIFY appropriate DNR region (see next page) **IMMEDIATELY** upon discovery of a potential release from **(check one)**:

- ◯ Underground Petroleum Storage Tank System (additional information may be required for Item 6 below)
- ◯ Aboveground Petroleum Storage Tank System
- ◯ Dry Cleaner Facility
- ◉ Other - Describe: Soil, sediment and groundwater analytical sampling

ATTN DNR: **R & R Program Associate**

Date DNR Notified: 09/09/2021

1. Discharge Reported By

Name	Firm	Phone Number (include area code)
Staci Goetz	Ramboll	(414) 335-3563

Mailing Address	Email
234 W. Florida St., 5th Floor, Milwaukee, WI 53204	staci.goetz@ramboll.com

2. Site Information

Name of site at which discharge occurred. Include local name of site/business, not responsible party name, unless a residence/vacant property.

DIC Imaging Products USA Inc, Liquid Compounds Facility

Location: Include street address, not PO Box. If no street address, describe as precisely as possible, i.e., 1/4 mile NW of CTHs 60 & 123 on E side of CTH 60.

7335 South 10th Street,

Municipality: (City, Village, Township) Specify municipality in which the site is located, not mailing address/city.

Oak Creek

County	Legal Description:	WTM:
Milwaukee	SE ¼ of NW ¼ Section 8, Town 05 N, Range 22 ◉E ◯W	X Y

3. Responsible Party (RP) and/or RP Representative

Responsible Party Name: Business or owner name that is responsible for cleanup. If more than one, list all. Attach additional pages as necessary.

Sun Chemical Corporation

☐ A local governmental unit claiming an exemption from state Spill Law and Solid Waste Management responsibilities for the discharge being reported, per Wis. Stat. §§ 292.11(9)(e) and 292.23, should: 1) check this box; 2) review DNR publication RR-055; and 3) provide documentation to DNR that demonstrates compliance with the statutory requirements of the liability exemptions. Local governmental units may also request a fee-based liability clarification letter from DNR by using DNR Form 4400-237.

Contact Person Name (if different)	Phone Number	Email
Gary M Andrzejewski	(708) 236-3713	gary.andrzejewski@sunchemical.com

Mailing Address	City	State	ZIP Code
135 West Lake Street	Northlake	IL	60164

Responsible Party Name: Business or owner name that is responsible for cleanup. If more than one, list all. Attach additional pages as necessary.

Contact Person Name (if different)	Phone Number	Email

Mailing Address	City	State	ZIP Code

(continued)

Notification For Hazardous Substance Discharge (Non-Emergency Only)

4. Hazardous Substance Information

Identify hazardous substance discharged (check all that apply):

- ☐ VOCs
  - ☐ PCE
  - ☐ TCE
  - ☐ Other Chlorinated
  - ☐ Diesel
  - ☐ Fuel Oil
  - ☐ Gasoline
  - ☐ Hydraulic Oil
  - ☐ Jet Fuel
- *(VOCs continued)*
  - ☐ Mineral Oil
  - ☐ Waste Oil
  - ☐ Petroleum-Unknown Type
  - ☐ 1,4-dioxane
- ☐ PAHs
- ☐ PCBs
- ☐ Cyanide
- ☐ Leachate
- ☐ Manure
- ☐ Metals
  - ☐ Arsenic
  - ☐ Chromium
  - ☐ Lead
  - ☐ Other: _____
- ☐ Pesticides: _____
- ☐ Fertilizer: _____
- ☐ RCRA Hazardous Waste: _____
- ☒ Other: AFFF-PFAS
- ☐ Unknown

5. Impacts to the Environment Information

Enter "K" for known/confirmed or "P" for potential for all that apply.

- ___ Air Contamination
- ___ Co-mingled (Petroleum & Non-Petroleum)
- ___ Contamination in Fractured Bedrock
- ___ Contamination Within 1 Meter of Bedrock
- ___ Contaminated Private Well
- ___ Contaminated Public Well
- ___ Contamination in Right of Way
- ___ Fire Explosion Threat
- ___ Free Product
- K Groundwater Contamination
- P Off-Site Contamination
- ___ Sanitary Sewer Contamination
- ___ Storm Sewer Contamination
- K Sediment Contamination
- Other (specify): _____
- K Soil Contamination
- ___ Soil Gas Contamination
- ___ Sub-slab Vapor Contamination
- P Surface Water Contamination
- ___ Within 100 ft of Private Well
- ___ Within 1000 ft of Public Well

Contamination was discovered as a result of:

☐ Tank closure assessment Date _____ ☒ Site assessment Date 07/28/2021 ☐ Other - Describe: _____ Date _____

Lab results: ☐ Lab results will be faxed upon receipt ☒ Lab results are attached

Additional Comments: Include a brief description of immediate actions taken to halt the release and contain or cleanup hazardous substances that have been discharged.

Ramboll performed phase II sampling where there had been a foam fire suppression release (BRRTS #04-41-547407, dated September 2005, closed June 26, 2008). PFAS compounds were detected in soil below the RCLS and in groundwater above the proposed WDNR PAL/ES and USEPA HAL at one location for PFOA, near the historical spill area.

6. Federal Energy Act Requirements (Section 9002(d) of the Solid Waste Disposal Act (SWDA))

For all confirmed releases from USTs occurring after 9/30/2007 please provide the following information:

☒ Does not apply.

Source

- ☐ Tank
- ☐ Piping
- ☐ Dispenser
- ☐ Submersible Turbine Pump
- ☐ Delivery Problem
- ☐ Other (specify): _____

Cause

- ☐ Spill
- ☐ Overfill
- ☐ Corrosion
- ☐ Physical or Mechanical Damage
- ☐ Installation Problem
- ☐ Other (does not fit any of above)
- ☐ Unknown

Submit this completed form along with any associate lab results using the RR Program Submittal Portal, found on the DNR website at https://dnr.wisconsin.gov/topic/Brownfields/Submittal.html.

If you have any questions, please contact the appropriate regional Environmental Program Associate (EPA) listed under the "EPAs" tab at https://dnr.wisconsin.gov/topic/Brownfields/Contact.html.

Sun Chemical Corporation
35 Waterview Blvd
Parsippany NJ 0705
Tel +1 973 404 6000
Fax +1 973 404 6439
www.sunchemical.com

September 9, 2021

Mr. Riley Neumann
Advanced Hydrogeologist
Remediation & Redevelopment Program
State of Wisconsin
Department of Natural Resources
1027 W. St. Paul Ave
Milwaukee, WI 53233

Re: DIC Imaging Products INC, Liquid Compounds
7335 South 10th St
Oak Creek, WI
BRRTS # 04-41-547407

Dear Mr. Neumann,

Sun Chemical Corporation (Sun) is submitting this case reopening request for Bureau for Remediation and Redevelopment Tracking System (BRRTS) case # 04-41-547407 in accordance with NR 727.13. The request is related to per- and polyfluoroalkyl substances (PFAS) sampling results in soil, sediment, and groundwater, associated with the historical spill of Aqueous Film Forming Foam (AFFF) by a foam fire suppression system at the facility on September 25, 2005. The site location is presented in Figure 1, in the SE ¼, NW ¼ of Section 8, Township 5 North, Range 22 East of Milwaukee County, Wisconsin.

DIC Imaging notified WDNR of the release and hired AAA Environmental to clean up the release. Per WDNR documentation, approximately 5,000 gallons of foam and water mix was vacuumed up and disposed off-site. An additional approximately 15,000 gallons of water was pumped from the on-site stormwater pond to the sanitary sewer with permission from the Milwaukee Metropolitan Sewer District. The BRRTS case was closed by WDNR June 26, 2008.

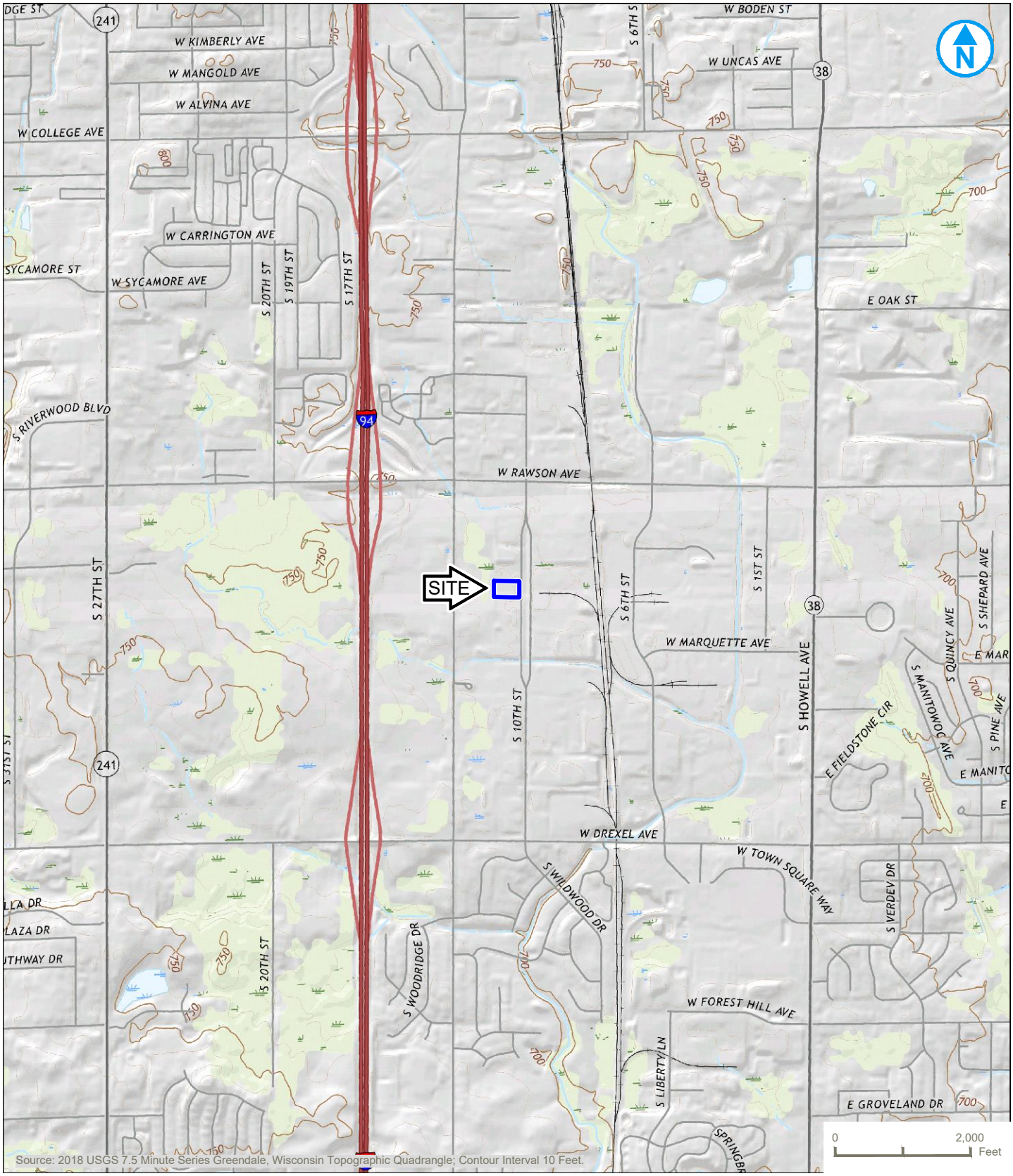
Ramboll, on behalf of Sun, completed soil and sediment, and groundwater sampling on 7/14/2021 and 7/28/201, respectively. Sample locations are shown on Figure 2. Tables 1 and 2 summarize detections of PFAS in these media and the laboratory analytical reports are provided in Attachment 1. This letter and enclosures serve as notification and a request to reopen the closed BRRTS case.
Please do not hesitate to call me if you'd like to discuss this submission.

Sincerely,

Gary M. Andrzejewski
Corporate Vice President, Environmental Affairs

cc: Andy Sexson Oak Creek Real Estate
Mary Jo Anzia, P.E., BSI Services and Solutions East, Inc.
Erin Veder, Ramboll
Dr. Staci Goetz, PG, Ramboll

FIGURES



Source: 2018 USGS 7.5 Minute Series Greendale, Wisconsin Topographic Quadrangle; Contour Interval 10 Feet.

C:\Users\hjward\Desktop\WIP\169002xxxx_DIC_Imaging_PHI\01_Site Location Map (Oak Creek WI).dwg

PROJECT: 169002xxxx DATED: 3/18/2021 DESIGNER: HJW

KEY MAP

Map Scale: 1:24,000
Map Center: 42°54'42.5628", -87°55'40.6668"

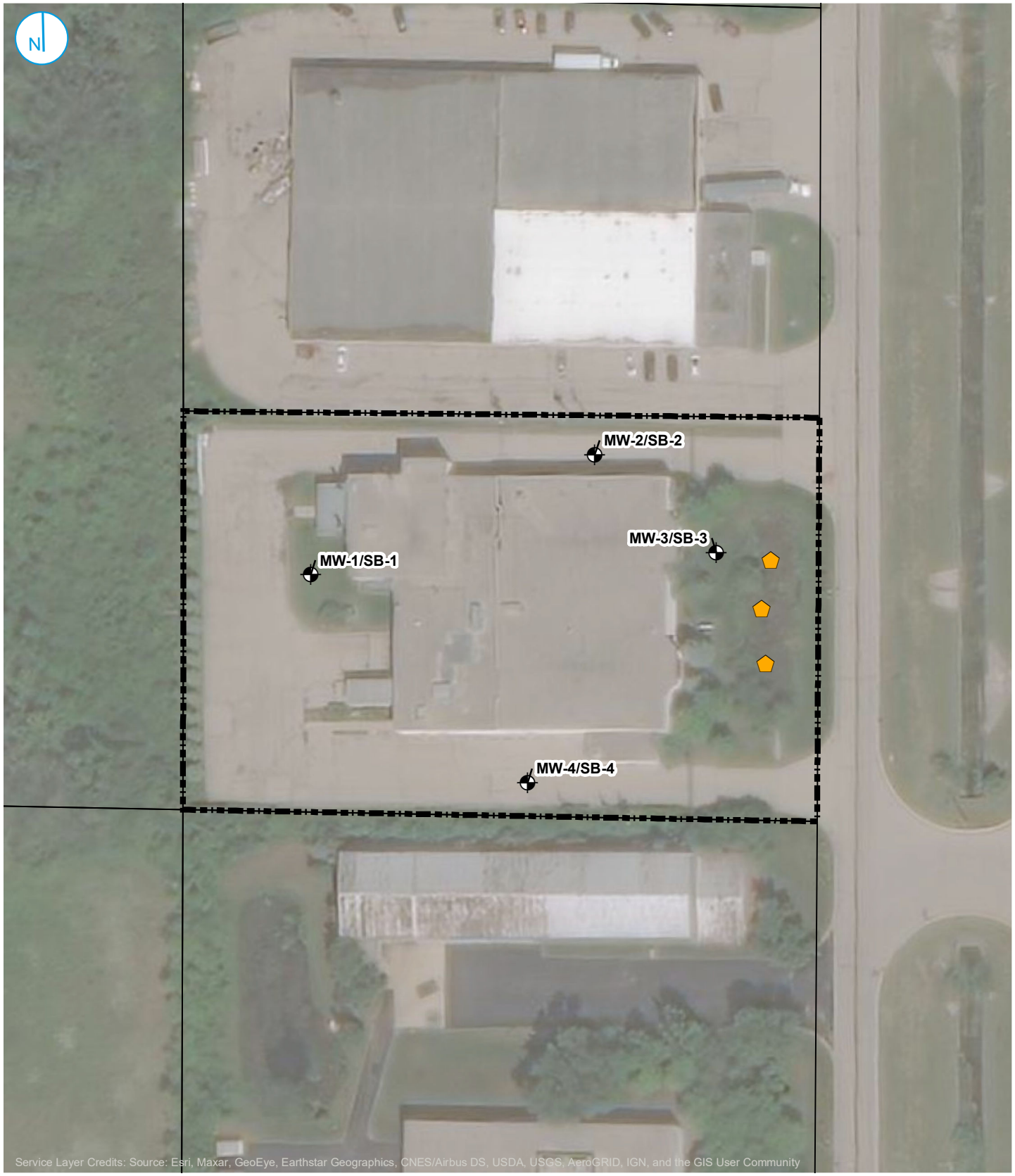
SITE LOCATION MAP

DIC IMAGING PRODUCTS USA INC
LIQUID COMPOUNDS FACILITY
7335 SOUTH 10TH STREET
OAK CREEK, WISCONSIN

FIGURE 01

RAMBOLL US CONSULTING, INC.
A RAMBOLL COMPANY

RAMBOLL



Y:\Mapping\Projects\7\71849\mxd\Figure 2_Sample Locations.mxd

PROJECT: 1690021164 | DATED: 8/13/2021 | DESIGNER: COOKEDT

SOIL BORING/MONITORING WELL LOCATION

SEDIMENT ALIQUOT LOCATION

SITE BOUNDARY

PARCEL BOUNDARY

0 37.5 75 Feet

SOIL BORING AND MONITORING WELL LOCATIONS

DIC IMAGING PRODUCTS US INC
LIQUID COMPOUNDS FACILITY
7335 SOUTH 10TH STREET
OAK CREEK, WISCONSIN

FIGURE 02

RAMBOLL US CONSULTING, INC.
A RAMBOLL COMPANY

RAMBOLL

TABLES

Table 1. PFAS Soil Analytical Results Compared to WDNR RCLs

DIC Imaging Products USA Inc, Liquid Compounds Facility
7335 South 10th Street, Oak Creek, Wisconsin

Sample Location	Sample Depth (ft BGS)	Sample Date	PFAS Perfluorooctanesulfonic acid (PFOS)		PFAS Perfluorooctanoic acid (PFOA)		PFAS 4,8-Dioxa-3H-perfluorononanoic acid (ADONA)		PFAS 4:2 Fluorotelomer sulfonic acid		PFAS 6:2 Fluorotelomer sulfonic acid		PFAS 8:2 Fluorotelomer sulfonic acid		PFAS F-53B Major		PFAS F-53B Minor		PFAS HFPO-DA (GenX)		PFAS NEtFOSA		PFAS NEtFOSAA		PFAS NEtFOSE		PFAS NMeFOSA		PFAS NMeFOSAA		PFAS NMeFOSE		PFAS Perfluorobutanesulfonic acid (PFBS)		PFAS Perfluorobutanoic acid (PFBA)		PFAS Perfluorodecanesulfonic acid (PFDS)		PFAS Perfluorodecanoic acid (PFDA)		PFAS Perfluorododecanesulfonic acid (PFDoS)	
Reporting Units:			µg/kg		µg/kg		µg/kg		µg/kg		µg/kg		µg/kg		µg/kg		µg/kg		µg/kg		µg/kg		µg/kg		µg/kg		µg/kg		µg/kg		µg/kg		µg/kg		µg/kg		µg/kg		µg/kg	
			Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
WI Soil Industrial DC RCLs:			**16,400**		**16,400**		**NS**		**NS**		**NS**		**NS**		**NS**		**NS**		**NS**		**NS**		**NS**		**NS**		**NS**		**NS**		**NS**		**NS**		**NS**		**NS**	
WI Soil Non-Industrial DC RCLs:			1,260		1,260		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS	
SB-1	0 - 0.5	07/14/2021	1.2	U	18	J	1.2	U	1.2	U	6.4		66	J	1.2	U	1.2	U	1.2	U	1.2	U	1.2	U	1.2	U	1.2	U	1.2	U	1.2	U	1.2	U	5.3		1.2	U	2.4		1.2	U
SB-2	8 - 9	07/14/2021	0.27	U	0.27	U	0.27	U	0.27	U	0.065	J	0.27	U	0.27	U	0.27	U	0.27	U	0.27	U	0.27	U	0.27	U	0.27	U	0.27	U	0.27	U	0.27	U	0.084	J	0.27	U	0.27	U	0.27	U
SB-3	3 - 4	07/14/2021	0.24	U	0.24	U	0.24	U	0.24	U	0.24	U	0.24	U	0.24	U	0.24	U	0.24	U	0.24	U	0.24	U	0.24	U	0.24	U	0.24	U	0.24	U	0.24	U	0.74		0.24	U	0.24	U	0.24	U
SB-4	7 - 9	07/14/2021	0.23	U	0.23	U	0.23	U	0.23	U	0.23	U	0.23	U	0.23	U	0.23	U	0.23	U	0.23	U	0.23	U	0.23	U	0.23	U	0.23	U	0.23	U	0.23	U	0.23	U	0.23	U	0.23	U	0.23	U
SB-4 Dup	7 - 9	07/14/2021	0.22	U	0.22	U	0.22	U	0.22	U	0.22	U	0.22	U	0.22	U	0.22	U	0.22	U	0.22	U	0.22	U	0.22	U	0.22	U	0.22	U	0.22	U	0.22	U	0.22	U	0.22	U	0.22	U	0.22	U
SED-COMP	Composite	07/14/2021	1.9	U	6.6		1.9	U	1.9	U	28		47		1.9	U	1.9	U	1.9	U	1.9	U	1.9	U	0.64	J	1.9	U	0.48	J	0.56	J	1.9	U	19	U	1.9	U	4.2		1.9	U
SED-COMP Dup	Composite	07/14/2021	1.7	U	9.0		1.7	U	1.7	U	39		65		1.7	U	1.7	U	1.7	U	1.7	U	1.7	U	0.76	J	1.7	U	0.66	J	1.7	U	1.7	U	4.5		0.65	J	6.5		1.7	U
Total Number of Samples Analyzed:			5		5		5		5		5		5		5		5		5		5		5		5		5		5		5		5		5		5		5	
Number of Detections:			0		2		0		0		3		2		0		0		0		0		0		1		0		1		1		0		3		0		2		0	
Min:			NA		6.6		NA		NA		0.065		47		NA		NA		NA		NA		NA		0.64		NA		0.48		0.56		NA		0.084		NA		2.4		NA	
Max:			NA		18		NA		NA		28		66		NA		NA		NA		NA		NA		0.64		NA		0.48		0.56		NA		5.3		NA		4.2		NA	
WI Soil Industrial DC RCLs:			16400		16400		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS	
Exceedances for Industrial DC RCLs:			0		0		0		0		0		0		0		0		0		0		0		0		0		0		0		0		0		0		0		0	
WI Soil Non-Industrial DC RCLs:			1260		1260		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS	
Exceedances for Non-Industrial DC RCLs:			0		0		0		0		0		0		0		0		0		0		0		0		0		0		0		0		0		0		0		0	

Notes:
Concentrations were not found to exceed the screening levels.
Statistics exclude the quality control field duplicate samples (DUPs).

Results & Flags:
-- = Analysis not performed
J = Estimated Concentration
NA = Not Applicable
U = Not Detected

Acronyms:
µg/kg = micrograms per kilogram
BGS = Below ground surface
DC = Direct-Contact
DUP = Quality Control Field Duplicate Sample
NS = No Standard
PFAS = Per- and polyfluoroalkyl substances
RCL = Soil Residual Contaminant Level
WDNR = Wisconsin Department of Natural Resources

Screening Levels:
Soil PFAS RCLs for PFOA and PFOS are derived from the WDNR NR720 Soil RR (Remediation and Redevelopment Program) RCLs.

Lab comments, additional data qualifiers and definitions can be found in associated laboratory reports.

Table 1. PFAS Soil Analytical Results Compared to WDNR RCLs

DIC Imaging Products USA Inc, Liquid Compounds Facility
7335 South 10th Street, Oak Creek, Wisconsin

Sample Location	Sample Depth (ft BGS)	Sample Date	PFAS	PFAS	PFAS	PFAS	PFAS	PFAS	PFAS	PFAS	PFAS	PFAS	PFAS	PFAS	PFAS
			Perfluorododecanoic acid (PFDoA)	Perfluoroheptanesulfonic Acid (PFHpS)	Perfluoroheptanoic acid (PFHpA)	Perfluorohexanesulfonic acid (PFHxS)	Perfluorohexanoic acid (PFHxA)	Perfluorononanesulfonic acid (PFNS)	Perfluorononanoic acid (PFNA)	Perfluorooctanesulfonamide (FOSA)	Perfluoropentanesulfonic acid (PFPeS)	Perfluoropentanoic acid (PFPeA)	Perfluorotetradecanoic acid (PFTeA)	Perfluorotridecanoic acid (PFTriA)	Perfluoroundecanoic acid (PFUnA)
Reporting Units:			µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
			Result Flag	Result Flag	Result Flag	Result Flag	Result Flag	Result Flag	Result Flag	Result Flag	Result Flag	Result Flag	Result Flag	Result Flag	Result Flag
WI Soil Industrial DC RCLs:			**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**
WI Soil Non-Industrial DC RCLs:			NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SB-1	0 - 0.5	07/14/2021	0.48 J	1.2 U	6.0	1.2 U	6.7	1.2 U	7.3	1.2 U	1.2 U	18 J	1.2 U	1.2 U	0.57 J
SB-2	8 - 9	07/14/2021	0.27 U	0.27 U	0.27 U	0.27 U	0.16 J	0.27 U	0.27 U	0.27 U	0.27 U	0.27	0.27 U	0.27 U	0.27 U
SB-3	3 - 4	07/14/2021	0.24 U	0.24 U	0.24 U	0.24 U	0.065 J	0.24 U	0.24 U	0.24 U	0.24 U	0.71	0.24 U	0.24 U	0.24 U
SB-4	7 - 9	07/14/2021	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U
SB-4 Dup	7 - 9	07/14/2021	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
SED-COMP	Composite	07/14/2021	5.2	1.9 U	5.4	1.9 U	21	1.9 U	3.1	0.41 J	1.9 U	26	1.3 J	1.3 J	4.9
SED-COMP Dup	Composite	07/14/2021	7.0	1.7 U	6.3	1.7 U	25	1.7 U	4.8	0.75 J	1.7 U	30	2.0	1.6 J	9.5
Total Number of Samples Analyzed:			5	5	5	5	5	5	5	5	5	5	5	5	5
Number of Detections:			2	0	2	0	4	0	2	1	0	4	1	1	2
Min:			0.48	NA	5.4	NA	0.065	NA	3.1	0.41	NA	0.27	1.3	1.3	0.57
Max:			5.2	NA	6	NA	21	NA	7.3	0.41	NA	26	1.3	1.3	4.9
WI Soil Industrial DC RCLs:			NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Exceedances for Industrial DC RCLs:			0	0	0	0	0	0	0	0	0	0	0	0	0
WI Soil Non-Industrial DC RCLs:			NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Exceedances for Non-Industrial DC RCLs:			0	0	0	0	0	0	0	0	0	0	0	0	0

[O:MGP 8/9/21, C:SGW 8/10/21]

Notes:
Concentrations were not found to exceed the screening levels.
Soil Industrial Direct Contact RCLs were compared to soil results collected 0 to 4 feet BGS.
Statistics exclude the quality control field duplicate samples (DUPs).

Screening Levels:
Soil PFAS RCLs for PFOA and PFOS are derived from the WDNR NR720 Soil RR (Remediation and Redevelopment Program) RCLs.

Lab comments, additional data qualifiers and definitions can be found in associated laboratory reports.

Acronyms:
µg/kg = micrograms per kilogram
BGS = Below ground surface
DC = Direct-Contact
DUP = Quality Control Field Duplicate Sample
NS = No Standard
PFAS = Per- and polyfluoroalkyl substances
RCL = Soil Residual Contaminant Level
WDNR = Wisconsin Department of Natural Resources

Table 2. PFAS Groundwater Analytical Results Compared to USEPA HAL and Proposed WDNR PAL and ES

DIC Imaging Products USA Inc, Liquid Compounds Facility
7335 South 10th Street, Oak Creek, Wisconsin

		PFAS	PFAS	PFAS	PFAS	PFAS	PFAS	PFAS	PFAS	PFAS	PFAS	PFAS	PFAS	PFAS	PFAS	PFAS	PFAS	PFAS	PFAS
Sample Location	Sample Date	PFAS (6)	PFOS & PFOA	Perfluorooctanesulfonic acid (PFOS)	Perfluorooctanoic acid (PFOA)	Perfluorooctanesulfonamide (FOSA)	NEtFOSA	NEtFOSAA	NEtFOSE	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	4:2 Fluorotelomer sulfonic acid	6:2 Fluorotelomer sulfonic acid	8:2 Fluorotelomer sulfonic acid	F-53B Major	F-53B Minor	HFPO-DA (GenX)	NMeFOSA	NMeFOSAA	NMeFOSE
Reporting Units:		ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L
		Result Flag	Result Flag	Result Flag	Result Flag	Result Flag	Result Flag	Result Flag	Result Flag	Result Flag	Result Flag	Result Flag	Result Flag	Result Flag	Result Flag	Result Flag	Result Flag	Result Flag	Result Flag
USEPA Groundwater HAL:		*NS*	*70*	*70*	*70*	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*
Proposed WI Groundwater ES:		**20**	**NS**	**20**	**20**	**20**	**20**	**20**	**20**	**3,000**	**NS**	**NS**	**NS**	**NS**	**NS**	**300**	**NS**	**NS**	**NS**
Proposed WI Groundwater PAL:		2	NS	2	2	2	2	2	2	600	NS	NS	NS	NS	NS	30	NS	NS	NS
MW-1	7/28/2021	**180.00**	*180.00*	0.49 U	***180***	0.89 U	0.79 U	1.2 U	0.77 U	0.36 U	50	2,400	1.4 J	0.22 U	0.29 U	1.4 U	0.39 U	1.1 U	1.3 U
MW-2	7/28/2021	1.00	1.00	0.49 U	1.0 J	0.88 U	0.78 U	1.2 U	0.77 U	0.36 U	5.3	31	0.41 U	0.22 U	0.29 U	1.4 U	0.39 U	1.1 U	1.3 U
MW-2 DUP	7/28/2021	1.50	1.50	0.49 U	1.5 J	0.88 U	0.79 U	1.2 U	0.77 U	0.36 U	9.1	35	0.42 U	0.22 U	0.29 U	1.4 U	0.39 U	1.1 U	1.3 U
MW-3	7/28/2021	1.40	1.40	0.49 U	1.4 J	0.90 U	0.80 U	1.2 U	0.78 U	0.37 U	0.22 U	2.3 U	0.42 U	0.22 U	0.29 U	1.4 U	0.39 U	1.1 U	1.3 U
Total Number of Samples Analyzed:		3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Number of Detections:		3	3	0	3	0	0	0	0	0	2	2	1	0	0	0	0	0	0
Min:		1	1	NA	1	NA	NA	NA	NA	NA	5.3	31	1.4	NA	NA	NA	NA	NA	NA
Max:		180	180	NA	180	NA	NA	NA	NA	NA	50	2,400	1.4	NA	NA	NA	NA	NA	NA
USEPA Groundwater HAL:		NS	70	70	70	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Exceedances for USEPA GW HAL:		0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Proposed WI Groundwater ES:		20	NS	20	20	20	20	20	20	3000	NS	NS	NS	NS	NS	300	NS	NS	NS
Exceedances for Proposed WI GW ES:		1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Proposed WI Groundwater PAL:		2	NS	2	2	2	2	2	2	600	NS	NS	NS	NS	NS	30	NS	NS	NS
Exceedances for Proposed WI GW PAL:		1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Notes:

Italics	*exceeds USEPA Groundwater HAL*
Bold	**attains or exceeds Proposed WI Groundwater ES**
Underlined	attains or exceeds Proposed WI Groundwater PAL

Statistics exclude the quality control field duplicate samples (DUPs).

Results & Flags:
J = Estimated concentration
NA = Not Applicable
U = Not Detected

Acronyms:
DUP = Quality Control Field Duplicate Sample
ES = Enforcement Standard
HAL = Health Advisory Level
ng/L = nanograms per liter
NS = No Screening Level
PAL = Preventive Action Limit
PFAS = per- and polyfluoroalkyl substances
USEPA = U.S. Environmental Protection Agency
WDNR = Wisconsin Department of Natural Resources

Superscripts:
1. PFAS (6) were calculated by Ramboll as follows:
   a. Where detections were observed, only the detected results were added together for the total summation.
   b. Analytes used for the calculation are NEtFOSA, NEtFOSAA, NEtFOSE, FOSA, PFOS, and PFOA.
2. PFOS & PFOA was calculated by Ramboll as follows:
   a. Where detections were observed, only the detected results were added together for the total summation.
   b. Analytes used for the calculation are PFOS, and PFOA.

Screening Levels:
PAL and ES from WI Administrative Code NR 140 groundwater quality standard are proposed for PFAS. https://www.dhs.wisconsin.gov/water/gws-cycle11.htm
USEPA Health Advisory Limits are non-enforceable and non-regulatory, established in 2016.

Lab comments and definitions can be found in associated laboratory reports.

Table 2. PFAS Groundwater Analytical Results Compared to USEPA HAL and Proposed WDNR PAL and ES

DIC Imaging Products USA Inc, Liquid Compounds Facility
7335 South 10th Street, Oak Creek, Wisconsin

		PFAS		PFAS		PFAS		PFAS		PFAS		PFAS		PFAS		PFAS		PFAS		PFAS		PFAS		PFAS	
Sample Location	Sample Date	Perfluorobutanesulfonic acid (PFBS)		Perfluorobutanoic acid (PFBA)		Perfluorodecanesulfonic acid (PFDS)		Perfluorodecanoic acid (PFDA)		Perfluorododecanesulfonic acid (PFDoS)		Perfluorododecanoic acid (PFDoA)		Perfluoroheptanesulfonic Acid (PFHpS)		Perfluoroheptanoic acid (PFHpA)		Perfluorohexanesulfonic acid (PFHxS)		Perfluorohexanoic acid (PFHxA)		Perfluorononanesulfonic acid (PFNS)		Perfluorononanoic acid (PFNA)		Perfluoropentanesulfonic acid (PFPeS)		Perfluoropentanoic acid (PFPeA)		Perfluorotetradecanoic acid (PFTeA)		Perfluorotridecanoic acid (PFTriA)		Perfluoroundecanoic acid (PFUnA)	
Reporting Units:		ng/L		ng/L		ng/L		ng/L		ng/L		ng/L		ng/L		ng/L		ng/L		ng/L		ng/L		ng/L		ng/L		ng/L		ng/L		ng/L		ng/L	
		Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
USEPA Groundwater HAL:		*NS*		*NS*		*NS*		*NS*		*NS*		*NS*		*NS*		*NS*		*NS*		*NS*		*NS*		*NS*		*NS*		*NS*		*NS*		*NS*		*NS*	
Proposed WI Groundwater ES:		**450,000**		**10,000**		**NS**		**300**		**NS**		**500**		**NS**		**NS**		**40**		**150,000**		**NS**		**30**		**NS**		**NS**		**10,000**		**NS**		**3,000**	
Proposed WI Groundwater PAL:		90,000		2,000		NS		60		NS		100		NS		NS		4		30,000		NS		3		NS		NS		2,000		NS		600	
MW-1	7/28/2021	0.83	J	1,800		0.29	U	0.28	U	0.88	U	0.50	U	0.17	U	980		0.58	J	7,600		0.33	U	9.7		0.27	U	12,000		0.66	U	1.2	U	0.99	U
MW-2	7/28/2021	0.44	J	250		0.29	U	1.4	U	0.87	U	0.50	U	0.17	U	11		0.51	U	240		0.33	U	0.24	U	0.27	U	900		0.66	U	1.2	U	0.99	U
MW-2 DUP	7/28/2021	0.65	J	300		0.29	U	1.4	U	0.88	U	0.50	U	0.17	U	13		0.51	U	300		0.33	U	0.24	U	0.27	U	1,000		0.66	U	1.2	U	0.99	U
MW-3	7/28/2021	0.32	J	26		0.29	U	0.28	U	0.89	U	0.50	U	0.17	U	1.4	J	0.52	U	4.5		0.34	U	0.25	U	0.27	U	32		0.67	U	1.2	U	1.0	U
Total Number of Samples Analyzed:		3		3		3		3		3		3		3		3		3		3		3		3		3		3		3		3		3	
Number of Detections:		3		3		0		0		0		0		0		3		1		3		0		1		0		3		0		0		0	
Min:		0.32		26		NA		NA		NA		NA		NA		1.4		0.58		4.5		NA		9.7		NA		32		NA		NA		NA	
Max:		0.83		1,800		NA		NA		NA		NA		NA		980		0.58		7,600		NA		9.7		NA		12,000		NA		NA		NA	
USEPA Groundwater HAL:		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS	
Exceedances for USEPA GW HAL:		0		0		0		0		0		0		0		0		0		0		0		0		0		0		0		0		0	
Proposed WI Groundwater ES:		450000		10000		NS		300		NS		500		NS		NS		40		150000		NS		30		NS		NS		10000		NS		3000	
Exceedances for Proposed WI GW ES:		0		0		0		0		0		0		0		0		0		0		0		0		0		0		0		0		0	
Proposed WI Groundwater PAL:		90000		2000		NS		60		NS		100		NS		NS		4		30000		NS		3		NS		NS		2000		NS		600	
Exceedances for Proposed WI GW PAL:		0		0		0		0		0		0		0		0		0		0		0		1		0		0		0		0		0	

[O:MGP 8/10/21, C:SGW 8/11/21]

Notes:

Italics	*exceeds USEPA Groundwater HAL*
Bold	**attains or exceeds Proposed WI Groundwater ES**
Underlined	attains or exceeds Proposed WI Groundwater PAL

Statistics exclude the quality control field duplicate samples (DUPs).

Results & Flags:
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Acronyms:
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Screening Levels:
PAL and ES from WI Administrative Code NR 140 groundwater quality standard are proposed for PFAS. https://www.dhs.wisconsin.gov/water/gws-cycle11.htm
USEPA Health Advisory Limits are non-enforceable and non-regulatory, established in 2016.

Lab comments and definitions can be found in associated laboratory reports.

ATTACHMENT 1
ANALYTICAL LABORATORY REPORTS

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Tel: (916)373-5600

Laboratory Job ID: 320-76427-1
Client Project/Site: Reichhold Oak Creek
Revision: 1

For:
Ramboll US Corporation
5050 Lincoln Drive, Suite 440
Edina, Minnesota 55436

Attn: Abby Small

Sandie Fredrick

Authorized for release by:
8/17/2021 11:56:03 AM

Sandie Fredrick, Project Manager II
(920)261-1660
sandra.fredrick@eurofinset.com

LINKS

Review your project results through TotalAccess

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The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Table of Contents

Definitions/Glossary

Client: Ramboll US Corporation
Project/Site: Reichhold Oak Creek

Job ID: 320-76427-1

Qualifiers

LCMS

Qualifier	Qualifier Description
*5-	Isotope dilution analyte is outside acceptance limits, low biased.
*5+	Isotope dilution analyte is outside acceptance limits, high biased.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
I	Value is EMPC (estimated maximum possible concentration).
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

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

Job ID: 320-76427-1

Laboratory: Eurofins TestAmerica, Sacramento

Narrative

Job Narrative
320-76427-1

Comments
No additional comments.

Receipt
The samples were received on 7/19/2021 8:47 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 21.3º C.

Receipt Exceptions
The following samples were received at the laboratory outside the required temperature criteria: SB-1 (0-0.5) (320-76427-1), SB-2 (8-9) (320-76427-2), FB-01-210714 (320-76427-3), EB-01-210714 (320-76427-4), SB-3 (3-4) (320-76427-5), SED-COMP (320-76427-6), SED-COMP-DUP (320-76427-7), SB-4 (7-9) (320-76427-8) and SB-4 (7-9) DUP (320-76427-9).

Client updated PFAS analyte list

LCMS
Method 537 (modified): The continuing calibration verification (CCV) associated with batch 320-508954 recovered above the upper control limit for Perfluorotridecanoic acid (PFTrDA). The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: SB-2 (8-9) (320-76427-2), FB-01-210714 (320-76427-3), EB-01-210714 (320-76427-4), SB-3 (3-4) (320-76427-5), SB-4 (7-9) (320-76427-8), SB-4 (7-9) DUP (320-76427-9) and (CCV 320-508954/3).

Method 537 (modified): The "I" qualifier means the transition mass ratio for the indicated analyte was outside of the established ratio limits. The qualitative identification of the analytes has some degree of uncertainty, and the reported value may have some high bias. However, analyst judgment was used to positively identify the analyte. (CCB 320-508954/1) and (CCVL 320-508954/2)

Method 537 (modified): The "I" qualifier means the transition mass ratio for the indicated analyte was outside of the established ratio limits. The qualitative identification of the analyte has some degree of uncertainty, and the reported value may have some high bias. However, analyst judgment was used to positively identify the analyte. (CCB 320-508965/15)

Method 537 (modified): The "I" qualifier means the transition mass ratio for the indicated analyte(s)was/ were outside of the established ratio limit(s). The qualitative identification of the analyte(s) has/ have some degree of uncertainty, and the reported value(s) may have some high bias. However, analyst judgment was used to positively identify the analytes. SB-3 (3-4) (320-76427-5), SED-COMP (320-76427-6) and (CCB 320-508979/15)

Method 537 (modified): The “I” qualifier means the transition mass ratio for the indicated analyte was outside of the established ratio limits. The qualitative identification of the analyte has some degree of uncertainty, and the reported value may have some high bias. However, analyst judgement was used to positively identify the analyte. SED-COMP (320-76427-6), SED-COMP-DUP (320-76427-7) and (CCB 320-509929/17)

Method 537 (modified): The Isotope Dilution Analyte (IDA) recovery associated with the following sample is below the method recommended limit: SED-COMP-DUP (320-76427-7). This sample was reanalyzed at dilution with improve recovery. Generally, data quality is not considered affected if the IDA signal-to-noise ratio is greater than 10:1, which is achieved for all IDA in the sample(s).

Method 537 (modified): Isotope Dilution Analyte (IDA) recovery is above the method recommended limit for the following sample: SED-COMP-DUP (320-76427-7). This sample was reanalyzed at dilution with improve recovery. Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries.

Method 537 (modified): The "I" qualifier means the transition mass ratio for the indicated analyte was outside of the established ratio limits. The qualitative identification of the analyte has some degree of uncertainty, and the reported value may have some high bias. However, analyst judgment was used to positively identify the analyte. SED-COMP-DUP (320-76427-7)

Method 537 (modified): Results for sample SED-COMP (320-76427-6) and SED-COMP-DUP (320-76427-7) were reported from the

Job ID: 320-76427-1 (Continued)

Laboratory: Eurofins TestAmerica, Sacramento (Continued)

analysis of a diluted extract due to sample matrix in the analysis of the undiluted extract. The dilution factor was applied to the labeled internal standard area counts and these area counts were within acceptance limits

Method 537 (modified): The matrix spike (MS) recoveries for preparation batch 320-510504 and analytical batch 320-510816 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 537 (modified): Due to the high concentration of 8:2 FTS, the matrix spike / matrix spike duplicate (MS/MSD) for preparation batch 320-510504 and analytical batch 320-510816 could not be evaluated for accuracy and precision. The associated laboratory control sample (LCS) met acceptance criteria.

Method 537 (modified): The matrix spike / matrix spike duplicate (MS/MSD) precision for preparation batch 320-510504 and analytical batch 320-510816 was outside control limits. Sample matrix interference is suspected.

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

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

Organic Prep
Method 3535: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 320-508645. Method: 3535_PFC_28D Matrix: Water

Method SHAKE: The following samples were yellow after extraction/final volume: SED-COMP (320-76427-6) and SED-COMP-DUP (320-76427-7) PFC_IDA_WI Solid

Method SHAKE: Due to the matrix, the initial volumes used for the following samples deviated from the standard procedure: SB-1 (0-0.5) (320-76427-1), (320-76427-A-1 MS) and (320-76427-A-1 MSD). The reporting limits (RLs) have been adjusted proportionately. PFC_IDA Solid

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

Detection Summary

Client: Ramboll US Corporation
Project/Site: Reichhold Oak Creek

Job ID: 320-76427-1

Client Sample ID: SB-1 (0-0.5) — Lab Sample ID: 320-76427-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	5.3		1.2	0.27	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	18	F1	1.2	0.24	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	6.7		1.2	0.18	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	6.0		1.2	0.23	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	18	F2 F1	1.2	0.32	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	7.3		1.2	0.13	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorodecanoic acid (PFDA)	2.4		1.2	0.29	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluoroundecanoic acid (PFUnA)	0.57	J	1.2	0.25	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorododecanoic acid (PFDoA)	0.48	J	1.2	0.18	ug/Kg	1	☼	537 (modified)	Total/NA
6:2 FTS	6.4		1.2	0.16	ug/Kg	1	☼	537 (modified)	Total/NA
8:2 FTS	66	F2	1.2	0.21	ug/Kg	1	☼	537 (modified)	Total/NA

Client Sample ID: SB-2 (8-9) — Lab Sample ID: 320-76427-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	0.084	J	0.27	0.061	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	0.27		0.27	0.055	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	0.16	J	0.27	0.041	ug/Kg	1	☼	537 (modified)	Total/NA
6:2 FTS	0.065	J	0.27	0.036	ug/Kg	1	☼	537 (modified)	Total/NA

Client Sample ID: FB-01-210714 — Lab Sample ID: 320-76427-3

No Detections.

Client Sample ID: EB-01-210714 — Lab Sample ID: 320-76427-4

No Detections.

Client Sample ID: SB-3 (3-4) — Lab Sample ID: 320-76427-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	0.74		0.24	0.055	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	0.71		0.24	0.049	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	0.065	J	0.24	0.037	ug/Kg	1	☼	537 (modified)	Total/NA

Client Sample ID: SED-COMP — Lab Sample ID: 320-76427-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluoropentanoic acid (PFPeA)	26		1.9	0.40	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	21		1.9	0.30	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	5.4		1.9	0.37	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	6.6		1.9	0.52	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	3.1		1.9	0.21	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorodecanoic acid (PFDA)	4.2		1.9	0.47	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluoroundecanoic acid (PFUnA)	4.9		1.9	0.41	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorododecanoic acid (PFDoA)	5.2		1.9	0.29	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorotridecanoic acid (PFTriA)	1.3	J	1.9	0.20	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorotetradecanoic acid (PFTeA)	1.3	J	1.9	0.36	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorooctanesulfonamide (FOSA)	0.41	J	1.9	0.32	ug/Kg	1	☼	537 (modified)	Total/NA
NMeFOSAA	0.48	J	1.9	0.22	ug/Kg	1	☼	537 (modified)	Total/NA
NMeFOSE	0.56	J	1.9	0.46	ug/Kg	1	☼	537 (modified)	Total/NA
NEtFOSE	0.64	J	1.9	0.27	ug/Kg	1	☼	537 (modified)	Total/NA
6:2 FTS	28		1.9	0.26	ug/Kg	1	☼	537 (modified)	Total/NA
8:2 FTS	47		1.9	0.34	ug/Kg	1	☼	537 (modified)	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Ramboll US Corporation
Project/Site: Reichhold Oak Creek

Job ID: 320-76427-1

Client Sample ID: SED-COMP-DUP — Lab Sample ID: 320-76427-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	4.5		1.7	0.39	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	30		1.7	0.35	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	25		1.7	0.26	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	6.3		1.7	0.32	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	9.0		1.7	0.45	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	4.8		1.7	0.19	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorodecanoic acid (PFDA)	6.5		1.7	0.41	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluoroundecanoic acid (PFUnA)	9.5		1.7	0.36	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorododecanoic acid (PFDoA)	7.0		1.7	0.26	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorotridecanoic acid (PFTriA)	1.6	J	1.7	0.18	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorotetradecanoic acid (PFTeA)	2.0		1.7	0.32	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorodecanesulfonic acid (PFDS)	0.65	J	1.7	0.44	ug/Kg	1	☼	537 (modified)	Total/NA
Perfluorooctanesulfonamide (FOSA)	0.75	J	1.7	0.28	ug/Kg	1	☼	537 (modified)	Total/NA
NMeFOSAA	0.66	J I	1.7	0.20	ug/Kg	1	☼	537 (modified)	Total/NA
NEtFOSE	0.76	J	1.7	0.24	ug/Kg	1	☼	537 (modified)	Total/NA
6:2 FTS	39		1.7	0.23	ug/Kg	1	☼	537 (modified)	Total/NA
8:2 FTS	65		1.7	0.30	ug/Kg	1	☼	537 (modified)	Total/NA

Client Sample ID: SB-4 (7-9) — Lab Sample ID: 320-76427-8

No Detections.

Client Sample ID: SB-4 (7-9) DUP — Lab Sample ID: 320-76427-9

No Detections.

This Detection Summary does not include radiochemical test results.

Client: Ramboll US Corporation
Project/Site: Reichhold Oak Creek

Job ID: 320-76427-1

Client Sample ID: SB-1 (0-0.5)
Date Collected: 07/14/21 08:50
Date Received: 07/19/21 08:47

Lab Sample ID: 320-76427-1
Matrix: Solid
Percent Solids: 81.5

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**5.3**		1.2	0.27	ug/Kg	☼	07/27/21 04:48	07/28/21 06:17	1
Perfluoropentanoic acid (PFPeA)	**18**	**F1**	1.2	0.24	ug/Kg	☼	07/27/21 04:48	07/28/21 06:17	1
Perfluorohexanoic acid (PFHxA)	**6.7**		1.2	0.18	ug/Kg	☼	07/27/21 04:48	07/28/21 06:17	1
Perfluoroheptanoic acid (PFHpA)	**6.0**		1.2	0.23	ug/Kg	☼	07/27/21 04:48	07/28/21 06:17	1
Perfluorooctanoic acid (PFOA)	**18**	**F2 F1**	1.2	0.32	ug/Kg	☼	07/27/21 04:48	07/28/21 06:17	1
Perfluorononanoic acid (PFNA)	**7.3**		1.2	0.13	ug/Kg	☼	07/27/21 04:48	07/28/21 06:17	1
Perfluorodecanoic acid (PFDA)	**2.4**		1.2	0.29	ug/Kg	☼	07/27/21 04:48	07/28/21 06:17	1
Perfluoroundecanoic acid (PFUnA)	**0.57**	**J**	1.2	0.25	ug/Kg	☼	07/27/21 04:48	07/28/21 06:17	1
Perfluorododecanoic acid (PFDoA)	**0.48**	**J**	1.2	0.18	ug/Kg	☼	07/27/21 04:48	07/28/21 06:17	1
Perfluorotridecanoic acid (PFTriA)	<0.13		1.2	0.13	ug/Kg	☼	07/27/21 04:48	07/28/21 06:17	1
Perfluorotetradecanoic acid (PFTeA)	<0.22		1.2	0.22	ug/Kg	☼	07/27/21 04:48	07/28/21 06:17	1
Perfluorobutanesulfonic acid (PFBS)	<0.23		1.2	0.23	ug/Kg	☼	07/27/21 04:48	07/28/21 06:17	1
Perfluoropentanesulfonic acid (PFPeS)	<0.22		1.2	0.22	ug/Kg	☼	07/27/21 04:48	07/28/21 06:17	1
Perfluorohexanesulfonic acid (PFHxS)	<0.17		1.2	0.17	ug/Kg	☼	07/27/21 04:48	07/28/21 06:17	1
Perfluoroheptanesulfonic Acid (PFHpS)	<0.29		1.2	0.29	ug/Kg	☼	07/27/21 04:48	07/28/21 06:17	1
Perfluorooctanesulfonic acid (PFOS)	<0.26		1.2	0.26	ug/Kg	☼	07/27/21 04:48	07/28/21 06:17	1
Perfluorononanesulfonic acid (PFNS)	<0.17		1.2	0.17	ug/Kg	☼	07/27/21 04:48	07/28/21 06:17	1
Perfluorodecanesulfonic acid (PFDS)	<0.31		1.2	0.31	ug/Kg	☼	07/27/21 04:48	07/28/21 06:17	1
Perfluorododecanesulfonic acid (PFDoS)	<0.28		1.2	0.28	ug/Kg	☼	07/27/21 04:48	07/28/21 06:17	1
Perfluorooctanesulfonamide (FOSA)	<0.20		1.2	0.20	ug/Kg	☼	07/27/21 04:48	07/28/21 06:17	1
NEtFOSA	<0.28		1.2	0.28	ug/Kg	☼	07/27/21 04:48	07/28/21 06:17	1
NMeFOSA	<0.29		1.2	0.29	ug/Kg	☼	07/27/21 04:48	07/28/21 06:17	1
NMeFOSAA	<0.14		1.2	0.14	ug/Kg	☼	07/27/21 04:48	07/28/21 06:17	1
NEtFOSAA	<0.29		1.2	0.29	ug/Kg	☼	07/27/21 04:48	07/28/21 06:17	1
NMeFOSE	<0.28		1.2	0.28	ug/Kg	☼	07/27/21 04:48	07/28/21 06:17	1
NEtFOSE	<0.17		1.2	0.17	ug/Kg	☼	07/27/21 04:48	07/28/21 06:17	1
4:2 FTS	<0.30		1.2	0.30	ug/Kg	☼	07/27/21 04:48	07/28/21 06:17	1
6:2 FTS	**6.4**		1.2	0.16	ug/Kg	☼	07/27/21 04:48	07/28/21 06:17	1
8:2 FTS	**66**	**F2**	1.2	0.21	ug/Kg	☼	07/27/21 04:48	07/28/21 06:17	1
DONA	<0.23		1.2	0.23	ug/Kg	☼	07/27/21 04:48	07/28/21 06:17	1
HFPO-DA (GenX)	<0.24		1.2	0.24	ug/Kg	☼	07/27/21 04:48	07/28/21 06:17	1
F-53B Major	<0.21		1.2	0.21	ug/Kg	☼	07/27/21 04:48	07/28/21 06:17	1
F-53B Minor	<0.18		1.2	0.18	ug/Kg	☼	07/27/21 04:48	07/28/21 06:17	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*76*		*25 - 150*	*07/27/21 04:48*	*07/28/21 06:17*	*1*
13C5 PFPeA	*100*		*25 - 150*	*07/27/21 04:48*	*07/28/21 06:17*	*1*
13C2 PFHxA	*104*		*25 - 150*	*07/27/21 04:48*	*07/28/21 06:17*	*1*
13C4 PFHpA	*105*		*25 - 150*	*07/27/21 04:48*	*07/28/21 06:17*	*1*
13C4 PFOA	*99*		*25 - 150*	*07/27/21 04:48*	*07/28/21 06:17*	*1*
13C5 PFNA	*105*		*25 - 150*	*07/27/21 04:48*	*07/28/21 06:17*	*1*
13C2 PFDA	*89*		*25 - 150*	*07/27/21 04:48*	*07/28/21 06:17*	*1*
13C2 PFUnA	*107*		*25 - 150*	*07/27/21 04:48*	*07/28/21 06:17*	*1*
13C2 PFDoA	*100*		*25 - 150*	*07/27/21 04:48*	*07/28/21 06:17*	*1*
13C2 PFTeDA	*84*		*25 - 150*	*07/27/21 04:48*	*07/28/21 06:17*	*1*
13C3 PFBS	*96*		*25 - 150*	*07/27/21 04:48*	*07/28/21 06:17*	*1*

Client: Ramboll US Corporation
Project/Site: Reichhold Oak Creek

Job ID: 320-76427-1

Client Sample ID: SB-1 (0-0.5)
Date Collected: 07/14/21 08:50
Date Received: 07/19/21 08:47

Lab Sample ID: 320-76427-1
Matrix: Solid
Percent Solids: 81.5

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
18O2 PFHxS	99		25 - 150	07/27/21 04:48	07/28/21 06:17	1
13C4 PFOS	103		25 - 150	07/27/21 04:48	07/28/21 06:17	1
13C8 FOSA	113		10 - 150	07/27/21 04:48	07/28/21 06:17	1
d3-NMeFOSAA	87		25 - 150	07/27/21 04:48	07/28/21 06:17	1
d5-NEtFOSAA	88		25 - 150	07/27/21 04:48	07/28/21 06:17	1
d-N-MeFOSA-M	102		10 - 150	07/27/21 04:48	07/28/21 06:17	1
d-N-EtFOSA-M	99		10 - 150	07/27/21 04:48	07/28/21 06:17	1
d7-N-MeFOSE-M	69		10 - 150	07/27/21 04:48	07/28/21 06:17	1
d9-N-EtFOSE-M	73		10 - 150	07/27/21 04:48	07/28/21 06:17	1
M2-4:2 FTS	107		25 - 150	07/27/21 04:48	07/28/21 06:17	1
M2-6:2 FTS	118		25 - 150	07/27/21 04:48	07/28/21 06:17	1
M2-8:2 FTS	97		25 - 150	07/27/21 04:48	07/28/21 06:17	1
13C3 HFPO-DA	102		25 - 150	07/27/21 04:48	07/28/21 06:17	1
13C2 10:2 FTS	81		25 - 150	07/27/21 04:48	07/28/21 06:17	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	18.5		0.1	0.1	%			07/20/21 12:16	1
Percent Solids	81.5		0.1	0.1	%			07/20/21 12:16	1

Client: Ramboll US Corporation
Project/Site: Reichhold Oak Creek

Job ID: 320-76427-1

Client Sample ID: SB-2 (8-9)
Date Collected: 07/14/21 10:50
Date Received: 07/19/21 08:47

Lab Sample ID: 320-76427-2
Matrix: Solid
Percent Solids: 74.0

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**0.084**	**J**	0.27	0.061	ug/Kg	☼	07/20/21 18:41	07/23/21 07:48	1
Perfluoropentanoic acid (PFPeA)	**0.27**		0.27	0.055	ug/Kg	☼	07/20/21 18:41	07/23/21 07:48	1
Perfluorohexanoic acid (PFHxA)	**0.16**	**J**	0.27	0.041	ug/Kg	☼	07/20/21 18:41	07/23/21 07:48	1
Perfluoroheptanoic acid (PFHpA)	<0.051		0.27	0.051	ug/Kg	☼	07/20/21 18:41	07/23/21 07:48	1
Perfluorooctanoic acid (PFOA)	<0.070		0.27	0.070	ug/Kg	☼	07/20/21 18:41	07/23/21 07:48	1
Perfluorononanoic acid (PFNA)	<0.029		0.27	0.029	ug/Kg	☼	07/20/21 18:41	07/23/21 07:48	1
Perfluorodecanoic acid (PFDA)	<0.064		0.27	0.064	ug/Kg	☼	07/20/21 18:41	07/23/21 07:48	1
Perfluoroundecanoic acid (PFUnA)	<0.056		0.27	0.056	ug/Kg	☼	07/20/21 18:41	07/23/21 07:48	1
Perfluorododecanoic acid (PFDoA)	<0.040		0.27	0.040	ug/Kg	☼	07/20/21 18:41	07/23/21 07:48	1
Perfluorotridecanoic acid (PFTriA)	<0.028		0.27	0.028	ug/Kg	☼	07/20/21 18:41	07/23/21 07:48	1
Perfluorotetradecanoic acid (PFTeA)	<0.049		0.27	0.049	ug/Kg	☼	07/20/21 18:41	07/23/21 07:48	1
Perfluorobutanesulfonic acid (PFBS)	<0.051		0.27	0.051	ug/Kg	☼	07/20/21 18:41	07/23/21 07:48	1
Perfluoropentanesulfonic acid (PFPeS)	<0.049		0.27	0.049	ug/Kg	☼	07/20/21 18:41	07/23/21 07:48	1
Perfluorohexanesulfonic acid (PFHxS)	<0.039		0.27	0.039	ug/Kg	☼	07/20/21 18:41	07/23/21 07:48	1
Perfluoroheptanesulfonic Acid (PFHpS)	<0.065		0.27	0.065	ug/Kg	☼	07/20/21 18:41	07/23/21 07:48	1
Perfluorooctanesulfonic acid (PFOS)	<0.057		0.27	0.057	ug/Kg	☼	07/20/21 18:41	07/23/21 07:48	1
Perfluorononanesulfonic acid (PFNS)	<0.039		0.27	0.039	ug/Kg	☼	07/20/21 18:41	07/23/21 07:48	1
Perfluorodecanesulfonic acid (PFDS)	<0.069		0.27	0.069	ug/Kg	☼	07/20/21 18:41	07/23/21 07:48	1
Perfluorododecanesulfonic acid (PFDoS)	<0.063		0.27	0.063	ug/Kg	☼	07/20/21 18:41	07/23/21 07:48	1
Perfluorooctanesulfonamide (FOSA)	<0.044		0.27	0.044	ug/Kg	☼	07/20/21 18:41	07/23/21 07:48	1
NEtFOSA	<0.063		0.27	0.063	ug/Kg	☼	07/20/21 18:41	07/23/21 07:48	1
NMeFOSA	<0.065		0.27	0.065	ug/Kg	☼	07/20/21 18:41	07/23/21 07:48	1
NMeFOSAA	<0.031		0.27	0.031	ug/Kg	☼	07/20/21 18:41	07/23/21 07:48	1
NEtFOSAA	<0.064		0.27	0.064	ug/Kg	☼	07/20/21 18:41	07/23/21 07:48	1
NMeFOSE	<0.063		0.27	0.063	ug/Kg	☼	07/20/21 18:41	07/23/21 07:48	1
NEtFOSE	<0.037		0.27	0.037	ug/Kg	☼	07/20/21 18:41	07/23/21 07:48	1
4:2 FTS	<0.068		0.27	0.068	ug/Kg	☼	07/20/21 18:41	07/23/21 07:48	1
6:2 FTS	**0.065**	**J**	0.27	0.036	ug/Kg	☼	07/20/21 18:41	07/23/21 07:48	1
8:2 FTS	<0.047		0.27	0.047	ug/Kg	☼	07/20/21 18:41	07/23/21 07:48	1
DONA	<0.052		0.27	0.052	ug/Kg	☼	07/20/21 18:41	07/23/21 07:48	1
HFPO-DA (GenX)	<0.055		0.27	0.055	ug/Kg	☼	07/20/21 18:41	07/23/21 07:48	1
F-53B Major	<0.047		0.27	0.047	ug/Kg	☼	07/20/21 18:41	07/23/21 07:48	1
F-53B Minor	<0.041		0.27	0.041	ug/Kg	☼	07/20/21 18:41	07/23/21 07:48	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*67*		*25 - 150*	*07/20/21 18:41*	*07/23/21 07:48*	*1*
13C5 PFPeA	*71*		*25 - 150*	*07/20/21 18:41*	*07/23/21 07:48*	*1*
13C2 PFHxA	*76*		*25 - 150*	*07/20/21 18:41*	*07/23/21 07:48*	*1*
13C4 PFHpA	*76*		*25 - 150*	*07/20/21 18:41*	*07/23/21 07:48*	*1*
13C4 PFOA	*78*		*25 - 150*	*07/20/21 18:41*	*07/23/21 07:48*	*1*
13C5 PFNA	*71*		*25 - 150*	*07/20/21 18:41*	*07/23/21 07:48*	*1*
13C2 PFDA	*80*		*25 - 150*	*07/20/21 18:41*	*07/23/21 07:48*	*1*
13C2 PFUnA	*74*		*25 - 150*	*07/20/21 18:41*	*07/23/21 07:48*	*1*
13C2 PFDoA	*79*		*25 - 150*	*07/20/21 18:41*	*07/23/21 07:48*	*1*
13C2 PFTeDA	*68*		*25 - 150*	*07/20/21 18:41*	*07/23/21 07:48*	*1*
13C3 PFBS	*83*		*25 - 150*	*07/20/21 18:41*	*07/23/21 07:48*	*1*
18O2 PFHxS	*74*		*25 - 150*	*07/20/21 18:41*	*07/23/21 07:48*	*1*
13C4 PFOS	*70*		*25 - 150*	*07/20/21 18:41*	*07/23/21 07:48*	*1*

Client: Ramboll US Corporation
Project/Site: Reichhold Oak Creek

Job ID: 320-76427-1

Client Sample ID: SB-2 (8-9)
Date Collected: 07/14/21 10:50
Date Received: 07/19/21 08:47

Lab Sample ID: 320-76427-2
Matrix: Solid
Percent Solids: 74.0

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 FOSA	75		10 - 150	07/20/21 18:41	07/23/21 07:48	1
d3-NMeFOSAA	75		25 - 150	07/20/21 18:41	07/23/21 07:48	1
d5-NEtFOSAA	85		25 - 150	07/20/21 18:41	07/23/21 07:48	1
d-N-MeFOSA-M	75		10 - 150	07/20/21 18:41	07/23/21 07:48	1
d-N-EtFOSA-M	66		10 - 150	07/20/21 18:41	07/23/21 07:48	1
d7-N-MeFOSE-M	48		10 - 150	07/20/21 18:41	07/23/21 07:48	1
d9-N-EtFOSE-M	58		10 - 150	07/20/21 18:41	07/23/21 07:48	1
M2-4:2 FTS	78		25 - 150	07/20/21 18:41	07/23/21 07:48	1
M2-6:2 FTS	82		25 - 150	07/20/21 18:41	07/23/21 07:48	1
M2-8:2 FTS	86		25 - 150	07/20/21 18:41	07/23/21 07:48	1
13C3 HFPO-DA	71		25 - 150	07/20/21 18:41	07/23/21 07:48	1
13C2 10:2 FTS	99		25 - 150	07/20/21 18:41	07/23/21 07:48	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	26.0		0.1	0.1	%			07/20/21 12:16	1
Percent Solids	74.0		0.1	0.1	%			07/20/21 12:16	1

Client: Ramboll US Corporation
Project/Site: Reichhold Oak Creek

Job ID: 320-76427-1

Client Sample ID: FB-01-210714
Date Collected: 07/14/21 12:05
Date Received: 07/19/21 08:47

Lab Sample ID: 320-76427-3
Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<2.0		4.2	2.0	ng/L		07/20/21 19:23	07/21/21 22:22	1
Perfluoropentanoic acid (PFPeA)	<0.41		1.7	0.41	ng/L		07/20/21 19:23	07/21/21 22:22	1
Perfluorohexanoic acid (PFHxA)	<0.48		1.7	0.48	ng/L		07/20/21 19:23	07/21/21 22:22	1
Perfluoroheptanoic acid (PFHpA)	<0.21		1.7	0.21	ng/L		07/20/21 19:23	07/21/21 22:22	1
Perfluorooctanoic acid (PFOA)	<0.71		1.7	0.71	ng/L		07/20/21 19:23	07/21/21 22:22	1
Perfluorononanoic acid (PFNA)	<0.22		1.7	0.22	ng/L		07/20/21 19:23	07/21/21 22:22	1
Perfluorodecanoic acid (PFDA)	<0.26		1.7	0.26	ng/L		07/20/21 19:23	07/21/21 22:22	1
Perfluoroundecanoic acid (PFUnA)	<0.91		1.7	0.91	ng/L		07/20/21 19:23	07/21/21 22:22	1
Perfluorododecanoic acid (PFDoA)	<0.46		1.7	0.46	ng/L		07/20/21 19:23	07/21/21 22:22	1
Perfluorotridecanoic acid (PFTriA)	<1.1		1.7	1.1	ng/L		07/20/21 19:23	07/21/21 22:22	1
Perfluorotetradecanoic acid (PFTeA)	<0.61		1.7	0.61	ng/L		07/20/21 19:23	07/21/21 22:22	1
Perfluorobutanesulfonic acid (PFBS)	<0.17		1.7	0.17	ng/L		07/20/21 19:23	07/21/21 22:22	1
Perfluoropentanesulfonic acid (PFPeS)	<0.25		1.7	0.25	ng/L		07/20/21 19:23	07/21/21 22:22	1
Perfluorohexanesulfonic acid (PFHxS)	<0.47		1.7	0.47	ng/L		07/20/21 19:23	07/21/21 22:22	1
Perfluoroheptanesulfonic Acid (PFHpS)	<0.16		1.7	0.16	ng/L		07/20/21 19:23	07/21/21 22:22	1
Perfluorooctanesulfonic acid (PFOS)	<0.45		1.7	0.45	ng/L		07/20/21 19:23	07/21/21 22:22	1
Perfluorononanesulfonic acid (PFNS)	<0.31		1.7	0.31	ng/L		07/20/21 19:23	07/21/21 22:22	1
Perfluorodecanesulfonic acid (PFDS)	<0.27		1.7	0.27	ng/L		07/20/21 19:23	07/21/21 22:22	1
Perfluorododecanesulfonic acid (PFDoS)	<0.81		1.7	0.81	ng/L		07/20/21 19:23	07/21/21 22:22	1
Perfluorooctanesulfonamide (FOSA)	<0.81		1.7	0.81	ng/L		07/20/21 19:23	07/21/21 22:22	1
NEtFOSA	<0.72		1.7	0.72	ng/L		07/20/21 19:23	07/21/21 22:22	1
NMeFOSA	<0.36		1.7	0.36	ng/L		07/20/21 19:23	07/21/21 22:22	1
NMeFOSAA	<1.0		4.2	1.0	ng/L		07/20/21 19:23	07/21/21 22:22	1
NEtFOSAA	<1.1		4.2	1.1	ng/L		07/20/21 19:23	07/21/21 22:22	1
NMeFOSE	<1.2		3.3	1.2	ng/L		07/20/21 19:23	07/21/21 22:22	1
NEtFOSE	<0.71		1.7	0.71	ng/L		07/20/21 19:23	07/21/21 22:22	1
4:2 FTS	<0.20		1.7	0.20	ng/L		07/20/21 19:23	07/21/21 22:22	1
6:2 FTS	<2.1		4.2	2.1	ng/L		07/20/21 19:23	07/21/21 22:22	1
8:2 FTS	<0.38		1.7	0.38	ng/L		07/20/21 19:23	07/21/21 22:22	1
DONA	<0.33		1.7	0.33	ng/L		07/20/21 19:23	07/21/21 22:22	1
HFPO-DA (GenX)	<1.2		3.3	1.2	ng/L		07/20/21 19:23	07/21/21 22:22	1
F-53B Major	<0.20		1.7	0.20	ng/L		07/20/21 19:23	07/21/21 22:22	1
F-53B Minor	<0.27		1.7	0.27	ng/L		07/20/21 19:23	07/21/21 22:22	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*103*		*25 - 150*	*07/20/21 19:23*	*07/21/21 22:22*	*1*
13C5 PFPeA	*95*		*25 - 150*	*07/20/21 19:23*	*07/21/21 22:22*	*1*
13C2 PFHxA	*92*		*25 - 150*	*07/20/21 19:23*	*07/21/21 22:22*	*1*
13C4 PFHpA	*96*		*25 - 150*	*07/20/21 19:23*	*07/21/21 22:22*	*1*
13C4 PFOA	*93*		*25 - 150*	*07/20/21 19:23*	*07/21/21 22:22*	*1*
13C5 PFNA	*88*		*25 - 150*	*07/20/21 19:23*	*07/21/21 22:22*	*1*
13C2 PFDA	*89*		*25 - 150*	*07/20/21 19:23*	*07/21/21 22:22*	*1*
13C2 PFUnA	*88*		*25 - 150*	*07/20/21 19:23*	*07/21/21 22:22*	*1*
13C2 PFDoA	*87*		*25 - 150*	*07/20/21 19:23*	*07/21/21 22:22*	*1*
13C2 PFTeDA	*95*		*25 - 150*	*07/20/21 19:23*	*07/21/21 22:22*	*1*
13C3 PFBS	*100*		*25 - 150*	*07/20/21 19:23*	*07/21/21 22:22*	*1*
18O2 PFHxS	*90*		*25 - 150*	*07/20/21 19:23*	*07/21/21 22:22*	*1*
13C4 PFOS	*96*		*25 - 150*	*07/20/21 19:23*	*07/21/21 22:22*	*1*

Client: Ramboll US Corporation
Project/Site: Reichhold Oak Creek

Job ID: 320-76427-1

Client Sample ID: FB-01-210714
Date Collected: 07/14/21 12:05
Date Received: 07/19/21 08:47

Lab Sample ID: 320-76427-3
Matrix: Water

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 FOSA	88		10 - 150	07/20/21 19:23	07/21/21 22:22	1
d3-NMeFOSAA	80		25 - 150	07/20/21 19:23	07/21/21 22:22	1
d5-NEtFOSAA	92		25 - 150	07/20/21 19:23	07/21/21 22:22	1
d-N-MeFOSA-M	83		10 - 150	07/20/21 19:23	07/21/21 22:22	1
d-N-EtFOSA-M	83		10 - 150	07/20/21 19:23	07/21/21 22:22	1
d7-N-MeFOSE-M	87		10 - 150	07/20/21 19:23	07/21/21 22:22	1
d9-N-EtFOSE-M	83		10 - 150	07/20/21 19:23	07/21/21 22:22	1
M2-4:2 FTS	63		25 - 150	07/20/21 19:23	07/21/21 22:22	1
M2-6:2 FTS	78		25 - 150	07/20/21 19:23	07/21/21 22:22	1
M2-8:2 FTS	76		25 - 150	07/20/21 19:23	07/21/21 22:22	1
13C3 HFPO-DA	97		25 - 150	07/20/21 19:23	07/21/21 22:22	1
13C2 10:2 FTS	89		25 - 150	07/20/21 19:23	07/21/21 22:22	1

Client: Ramboll US Corporation
Project/Site: Reichhold Oak Creek

Job ID: 320-76427-1

Client Sample ID: EB-01-210714
Date Collected: 07/14/21 12:15
Date Received: 07/19/21 08:47

Lab Sample ID: 320-76427-4
Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<2.1		4.3	2.1	ng/L		07/20/21 19:23	07/21/21 22:32	1
Perfluoropentanoic acid (PFPeA)	<0.42		1.7	0.42	ng/L		07/20/21 19:23	07/21/21 22:32	1
Perfluorohexanoic acid (PFHxA)	<0.50		1.7	0.50	ng/L		07/20/21 19:23	07/21/21 22:32	1
Perfluoroheptanoic acid (PFHpA)	<0.21		1.7	0.21	ng/L		07/20/21 19:23	07/21/21 22:32	1
Perfluorooctanoic acid (PFOA)	<0.73		1.7	0.73	ng/L		07/20/21 19:23	07/21/21 22:32	1
Perfluorononanoic acid (PFNA)	<0.23		1.7	0.23	ng/L		07/20/21 19:23	07/21/21 22:32	1
Perfluorodecanoic acid (PFDA)	<0.27		1.7	0.27	ng/L		07/20/21 19:23	07/21/21 22:32	1
Perfluoroundecanoic acid (PFUnA)	<0.95		1.7	0.95	ng/L		07/20/21 19:23	07/21/21 22:32	1
Perfluorododecanoic acid (PFDoA)	<0.47		1.7	0.47	ng/L		07/20/21 19:23	07/21/21 22:32	1
Perfluorotridecanoic acid (PFTriA)	<1.1		1.7	1.1	ng/L		07/20/21 19:23	07/21/21 22:32	1
Perfluorotetradecanoic acid (PFTeA)	<0.63		1.7	0.63	ng/L		07/20/21 19:23	07/21/21 22:32	1
Perfluorobutanesulfonic acid (PFBS)	<0.17		1.7	0.17	ng/L		07/20/21 19:23	07/21/21 22:32	1
Perfluoropentanesulfonic acid (PFPeS)	<0.26		1.7	0.26	ng/L		07/20/21 19:23	07/21/21 22:32	1
Perfluorohexanesulfonic acid (PFHxS)	<0.49		1.7	0.49	ng/L		07/20/21 19:23	07/21/21 22:32	1
Perfluoroheptanesulfonic Acid (PFHpS)	<0.16		1.7	0.16	ng/L		07/20/21 19:23	07/21/21 22:32	1
Perfluorooctanesulfonic acid (PFOS)	<0.46		1.7	0.46	ng/L		07/20/21 19:23	07/21/21 22:32	1
Perfluorononanesulfonic acid (PFNS)	<0.32		1.7	0.32	ng/L		07/20/21 19:23	07/21/21 22:32	1
Perfluorodecanesulfonic acid (PFDS)	<0.28		1.7	0.28	ng/L		07/20/21 19:23	07/21/21 22:32	1
Perfluorododecanesulfonic acid (PFDoS)	<0.83		1.7	0.83	ng/L		07/20/21 19:23	07/21/21 22:32	1
Perfluorooctanesulfonamide (FOSA)	<0.84		1.7	0.84	ng/L		07/20/21 19:23	07/21/21 22:32	1
NEtFOSA	<0.75		1.7	0.75	ng/L		07/20/21 19:23	07/21/21 22:32	1
NMeFOSA	<0.37		1.7	0.37	ng/L		07/20/21 19:23	07/21/21 22:32	1
NMeFOSAA	<1.0		4.3	1.0	ng/L		07/20/21 19:23	07/21/21 22:32	1
NEtFOSAA	<1.1		4.3	1.1	ng/L		07/20/21 19:23	07/21/21 22:32	1
NMeFOSE	<1.2		3.4	1.2	ng/L		07/20/21 19:23	07/21/21 22:32	1
NEtFOSE	<0.73		1.7	0.73	ng/L		07/20/21 19:23	07/21/21 22:32	1
4:2 FTS	<0.21		1.7	0.21	ng/L		07/20/21 19:23	07/21/21 22:32	1
6:2 FTS	<2.1		4.3	2.1	ng/L		07/20/21 19:23	07/21/21 22:32	1
8:2 FTS	<0.40		1.7	0.40	ng/L		07/20/21 19:23	07/21/21 22:32	1
DONA	<0.34		1.7	0.34	ng/L		07/20/21 19:23	07/21/21 22:32	1
HFPO-DA (GenX)	<1.3		3.4	1.3	ng/L		07/20/21 19:23	07/21/21 22:32	1
F-53B Major	<0.21		1.7	0.21	ng/L		07/20/21 19:23	07/21/21 22:32	1
F-53B Minor	<0.28		1.7	0.28	ng/L		07/20/21 19:23	07/21/21 22:32	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*98*		*25 - 150*	*07/20/21 19:23*	*07/21/21 22:32*	*1*
13C5 PFPeA	*84*		*25 - 150*	*07/20/21 19:23*	*07/21/21 22:32*	*1*
13C2 PFHxA	*83*		*25 - 150*	*07/20/21 19:23*	*07/21/21 22:32*	*1*
13C4 PFHpA	*92*		*25 - 150*	*07/20/21 19:23*	*07/21/21 22:32*	*1*
13C4 PFOA	*95*		*25 - 150*	*07/20/21 19:23*	*07/21/21 22:32*	*1*
13C5 PFNA	*86*		*25 - 150*	*07/20/21 19:23*	*07/21/21 22:32*	*1*
13C2 PFDA	*85*		*25 - 150*	*07/20/21 19:23*	*07/21/21 22:32*	*1*
13C2 PFUnA	*81*		*25 - 150*	*07/20/21 19:23*	*07/21/21 22:32*	*1*
13C2 PFDoA	*94*		*25 - 150*	*07/20/21 19:23*	*07/21/21 22:32*	*1*
13C2 PFTeDA	*90*		*25 - 150*	*07/20/21 19:23*	*07/21/21 22:32*	*1*
13C3 PFBS	*90*		*25 - 150*	*07/20/21 19:23*	*07/21/21 22:32*	*1*
18O2 PFHxS	*85*		*25 - 150*	*07/20/21 19:23*	*07/21/21 22:32*	*1*
13C4 PFOS	*87*		*25 - 150*	*07/20/21 19:23*	*07/21/21 22:32*	*1*

Client: Ramboll US Corporation
Project/Site: Reichhold Oak Creek

Job ID: 320-76427-1

Client Sample ID: EB-01-210714
Date Collected: 07/14/21 12:15
Date Received: 07/19/21 08:47

Lab Sample ID: 320-76427-4
Matrix: Water

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 FOSA	83		10 - 150	07/20/21 19:23	07/21/21 22:32	1
d3-NMeFOSAA	82		25 - 150	07/20/21 19:23	07/21/21 22:32	1
d5-NEtFOSAA	84		25 - 150	07/20/21 19:23	07/21/21 22:32	1
d-N-MeFOSA-M	86		10 - 150	07/20/21 19:23	07/21/21 22:32	1
d-N-EtFOSA-M	72		10 - 150	07/20/21 19:23	07/21/21 22:32	1
d7-N-MeFOSE-M	84		10 - 150	07/20/21 19:23	07/21/21 22:32	1
d9-N-EtFOSE-M	77		10 - 150	07/20/21 19:23	07/21/21 22:32	1
M2-4:2 FTS	62		25 - 150	07/20/21 19:23	07/21/21 22:32	1
M2-6:2 FTS	74		25 - 150	07/20/21 19:23	07/21/21 22:32	1
M2-8:2 FTS	73		25 - 150	07/20/21 19:23	07/21/21 22:32	1
13C3 HFPO-DA	90		25 - 150	07/20/21 19:23	07/21/21 22:32	1
13C2 10:2 FTS	81		25 - 150	07/20/21 19:23	07/21/21 22:32	1

Client: Ramboll US Corporation
Project/Site: Reichhold Oak Creek

Job ID: 320-76427-1

Client Sample ID: SB-3 (3-4)
Date Collected: 07/14/21 12:50
Date Received: 07/19/21 08:47

Lab Sample ID: 320-76427-5
Matrix: Solid
Percent Solids: 77.0

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**0.74**		0.24	0.055	ug/Kg	☼	07/20/21 18:41	07/23/21 07:57	1
Perfluoropentanoic acid (PFPeA)	**0.71**		0.24	0.049	ug/Kg	☼	07/20/21 18:41	07/23/21 07:57	1
Perfluorohexanoic acid (PFHxA)	**0.065**	**J**	0.24	0.037	ug/Kg	☼	07/20/21 18:41	07/23/21 07:57	1
Perfluoroheptanoic acid (PFHpA)	<0.046		0.24	0.046	ug/Kg	☼	07/20/21 18:41	07/23/21 07:57	1
Perfluorooctanoic acid (PFOA)	<0.064		0.24	0.064	ug/Kg	☼	07/20/21 18:41	07/23/21 07:57	1
Perfluorononanoic acid (PFNA)	<0.026		0.24	0.026	ug/Kg	☼	07/20/21 18:41	07/23/21 07:57	1
Perfluorodecanoic acid (PFDA)	<0.058		0.24	0.058	ug/Kg	☼	07/20/21 18:41	07/23/21 07:57	1
Perfluoroundecanoic acid (PFUnA)	<0.051		0.24	0.051	ug/Kg	☼	07/20/21 18:41	07/23/21 07:57	1
Perfluorododecanoic acid (PFDoA)	<0.036		0.24	0.036	ug/Kg	☼	07/20/21 18:41	07/23/21 07:57	1
Perfluorotridecanoic acid (PFTriA)	<0.025		0.24	0.025	ug/Kg	☼	07/20/21 18:41	07/23/21 07:57	1
Perfluorotetradecanoic acid (PFTeA)	<0.045		0.24	0.045	ug/Kg	☼	07/20/21 18:41	07/23/21 07:57	1
Perfluorobutanesulfonic acid (PFBS)	<0.046		0.24	0.046	ug/Kg	☼	07/20/21 18:41	07/23/21 07:57	1
Perfluoropentanesulfonic acid (PFPeS)	<0.045		0.24	0.045	ug/Kg	☼	07/20/21 18:41	07/23/21 07:57	1
Perfluorohexanesulfonic acid (PFHxS)	<0.035		0.24	0.035	ug/Kg	☼	07/20/21 18:41	07/23/21 07:57	1
Perfluoroheptanesulfonic Acid (PFHpS)	<0.059		0.24	0.059	ug/Kg	☼	07/20/21 18:41	07/23/21 07:57	1
Perfluorooctanesulfonic acid (PFOS)	<0.052		0.24	0.052	ug/Kg	☼	07/20/21 18:41	07/23/21 07:57	1
Perfluorononanesulfonic acid (PFNS)	<0.035		0.24	0.035	ug/Kg	☼	07/20/21 18:41	07/23/21 07:57	1
Perfluorodecanesulfonic acid (PFDS)	<0.063		0.24	0.063	ug/Kg	☼	07/20/21 18:41	07/23/21 07:57	1
Perfluorododecanesulfonic acid (PFDoS)	<0.057		0.24	0.057	ug/Kg	☼	07/20/21 18:41	07/23/21 07:57	1
Perfluorooctanesulfonamide (FOSA)	<0.040		0.24	0.040	ug/Kg	☼	07/20/21 18:41	07/23/21 07:57	1
NEtFOSA	<0.057		0.24	0.057	ug/Kg	☼	07/20/21 18:41	07/23/21 07:57	1
NMeFOSA	<0.059		0.24	0.059	ug/Kg	☼	07/20/21 18:41	07/23/21 07:57	1
NMeFOSAA	<0.028		0.24	0.028	ug/Kg	☼	07/20/21 18:41	07/23/21 07:57	1
NEtFOSAA	<0.058		0.24	0.058	ug/Kg	☼	07/20/21 18:41	07/23/21 07:57	1
NMeFOSE	<0.057		0.24	0.057	ug/Kg	☼	07/20/21 18:41	07/23/21 07:57	1
NEtFOSE	<0.034		0.24	0.034	ug/Kg	☼	07/20/21 18:41	07/23/21 07:57	1
4:2 FTS	<0.061		0.24	0.061	ug/Kg	☼	07/20/21 18:41	07/23/21 07:57	1
6:2 FTS	<0.032		0.24	0.032	ug/Kg	☼	07/20/21 18:41	07/23/21 07:57	1
8:2 FTS	<0.042		0.24	0.042	ug/Kg	☼	07/20/21 18:41	07/23/21 07:57	1
DONA	<0.047		0.24	0.047	ug/Kg	☼	07/20/21 18:41	07/23/21 07:57	1
HFPO-DA (GenX)	<0.049		0.24	0.049	ug/Kg	☼	07/20/21 18:41	07/23/21 07:57	1
F-53B Major	<0.042		0.24	0.042	ug/Kg	☼	07/20/21 18:41	07/23/21 07:57	1
F-53B Minor	<0.037		0.24	0.037	ug/Kg	☼	07/20/21 18:41	07/23/21 07:57	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*59*		*25 - 150*	*07/20/21 18:41*	*07/23/21 07:57*	*1*
13C5 PFPeA	*67*		*25 - 150*	*07/20/21 18:41*	*07/23/21 07:57*	*1*
13C2 PFHxA	*66*		*25 - 150*	*07/20/21 18:41*	*07/23/21 07:57*	*1*
13C4 PFHpA	*69*		*25 - 150*	*07/20/21 18:41*	*07/23/21 07:57*	*1*
13C4 PFOA	*64*		*25 - 150*	*07/20/21 18:41*	*07/23/21 07:57*	*1*
13C5 PFNA	*70*		*25 - 150*	*07/20/21 18:41*	*07/23/21 07:57*	*1*
13C2 PFDA	*67*		*25 - 150*	*07/20/21 18:41*	*07/23/21 07:57*	*1*
13C2 PFUnA	*70*		*25 - 150*	*07/20/21 18:41*	*07/23/21 07:57*	*1*
13C2 PFDoA	*67*		*25 - 150*	*07/20/21 18:41*	*07/23/21 07:57*	*1*
13C2 PFTeDA	*64*		*25 - 150*	*07/20/21 18:41*	*07/23/21 07:57*	*1*
13C3 PFBS	*69*		*25 - 150*	*07/20/21 18:41*	*07/23/21 07:57*	*1*
18O2 PFHxS	*64*		*25 - 150*	*07/20/21 18:41*	*07/23/21 07:57*	*1*
13C4 PFOS	*60*		*25 - 150*	*07/20/21 18:41*	*07/23/21 07:57*	*1*

Client: Ramboll US Corporation
Project/Site: Reichhold Oak Creek

Job ID: 320-76427-1

Client Sample ID: SB-3 (3-4)
Date Collected: 07/14/21 12:50
Date Received: 07/19/21 08:47

Lab Sample ID: 320-76427-5
Matrix: Solid
Percent Solids: 77.0

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

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*64*		*10 - 150*	*07/20/21 18:41*	*07/23/21 07:57*	*1*
d3-NMeFOSAA	*63*		*25 - 150*	*07/20/21 18:41*	*07/23/21 07:57*	*1*
d5-NEtFOSAA	*73*		*25 - 150*	*07/20/21 18:41*	*07/23/21 07:57*	*1*
d-N-MeFOSA-M	*68*		*10 - 150*	*07/20/21 18:41*	*07/23/21 07:57*	*1*
d-N-EtFOSA-M	*64*		*10 - 150*	*07/20/21 18:41*	*07/23/21 07:57*	*1*
d7-N-MeFOSE-M	*47*		*10 - 150*	*07/20/21 18:41*	*07/23/21 07:57*	*1*
d9-N-EtFOSE-M	*51*		*10 - 150*	*07/20/21 18:41*	*07/23/21 07:57*	*1*
M2-4:2 FTS	*77*		*25 - 150*	*07/20/21 18:41*	*07/23/21 07:57*	*1*
M2-6:2 FTS	*85*		*25 - 150*	*07/20/21 18:41*	*07/23/21 07:57*	*1*
M2-8:2 FTS	*87*		*25 - 150*	*07/20/21 18:41*	*07/23/21 07:57*	*1*
13C3 HFPO-DA	*66*		*25 - 150*	*07/20/21 18:41*	*07/23/21 07:57*	*1*
13C2 10:2 FTS	*88*		*25 - 150*	*07/20/21 18:41*	*07/23/21 07:57*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**23.0**		0.1	0.1	%			07/20/21 12:16	1
Percent Solids	**77.0**		0.1	0.1	%			07/20/21 12:16	1

Client: Ramboll US Corporation
Project/Site: Reichhold Oak Creek

Job ID: 320-76427-1

Client Sample ID: SED-COMP
Date Collected: 07/14/21 13:50
Date Received: 07/19/21 08:47

Lab Sample ID: 320-76427-6
Matrix: Solid
Percent Solids: 9.9

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoropentanoic acid (PFPeA)	**26**		1.9	0.40	ug/Kg	☼	07/20/21 18:41	07/24/21 18:35	1
Perfluorohexanoic acid (PFHxA)	**21**		1.9	0.30	ug/Kg	☼	07/20/21 18:41	07/24/21 18:35	1
Perfluoroheptanoic acid (PFHpA)	**5.4**		1.9	0.37	ug/Kg	☼	07/20/21 18:41	07/24/21 18:35	1
Perfluorooctanoic acid (PFOA)	**6.6**		1.9	0.52	ug/Kg	☼	07/20/21 18:41	07/24/21 18:35	1
Perfluorononanoic acid (PFNA)	**3.1**		1.9	0.21	ug/Kg	☼	07/20/21 18:41	07/24/21 18:35	1
Perfluorodecanoic acid (PFDA)	**4.2**		1.9	0.47	ug/Kg	☼	07/20/21 18:41	07/24/21 18:35	1
Perfluoroundecanoic acid (PFUnA)	**4.9**		1.9	0.41	ug/Kg	☼	07/20/21 18:41	07/24/21 18:35	1
Perfluorododecanoic acid (PFDoA)	**5.2**		1.9	0.29	ug/Kg	☼	07/20/21 18:41	07/24/21 18:35	1
Perfluorotridecanoic acid (PFTriA)	**1.3**	**J**	1.9	0.20	ug/Kg	☼	07/20/21 18:41	07/24/21 18:35	1
Perfluorotetradecanoic acid (PFTeA)	**1.3**	**J**	1.9	0.36	ug/Kg	☼	07/20/21 18:41	07/24/21 18:35	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		1.9	0.37	ug/Kg	☼	07/20/21 18:41	07/24/21 18:35	1
Perfluoropentanesulfonic acid (PFPeS)	<0.36		1.9	0.36	ug/Kg	☼	07/20/21 18:41	07/24/21 18:35	1
Perfluorohexanesulfonic acid (PFHxS)	<0.28		1.9	0.28	ug/Kg	☼	07/20/21 18:41	07/24/21 18:35	1
Perfluoroheptanesulfonic Acid (PFHpS)	<0.48		1.9	0.48	ug/Kg	☼	07/20/21 18:41	07/24/21 18:35	1
Perfluorooctanesulfonic acid (PFOS)	<0.42		1.9	0.42	ug/Kg	☼	07/20/21 18:41	07/24/21 18:35	1
Perfluorononanesulfonic acid (PFNS)	<0.28		1.9	0.28	ug/Kg	☼	07/20/21 18:41	07/24/21 18:35	1
Perfluorodecanesulfonic acid (PFDS)	<0.51		1.9	0.51	ug/Kg	☼	07/20/21 18:41	07/24/21 18:35	1
Perfluorododecanesulfonic acid (PFDoS)	<0.46		1.9	0.46	ug/Kg	☼	07/20/21 18:41	07/24/21 18:35	1
Perfluorooctanesulfonamide (FOSA)	**0.41**	**J**	1.9	0.32	ug/Kg	☼	07/20/21 18:41	07/24/21 18:35	1
NEtFOSA	<0.46		1.9	0.46	ug/Kg	☼	07/20/21 18:41	07/24/21 18:35	1
NMeFOSA	<0.48		1.9	0.48	ug/Kg	☼	07/20/21 18:41	07/24/21 18:35	1
NMeFOSAA	**0.48**	**J**	1.9	0.22	ug/Kg	☼	07/20/21 18:41	07/24/21 18:35	1
NEtFOSAA	<0.47		1.9	0.47	ug/Kg	☼	07/20/21 18:41	07/24/21 18:35	1
NMeFOSE	**0.56**	**J**	1.9	0.46	ug/Kg	☼	07/20/21 18:41	07/24/21 18:35	1
NEtFOSE	**0.64**	**J**	1.9	0.27	ug/Kg	☼	07/20/21 18:41	07/24/21 18:35	1
4:2 FTS	<0.50		1.9	0.50	ug/Kg	☼	07/20/21 18:41	07/24/21 18:35	1
6:2 FTS	**28**		1.9	0.26	ug/Kg	☼	07/20/21 18:41	07/24/21 18:35	1
8:2 FTS	**47**		1.9	0.34	ug/Kg	☼	07/20/21 18:41	07/24/21 18:35	1
DONA	<0.38		1.9	0.38	ug/Kg	☼	07/20/21 18:41	07/24/21 18:35	1
HFPO-DA (GenX)	<0.40		1.9	0.40	ug/Kg	☼	07/20/21 18:41	07/24/21 18:35	1
F-53B Major	<0.34		1.9	0.34	ug/Kg	☼	07/20/21 18:41	07/24/21 18:35	1
F-53B Minor	<0.30		1.9	0.30	ug/Kg	☼	07/20/21 18:41	07/24/21 18:35	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C5 PFPeA	*45*		*25 - 150*	*07/20/21 18:41*	*07/24/21 18:35*	*1*
13C2 PFHxA	*51*		*25 - 150*	*07/20/21 18:41*	*07/24/21 18:35*	*1*
13C4 PFHpA	*48*		*25 - 150*	*07/20/21 18:41*	*07/24/21 18:35*	*1*
13C4 PFOA	*51*		*25 - 150*	*07/20/21 18:41*	*07/24/21 18:35*	*1*
13C5 PFNA	*63*		*25 - 150*	*07/20/21 18:41*	*07/24/21 18:35*	*1*
13C2 PFDA	*62*		*25 - 150*	*07/20/21 18:41*	*07/24/21 18:35*	*1*
13C2 PFUnA	*58*		*25 - 150*	*07/20/21 18:41*	*07/24/21 18:35*	*1*
13C2 PFDoA	*51*		*25 - 150*	*07/20/21 18:41*	*07/24/21 18:35*	*1*
13C2 PFTeDA	*49*		*25 - 150*	*07/20/21 18:41*	*07/24/21 18:35*	*1*
13C3 PFBS	*60*		*25 - 150*	*07/20/21 18:41*	*07/24/21 18:35*	*1*
18O2 PFHxS	*52*		*25 - 150*	*07/20/21 18:41*	*07/24/21 18:35*	*1*

Client Sample ID: SED-COMP
Date Collected: 07/14/21 13:50
Date Received: 07/19/21 08:47

Lab Sample ID: 320-76427-6
Matrix: Solid
Percent Solids: 9.9

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

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFOS	*58*		*25 - 150*	*07/20/21 18:41*	*07/24/21 18:35*	*1*
13C8 FOSA	*52*		*10 - 150*	*07/20/21 18:41*	*07/24/21 18:35*	*1*
d3-NMeFOSAA	*48*		*25 - 150*	*07/20/21 18:41*	*07/24/21 18:35*	*1*
d5-NEtFOSAA	*59*		*25 - 150*	*07/20/21 18:41*	*07/24/21 18:35*	*1*
d-N-MeFOSA-M	*45*		*10 - 150*	*07/20/21 18:41*	*07/24/21 18:35*	*1*
d-N-EtFOSA-M	*49*		*10 - 150*	*07/20/21 18:41*	*07/24/21 18:35*	*1*
d7-N-MeFOSE-M	*34*		*10 - 150*	*07/20/21 18:41*	*07/24/21 18:35*	*1*
d9-N-EtFOSE-M	*31*		*10 - 150*	*07/20/21 18:41*	*07/24/21 18:35*	*1*
M2-4:2 FTS	*138*		*25 - 150*	*07/20/21 18:41*	*07/24/21 18:35*	*1*
M2-6:2 FTS	*136*		*25 - 150*	*07/20/21 18:41*	*07/24/21 18:35*	*1*
M2-8:2 FTS	*139*		*25 - 150*	*07/20/21 18:41*	*07/24/21 18:35*	*1*
13C3 HFPO-DA	*54*		*25 - 150*	*07/20/21 18:41*	*07/24/21 18:35*	*1*
13C2 10:2 FTS	*86*		*25 - 150*	*07/20/21 18:41*	*07/24/21 18:35*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<4.5		19	4.5	ug/Kg	☼	07/20/21 18:41	07/24/21 18:16	10

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*11*	**5-*	*25 - 150*	*07/20/21 18:41*	*07/24/21 18:16*	*10*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**90.1**		0.1	0.1	%			07/20/21 12:16	1
Percent Solids	**9.9**		0.1	0.1	%			07/20/21 12:16	1

Client Sample ID: SED-COMP-DUP

Date Collected: 07/14/21 13:50
Date Received: 07/19/21 08:47

Lab Sample ID: 320-76427-7

Matrix: Solid
Percent Solids: 11.2

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**4.5**		1.7	0.39	ug/Kg	☼	07/20/21 18:41	07/24/21 18:44	1
Perfluoropentanoic acid (PFPeA)	**30**		1.7	0.35	ug/Kg	☼	07/20/21 18:41	07/24/21 18:44	1
Perfluorohexanoic acid (PFHxA)	**25**		1.7	0.26	ug/Kg	☼	07/20/21 18:41	07/24/21 18:44	1
Perfluoroheptanoic acid (PFHpA)	**6.3**		1.7	0.32	ug/Kg	☼	07/20/21 18:41	07/24/21 18:44	1
Perfluorooctanoic acid (PFOA)	**9.0**		1.7	0.45	ug/Kg	☼	07/20/21 18:41	07/24/21 18:44	1
Perfluorononanoic acid (PFNA)	**4.8**		1.7	0.19	ug/Kg	☼	07/20/21 18:41	07/24/21 18:44	1
Perfluorodecanoic acid (PFDA)	**6.5**		1.7	0.41	ug/Kg	☼	07/20/21 18:41	07/24/21 18:44	1
Perfluoroundecanoic acid (PFUnA)	**9.5**		1.7	0.36	ug/Kg	☼	07/20/21 18:41	07/24/21 18:44	1
Perfluorododecanoic acid (PFDoA)	**7.0**		1.7	0.26	ug/Kg	☼	07/20/21 18:41	07/24/21 18:44	1
Perfluorotridecanoic acid (PFTriA)	**1.6**	**J**	1.7	0.18	ug/Kg	☼	07/20/21 18:41	07/24/21 18:44	1
Perfluorotetradecanoic acid (PFTeA)	**2.0**		1.7	0.32	ug/Kg	☼	07/20/21 18:41	07/24/21 18:44	1
Perfluorobutanesulfonic acid (PFBS)	<0.32		1.7	0.32	ug/Kg	☼	07/20/21 18:41	07/24/21 18:44	1
Perfluoropentanesulfonic acid (PFPeS)	<0.32		1.7	0.32	ug/Kg	☼	07/20/21 18:41	07/24/21 18:44	1
Perfluorohexanesulfonic acid (PFHxS)	<0.25		1.7	0.25	ug/Kg	☼	07/20/21 18:41	07/24/21 18:44	1
Perfluoroheptanesulfonic Acid (PFHpS)	<0.42		1.7	0.42	ug/Kg	☼	07/20/21 18:41	07/24/21 18:44	1
Perfluorooctanesulfonic acid (PFOS)	<0.37		1.7	0.37	ug/Kg	☼	07/20/21 18:41	07/24/21 18:44	1
Perfluorononanesulfonic acid (PFNS)	<0.25		1.7	0.25	ug/Kg	☼	07/20/21 18:41	07/24/21 18:44	1
Perfluorodecanesulfonic acid (PFDS)	**0.65**	**J**	1.7	0.44	ug/Kg	☼	07/20/21 18:41	07/24/21 18:44	1
Perfluorododecanesulfonic acid (PFDoS)	<0.40		1.7	0.40	ug/Kg	☼	07/20/21 18:41	07/24/21 18:44	1
Perfluorooctanesulfonamide (FOSA)	**0.75**	**J**	1.7	0.28	ug/Kg	☼	07/20/21 18:41	07/24/21 18:44	1
NEtFOSA	<0.40		1.7	0.40	ug/Kg	☼	07/20/21 18:41	07/24/21 18:44	1
NMeFOSA	<0.42		1.7	0.42	ug/Kg	☼	07/20/21 18:41	07/24/21 18:44	1
NMeFOSAA	**0.66**	**J I**	1.7	0.20	ug/Kg	☼	07/20/21 18:41	07/24/21 18:44	1
NEtFOSAA	<0.41		1.7	0.41	ug/Kg	☼	07/20/21 18:41	07/24/21 18:44	1
NMeFOSE	<0.40		1.7	0.40	ug/Kg	☼	07/20/21 18:41	07/24/21 18:44	1
NEtFOSE	**0.76**	**J**	1.7	0.24	ug/Kg	☼	07/20/21 18:41	07/24/21 18:44	1
4:2 FTS	<0.43		1.7	0.43	ug/Kg	☼	07/20/21 18:41	07/24/21 18:44	1
6:2 FTS	**39**		1.7	0.23	ug/Kg	☼	07/20/21 18:41	07/24/21 18:44	1
8:2 FTS	**65**		1.7	0.30	ug/Kg	☼	07/20/21 18:41	07/24/21 18:44	1
DONA	<0.33		1.7	0.33	ug/Kg	☼	07/20/21 18:41	07/24/21 18:44	1
HFPO-DA (GenX)	<0.35		1.7	0.35	ug/Kg	☼	07/20/21 18:41	07/24/21 18:44	1
F-53B Major	<0.30		1.7	0.30	ug/Kg	☼	07/20/21 18:41	07/24/21 18:44	1
F-53B Minor	<0.26		1.7	0.26	ug/Kg	☼	07/20/21 18:41	07/24/21 18:44	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*10*	**5-*	*25 - 150*	*07/20/21 18:41*	*07/24/21 18:44*	*1*
13C5 PFPeA	*57*		*25 - 150*	*07/20/21 18:41*	*07/24/21 18:44*	*1*
13C2 PFHxA	*57*		*25 - 150*	*07/20/21 18:41*	*07/24/21 18:44*	*1*
13C4 PFHpA	*56*		*25 - 150*	*07/20/21 18:41*	*07/24/21 18:44*	*1*
13C4 PFOA	*62*		*25 - 150*	*07/20/21 18:41*	*07/24/21 18:44*	*1*
13C5 PFNA	*75*		*25 - 150*	*07/20/21 18:41*	*07/24/21 18:44*	*1*
13C2 PFDA	*75*		*25 - 150*	*07/20/21 18:41*	*07/24/21 18:44*	*1*
13C2 PFUnA	*59*		*25 - 150*	*07/20/21 18:41*	*07/24/21 18:44*	*1*
13C2 PFDoA	*57*		*25 - 150*	*07/20/21 18:41*	*07/24/21 18:44*	*1*

Client Sample ID: SED-COMP-DUP
Date Collected: 07/14/21 13:50
Date Received: 07/19/21 08:47

Lab Sample ID: 320-76427-7
Matrix: Solid
Percent Solids: 11.2

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFTeDA	55		25 - 150	07/20/21 18:41	07/24/21 18:44	1
13C3 PFBS	78		25 - 150	07/20/21 18:41	07/24/21 18:44	1
18O2 PFHxS	62		25 - 150	07/20/21 18:41	07/24/21 18:44	1
13C4 PFOS	78		25 - 150	07/20/21 18:41	07/24/21 18:44	1
13C8 FOSA	61		10 - 150	07/20/21 18:41	07/24/21 18:44	1
d3-NMeFOSAA	60		25 - 150	07/20/21 18:41	07/24/21 18:44	1
d5-NEtFOSAA	65		25 - 150	07/20/21 18:41	07/24/21 18:44	1
d-N-MeFOSA-M	58		10 - 150	07/20/21 18:41	07/24/21 18:44	1
d-N-EtFOSA-M	53		10 - 150	07/20/21 18:41	07/24/21 18:44	1
d7-N-MeFOSE-M	43		10 - 150	07/20/21 18:41	07/24/21 18:44	1
d9-N-EtFOSE-M	41		10 - 150	07/20/21 18:41	07/24/21 18:44	1
M2-4:2 FTS	155	*5+	25 - 150	07/20/21 18:41	07/24/21 18:44	1
M2-6:2 FTS	178	*5+	25 - 150	07/20/21 18:41	07/24/21 18:44	1
M2-8:2 FTS	166	*5+	25 - 150	07/20/21 18:41	07/24/21 18:44	1
13C3 HFPO-DA	62		25 - 150	07/20/21 18:41	07/24/21 18:44	1
13C2 10:2 FTS	97		25 - 150	07/20/21 18:41	07/24/21 18:44	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	88.8		0.1	0.1	%			07/20/21 12:16	1
Percent Solids	11.2		0.1	0.1	%			07/20/21 12:16	1

Client: Ramboll US Corporation
Project/Site: Reichhold Oak Creek

Job ID: 320-76427-1

Client Sample ID: SB-4 (7-9)
Date Collected: 07/14/21 14:30
Date Received: 07/19/21 08:47

Lab Sample ID: 320-76427-8
Matrix: Solid
Percent Solids: 78.8

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<0.054		0.23	0.054	ug/Kg	☼	07/20/21 18:41	07/23/21 08:45	1
Perfluoropentanoic acid (PFPeA)	<0.048		0.23	0.048	ug/Kg	☼	07/20/21 18:41	07/23/21 08:45	1
Perfluorohexanoic acid (PFHxA)	<0.036		0.23	0.036	ug/Kg	☼	07/20/21 18:41	07/23/21 08:45	1
Perfluoroheptanoic acid (PFHpA)	<0.045		0.23	0.045	ug/Kg	☼	07/20/21 18:41	07/23/21 08:45	1
Perfluorooctanoic acid (PFOA)	<0.062		0.23	0.062	ug/Kg	☼	07/20/21 18:41	07/23/21 08:45	1
Perfluorononanoic acid (PFNA)	<0.026		0.23	0.026	ug/Kg	☼	07/20/21 18:41	07/23/21 08:45	1
Perfluorodecanoic acid (PFDA)	<0.056		0.23	0.056	ug/Kg	☼	07/20/21 18:41	07/23/21 08:45	1
Perfluoroundecanoic acid (PFUnA)	<0.049		0.23	0.049	ug/Kg	☼	07/20/21 18:41	07/23/21 08:45	1
Perfluorododecanoic acid (PFDoA)	<0.035		0.23	0.035	ug/Kg	☼	07/20/21 18:41	07/23/21 08:45	1
Perfluorotridecanoic acid (PFTriA)	<0.025		0.23	0.025	ug/Kg	☼	07/20/21 18:41	07/23/21 08:45	1
Perfluorotetradecanoic acid (PFTeA)	<0.043		0.23	0.043	ug/Kg	☼	07/20/21 18:41	07/23/21 08:45	1
Perfluorobutanesulfonic acid (PFBS)	<0.045		0.23	0.045	ug/Kg	☼	07/20/21 18:41	07/23/21 08:45	1
Perfluoropentanesulfonic acid (PFPeS)	<0.043		0.23	0.043	ug/Kg	☼	07/20/21 18:41	07/23/21 08:45	1
Perfluorohexanesulfonic acid (PFHxS)	<0.034		0.23	0.034	ug/Kg	☼	07/20/21 18:41	07/23/21 08:45	1
Perfluoroheptanesulfonic Acid (PFHpS)	<0.057		0.23	0.057	ug/Kg	☼	07/20/21 18:41	07/23/21 08:45	1
Perfluorooctanesulfonic acid (PFOS)	<0.050		0.23	0.050	ug/Kg	☼	07/20/21 18:41	07/23/21 08:45	1
Perfluorononanesulfonic acid (PFNS)	<0.034		0.23	0.034	ug/Kg	☼	07/20/21 18:41	07/23/21 08:45	1
Perfluorodecanesulfonic acid (PFDS)	<0.061		0.23	0.061	ug/Kg	☼	07/20/21 18:41	07/23/21 08:45	1
Perfluorododecanesulfonic acid (PFDoS)	<0.055		0.23	0.055	ug/Kg	☼	07/20/21 18:41	07/23/21 08:45	1
Perfluorooctanesulfonamide (FOSA)	<0.039		0.23	0.039	ug/Kg	☼	07/20/21 18:41	07/23/21 08:45	1
NEtFOSA	<0.055		0.23	0.055	ug/Kg	☼	07/20/21 18:41	07/23/21 08:45	1
NMeFOSA	<0.057		0.23	0.057	ug/Kg	☼	07/20/21 18:41	07/23/21 08:45	1
NMeFOSAA	<0.027		0.23	0.027	ug/Kg	☼	07/20/21 18:41	07/23/21 08:45	1
NEtFOSAA	<0.056		0.23	0.056	ug/Kg	☼	07/20/21 18:41	07/23/21 08:45	1
NMeFOSE	<0.055		0.23	0.055	ug/Kg	☼	07/20/21 18:41	07/23/21 08:45	1
NEtFOSE	<0.033		0.23	0.033	ug/Kg	☼	07/20/21 18:41	07/23/21 08:45	1
4:2 FTS	<0.060		0.23	0.060	ug/Kg	☼	07/20/21 18:41	07/23/21 08:45	1
6:2 FTS	<0.032		0.23	0.032	ug/Kg	☼	07/20/21 18:41	07/23/21 08:45	1
8:2 FTS	<0.041		0.23	0.041	ug/Kg	☼	07/20/21 18:41	07/23/21 08:45	1
DONA	<0.046		0.23	0.046	ug/Kg	☼	07/20/21 18:41	07/23/21 08:45	1
HFPO-DA (GenX)	<0.048		0.23	0.048	ug/Kg	☼	07/20/21 18:41	07/23/21 08:45	1
F-53B Major	<0.041		0.23	0.041	ug/Kg	☼	07/20/21 18:41	07/23/21 08:45	1
F-53B Minor	<0.036		0.23	0.036	ug/Kg	☼	07/20/21 18:41	07/23/21 08:45	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*68*		*25 - 150*	*07/20/21 18:41*	*07/23/21 08:45*	*1*
13C5 PFPeA	*74*		*25 - 150*	*07/20/21 18:41*	*07/23/21 08:45*	*1*
13C2 PFHxA	*74*		*25 - 150*	*07/20/21 18:41*	*07/23/21 08:45*	*1*
13C4 PFHpA	*73*		*25 - 150*	*07/20/21 18:41*	*07/23/21 08:45*	*1*
13C4 PFOA	*76*		*25 - 150*	*07/20/21 18:41*	*07/23/21 08:45*	*1*
13C5 PFNA	*80*		*25 - 150*	*07/20/21 18:41*	*07/23/21 08:45*	*1*
13C2 PFDA	*80*		*25 - 150*	*07/20/21 18:41*	*07/23/21 08:45*	*1*
13C2 PFUnA	*77*		*25 - 150*	*07/20/21 18:41*	*07/23/21 08:45*	*1*
13C2 PFDoA	*76*		*25 - 150*	*07/20/21 18:41*	*07/23/21 08:45*	*1*
13C2 PFTeDA	*66*		*25 - 150*	*07/20/21 18:41*	*07/23/21 08:45*	*1*
13C3 PFBS	*83*		*25 - 150*	*07/20/21 18:41*	*07/23/21 08:45*	*1*
18O2 PFHxS	*76*		*25 - 150*	*07/20/21 18:41*	*07/23/21 08:45*	*1*
13C4 PFOS	*72*		*25 - 150*	*07/20/21 18:41*	*07/23/21 08:45*	*1*

Client: Ramboll US Corporation
Project/Site: Reichhold Oak Creek

Job ID: 320-76427-1

Client Sample ID: SB-4 (7-9)
Date Collected: 07/14/21 14:30
Date Received: 07/19/21 08:47

Lab Sample ID: 320-76427-8
Matrix: Solid
Percent Solids: 78.8

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

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*77*		*10 - 150*	*07/20/21 18:41*	*07/23/21 08:45*	*1*
d3-NMeFOSAA	*84*		*25 - 150*	*07/20/21 18:41*	*07/23/21 08:45*	*1*
d5-NEtFOSAA	*84*		*25 - 150*	*07/20/21 18:41*	*07/23/21 08:45*	*1*
d-N-MeFOSA-M	*81*		*10 - 150*	*07/20/21 18:41*	*07/23/21 08:45*	*1*
d-N-EtFOSA-M	*72*		*10 - 150*	*07/20/21 18:41*	*07/23/21 08:45*	*1*
d7-N-MeFOSE-M	*49*		*10 - 150*	*07/20/21 18:41*	*07/23/21 08:45*	*1*
d9-N-EtFOSE-M	*50*		*10 - 150*	*07/20/21 18:41*	*07/23/21 08:45*	*1*
M2-4:2 FTS	*87*		*25 - 150*	*07/20/21 18:41*	*07/23/21 08:45*	*1*
M2-6:2 FTS	*99*		*25 - 150*	*07/20/21 18:41*	*07/23/21 08:45*	*1*
M2-8:2 FTS	*103*		*25 - 150*	*07/20/21 18:41*	*07/23/21 08:45*	*1*
13C3 HFPO-DA	*75*		*25 - 150*	*07/20/21 18:41*	*07/23/21 08:45*	*1*
13C2 10:2 FTS	*96*		*25 - 150*	*07/20/21 18:41*	*07/23/21 08:45*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**21.2**		0.1	0.1	%			07/20/21 12:16	1
Percent Solids	**78.8**		0.1	0.1	%			07/20/21 12:16	1

Client: Ramboll US Corporation
Project/Site: Reichhold Oak Creek

Job ID: 320-76427-1

Client Sample ID: SB-4 (7-9) DUP
Date Collected: 07/14/21 14:30
Date Received: 07/19/21 08:47

Lab Sample ID: 320-76427-9
Matrix: Solid
Percent Solids: 79.5

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<0.052		0.22	0.052	ug/Kg	☼	07/20/21 18:41	07/23/21 08:54	1
Perfluoropentanoic acid (PFPeA)	<0.046		0.22	0.046	ug/Kg	☼	07/20/21 18:41	07/23/21 08:54	1
Perfluorohexanoic acid (PFHxA)	<0.035		0.22	0.035	ug/Kg	☼	07/20/21 18:41	07/23/21 08:54	1
Perfluoroheptanoic acid (PFHpA)	<0.043		0.22	0.043	ug/Kg	☼	07/20/21 18:41	07/23/21 08:54	1
Perfluorooctanoic acid (PFOA)	<0.060		0.22	0.060	ug/Kg	☼	07/20/21 18:41	07/23/21 08:54	1
Perfluorononanoic acid (PFNA)	<0.025		0.22	0.025	ug/Kg	☼	07/20/21 18:41	07/23/21 08:54	1
Perfluorodecanoic acid (PFDA)	<0.054		0.22	0.054	ug/Kg	☼	07/20/21 18:41	07/23/21 08:54	1
Perfluoroundecanoic acid (PFUnA)	<0.047		0.22	0.047	ug/Kg	☼	07/20/21 18:41	07/23/21 08:54	1
Perfluorododecanoic acid (PFDoA)	<0.034		0.22	0.034	ug/Kg	☼	07/20/21 18:41	07/23/21 08:54	1
Perfluorotridecanoic acid (PFTriA)	<0.024		0.22	0.024	ug/Kg	☼	07/20/21 18:41	07/23/21 08:54	1
Perfluorotetradecanoic acid (PFTeA)	<0.042		0.22	0.042	ug/Kg	☼	07/20/21 18:41	07/23/21 08:54	1
Perfluorobutanesulfonic acid (PFBS)	<0.043		0.22	0.043	ug/Kg	☼	07/20/21 18:41	07/23/21 08:54	1
Perfluoropentanesulfonic acid (PFPeS)	<0.042		0.22	0.042	ug/Kg	☼	07/20/21 18:41	07/23/21 08:54	1
Perfluorohexanesulfonic acid (PFHxS)	<0.033		0.22	0.033	ug/Kg	☼	07/20/21 18:41	07/23/21 08:54	1
Perfluoroheptanesulfonic Acid (PFHpS)	<0.055		0.22	0.055	ug/Kg	☼	07/20/21 18:41	07/23/21 08:54	1
Perfluorooctanesulfonic acid (PFOS)	<0.048		0.22	0.048	ug/Kg	☼	07/20/21 18:41	07/23/21 08:54	1
Perfluorononanesulfonic acid (PFNS)	<0.033		0.22	0.033	ug/Kg	☼	07/20/21 18:41	07/23/21 08:54	1
Perfluorodecanesulfonic acid (PFDS)	<0.058		0.22	0.058	ug/Kg	☼	07/20/21 18:41	07/23/21 08:54	1
Perfluorododecanesulfonic acid (PFDoS)	<0.053		0.22	0.053	ug/Kg	☼	07/20/21 18:41	07/23/21 08:54	1
Perfluorooctanesulfonamide (FOSA)	<0.037		0.22	0.037	ug/Kg	☼	07/20/21 18:41	07/23/21 08:54	1
NEtFOSA	<0.053		0.22	0.053	ug/Kg	☼	07/20/21 18:41	07/23/21 08:54	1
NMeFOSA	<0.055		0.22	0.055	ug/Kg	☼	07/20/21 18:41	07/23/21 08:54	1
NMeFOSAA	<0.026		0.22	0.026	ug/Kg	☼	07/20/21 18:41	07/23/21 08:54	1
NEtFOSAA	<0.054		0.22	0.054	ug/Kg	☼	07/20/21 18:41	07/23/21 08:54	1
NMeFOSE	<0.053		0.22	0.053	ug/Kg	☼	07/20/21 18:41	07/23/21 08:54	1
NEtFOSE	<0.031		0.22	0.031	ug/Kg	☼	07/20/21 18:41	07/23/21 08:54	1
4:2 FTS	<0.057		0.22	0.057	ug/Kg	☼	07/20/21 18:41	07/23/21 08:54	1
6:2 FTS	<0.030		0.22	0.030	ug/Kg	☼	07/20/21 18:41	07/23/21 08:54	1
8:2 FTS	<0.039		0.22	0.039	ug/Kg	☼	07/20/21 18:41	07/23/21 08:54	1
DONA	<0.044		0.22	0.044	ug/Kg	☼	07/20/21 18:41	07/23/21 08:54	1
HFPO-DA (GenX)	<0.046		0.22	0.046	ug/Kg	☼	07/20/21 18:41	07/23/21 08:54	1
F-53B Major	<0.039		0.22	0.039	ug/Kg	☼	07/20/21 18:41	07/23/21 08:54	1
F-53B Minor	<0.035		0.22	0.035	ug/Kg	☼	07/20/21 18:41	07/23/21 08:54	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*60*		*25 - 150*	*07/20/21 18:41*	*07/23/21 08:54*	*1*
13C5 PFPeA	*67*		*25 - 150*	*07/20/21 18:41*	*07/23/21 08:54*	*1*
13C2 PFHxA	*74*		*25 - 150*	*07/20/21 18:41*	*07/23/21 08:54*	*1*
13C4 PFHpA	*72*		*25 - 150*	*07/20/21 18:41*	*07/23/21 08:54*	*1*
13C4 PFOA	*73*		*25 - 150*	*07/20/21 18:41*	*07/23/21 08:54*	*1*
13C5 PFNA	*71*		*25 - 150*	*07/20/21 18:41*	*07/23/21 08:54*	*1*
13C2 PFDA	*72*		*25 - 150*	*07/20/21 18:41*	*07/23/21 08:54*	*1*
13C2 PFUnA	*67*		*25 - 150*	*07/20/21 18:41*	*07/23/21 08:54*	*1*
13C2 PFDoA	*66*		*25 - 150*	*07/20/21 18:41*	*07/23/21 08:54*	*1*
13C2 PFTeDA	*54*		*25 - 150*	*07/20/21 18:41*	*07/23/21 08:54*	*1*
13C3 PFBS	*74*		*25 - 150*	*07/20/21 18:41*	*07/23/21 08:54*	*1*
18O2 PFHxS	*67*		*25 - 150*	*07/20/21 18:41*	*07/23/21 08:54*	*1*
13C4 PFOS	*67*		*25 - 150*	*07/20/21 18:41*	*07/23/21 08:54*	*1*

Client: Ramboll US Corporation
Project/Site: Reichhold Oak Creek

Job ID: 320-76427-1

Client Sample ID: SB-4 (7-9) DUP
Date Collected: 07/14/21 14:30
Date Received: 07/19/21 08:47

Lab Sample ID: 320-76427-9
Matrix: Solid
Percent Solids: 79.5

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

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*67*		*10 - 150*	*07/20/21 18:41*	*07/23/21 08:54*	*1*
d3-NMeFOSAA	*75*		*25 - 150*	*07/20/21 18:41*	*07/23/21 08:54*	*1*
d5-NEtFOSAA	*77*		*25 - 150*	*07/20/21 18:41*	*07/23/21 08:54*	*1*
d-N-MeFOSA-M	*71*		*10 - 150*	*07/20/21 18:41*	*07/23/21 08:54*	*1*
d-N-EtFOSA-M	*64*		*10 - 150*	*07/20/21 18:41*	*07/23/21 08:54*	*1*
d7-N-MeFOSE-M	*46*		*10 - 150*	*07/20/21 18:41*	*07/23/21 08:54*	*1*
d9-N-EtFOSE-M	*50*		*10 - 150*	*07/20/21 18:41*	*07/23/21 08:54*	*1*
M2-4:2 FTS	*73*		*25 - 150*	*07/20/21 18:41*	*07/23/21 08:54*	*1*
M2-6:2 FTS	*82*		*25 - 150*	*07/20/21 18:41*	*07/23/21 08:54*	*1*
M2-8:2 FTS	*87*		*25 - 150*	*07/20/21 18:41*	*07/23/21 08:54*	*1*
13C3 HFPO-DA	*73*		*25 - 150*	*07/20/21 18:41*	*07/23/21 08:54*	*1*
13C2 10:2 FTS	*90*		*25 - 150*	*07/20/21 18:41*	*07/23/21 08:54*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**20.5**		0.1	0.1	%			07/20/21 12:16	1
Percent Solids	**79.5**		0.1	0.1	%			07/20/21 12:16	1

Isotope Dilution Summary

Client: Ramboll US Corporation
Project/Site: Reichhold Oak Creek

Job ID: 320-76427-1

Method: 537 (modified) - Fluorinated Alkyl Substances

Matrix: Solid **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)
320-76427-1	SB-1 (0-0.5)	76	100	104	105	99	105	89	107
320-76427-1 MS	SB-1 (0-0.5)	73	90	97	95	97	97	88	89
320-76427-1 MSD	SB-1 (0-0.5)	76	95	96	97	96	93	83	95
320-76427-2	SB-2 (8-9)	67	71	76	76	78	71	80	74
320-76427-5	SB-3 (3-4)	59	67	66	69	64	70	67	70
320-76427-6 - DL	SED-COMP	11 *5-							
320-76427-6	SED-COMP		45	51	48	51	63	62	58
320-76427-7	SED-COMP-DUP	10 *5-	57	57	56	62	75	75	59
320-76427-8	SB-4 (7-9)	68	74	74	73	76	80	80	77
320-76427-9	SB-4 (7-9) DUP	60	67	74	72	73	71	72	67
LCS 320-508643/2-A	Lab Control Sample	70	76	76	77	77	76	75	77
LCS 320-510504/2-A	Lab Control Sample	84	94	92	96	94	99	84	89
MB 320-508643/1-A	Method Blank	64	70	71	74	71	73	73	72
MB 320-510504/1-A	Method Blank	78	82	85	88	85	87	74	89

		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)
320-76427-1	SB-1 (0-0.5)	100	84	96	99	103	113	87	88
320-76427-1 MS	SB-1 (0-0.5)	84	80	87	92	96	97	81	84
320-76427-1 MSD	SB-1 (0-0.5)	87	72	85	92	95	104	82	79
320-76427-2	SB-2 (8-9)	79	68	83	74	70	75	75	85
320-76427-5	SB-3 (3-4)	67	64	69	64	60	64	63	73
320-76427-6 - DL	SED-COMP								
320-76427-6	SED-COMP	51	49	60	52	58	52	48	59
320-76427-7	SED-COMP-DUP	57	55	78	62	78	61	60	65
320-76427-8	SB-4 (7-9)	76	66	83	76	72	77	84	84
320-76427-9	SB-4 (7-9) DUP	66	54	74	67	67	67	75	77
LCS 320-508643/2-A	Lab Control Sample	77	74	87	80	76	72	79	78
LCS 320-510504/2-A	Lab Control Sample	86	92	91	98	100	99	84	81
MB 320-508643/1-A	Method Blank	73	72	77	74	67	70	78	77
MB 320-510504/1-A	Method Blank	77	76	78	82	88	90	67	76

		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)
320-76427-1	SB-1 (0-0.5)	102	99	69	73	107	118	97	102
320-76427-1 MS	SB-1 (0-0.5)	93	89	72	71	99	103	100	99
320-76427-1 MSD	SB-1 (0-0.5)	93	90	70	72	100	101	87	99
320-76427-2	SB-2 (8-9)	75	66	48	58	78	82	86	71
320-76427-5	SB-3 (3-4)	68	64	47	51	77	85	87	66
320-76427-6 - DL	SED-COMP								
320-76427-6	SED-COMP	45	49	34	31	138	136	139	54
320-76427-7	SED-COMP-DUP	58	53	43	41	155 *5+	178 *5+	166 *5+	62
320-76427-8	SB-4 (7-9)	81	72	49	50	87	99	103	75
320-76427-9	SB-4 (7-9) DUP	71	64	46	50	73	82	87	73
LCS 320-508643/2-A	Lab Control Sample	74	71	66	60	76	93	80	73
LCS 320-510504/2-A	Lab Control Sample	90	95	78	75	101	100	89	93
MB 320-508643/1-A	Method Blank	73	67	56	61	79	79	87	73
MB 320-510504/1-A	Method Blank	79	79	58	64	89	91	86	86

Isotope Dilution Summary

Client: Ramboll US Corporation
Project/Site: Reichhold Oak Creek

Job ID: 320-76427-1

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

Matrix: Solid

Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	M102FTS (25-150)							
320-76427-1	SB-1 (0-0.5)	81							
320-76427-1 MS	SB-1 (0-0.5)	80							
320-76427-1 MSD	SB-1 (0-0.5)	74							
320-76427-2	SB-2 (8-9)	99							
320-76427-5	SB-3 (3-4)	88							
320-76427-6 - DL	SED-COMP								
320-76427-6	SED-COMP	86							
320-76427-7	SED-COMP-DUP	97							
320-76427-8	SB-4 (7-9)	96							
320-76427-9	SB-4 (7-9) DUP	90							
LCS 320-508643/2-A	Lab Control Sample	76							
LCS 320-510504/2-A	Lab Control Sample	86							
MB 320-508643/1-A	Method Blank	81							
MB 320-510504/1-A	Method Blank	74							

Surrogate Legend

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

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)
320-76427-3	FB-01-210714	103	95	92	96	93	88	89	88
320-76427-4	EB-01-210714	98	84	83	92	95	86	85	81
LCS 320-508645/2-A	Lab Control Sample	95	87	80	85	96	82	91	81

Isotope Dilution Summary

Client: Ramboll US Corporation
Project/Site: Reichhold Oak Creek

Job ID: 320-76427-1

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

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)
LCSD 320-508645/3-A	Lab Control Sample Dup	104	92	88	95	108	92	99	94
MB 320-508645/1-A	Method Blank	100	96	83	93	101	91	88	86

		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)
320-76427-3	FB-01-210714	87	95	100	90	96	88	80	92
320-76427-4	EB-01-210714	94	90	90	85	87	83	82	84
LCS 320-508645/2-A	Lab Control Sample	89	82	91	88	89	80	77	82
LCSD 320-508645/3-A	Lab Control Sample Dup	98	89	104	98	93	87	88	96
MB 320-508645/1-A	Method Blank	88	97	100	89	90	84	79	92

		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)
320-76427-3	FB-01-210714	83	83	87	83	63	78	76	97
320-76427-4	EB-01-210714	86	72	84	77	62	74	73	90
LCS 320-508645/2-A	Lab Control Sample	80	75	85	74	65	73	66	81
LCSD 320-508645/3-A	Lab Control Sample Dup	78	69	90	83	68	83	77	92
MB 320-508645/1-A	Method Blank	77	75	86	79	69	84	92	95

		Percent Isotope Dilution Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	M102FTS (25-150)
320-76427-3	FB-01-210714	89
320-76427-4	EB-01-210714	81
LCS 320-508645/2-A	Lab Control Sample	81
LCSD 320-508645/3-A	Lab Control Sample Dup	85
MB 320-508645/1-A	Method Blank	89

Surrogate Legend

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

Isotope Dilution Summary

Client: Ramboll US Corporation
Job ID: 320-76427-1
Project/Site: Reichhold Oak Creek

M282FTS = M2-8:2 FTS
HFPODA = 13C3 HFPO-DA
M102FTS = 13C2 10:2 FTS

Method: 537 (modified) - Fluorinated Alkyl Substances

Lab Sample ID: MB 320-508643/1-A
Matrix: Solid
Analysis Batch: 509929

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 508643

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<0.046		0.20	0.046	ug/Kg		07/20/21 18:41	07/23/21 07:01	1
Perfluoropentanoic acid (PFPeA)	<0.041		0.20	0.041	ug/Kg		07/20/21 18:41	07/23/21 07:01	1
Perfluorohexanoic acid (PFHxA)	<0.031		0.20	0.031	ug/Kg		07/20/21 18:41	07/23/21 07:01	1
Perfluoroheptanoic acid (PFHpA)	<0.038		0.20	0.038	ug/Kg		07/20/21 18:41	07/23/21 07:01	1
Perfluorooctanoic acid (PFOA)	<0.053		0.20	0.053	ug/Kg		07/20/21 18:41	07/23/21 07:01	1
Perfluorononanoic acid (PFNA)	<0.022		0.20	0.022	ug/Kg		07/20/21 18:41	07/23/21 07:01	1
Perfluorodecanoic acid (PFDA)	<0.048		0.20	0.048	ug/Kg		07/20/21 18:41	07/23/21 07:01	1
Perfluoroundecanoic acid (PFUnA)	<0.042		0.20	0.042	ug/Kg		07/20/21 18:41	07/23/21 07:01	1
Perfluorododecanoic acid (PFDoA)	<0.030		0.20	0.030	ug/Kg		07/20/21 18:41	07/23/21 07:01	1
Perfluorotridecanoic acid (PFTriA)	<0.021		0.20	0.021	ug/Kg		07/20/21 18:41	07/23/21 07:01	1
Perfluorotetradecanoic acid (PFTeA)	<0.037		0.20	0.037	ug/Kg		07/20/21 18:41	07/23/21 07:01	1
Perfluorobutanesulfonic acid (PFBS)	<0.038		0.20	0.038	ug/Kg		07/20/21 18:41	07/23/21 07:01	1
Perfluoropentanesulfonic acid (PFPeS)	<0.037		0.20	0.037	ug/Kg		07/20/21 18:41	07/23/21 07:01	1
Perfluorohexanesulfonic acid (PFHxS)	<0.029		0.20	0.029	ug/Kg		07/20/21 18:41	07/23/21 07:01	1
Perfluoroheptanesulfonic Acid (PFHpS)	<0.049		0.20	0.049	ug/Kg		07/20/21 18:41	07/23/21 07:01	1
Perfluorooctanesulfonic acid (PFOS)	<0.043		0.20	0.043	ug/Kg		07/20/21 18:41	07/23/21 07:01	1
Perfluorononanesulfonic acid (PFNS)	<0.029		0.20	0.029	ug/Kg		07/20/21 18:41	07/23/21 07:01	1
Perfluorodecanesulfonic acid (PFDS)	<0.052		0.20	0.052	ug/Kg		07/20/21 18:41	07/23/21 07:01	1
Perfluorododecanesulfonic acid (PFDoS)	<0.047		0.20	0.047	ug/Kg		07/20/21 18:41	07/23/21 07:01	1
Perfluorooctanesulfonamide (FOSA)	<0.033		0.20	0.033	ug/Kg		07/20/21 18:41	07/23/21 07:01	1
NEtFOSA	<0.047		0.20	0.047	ug/Kg		07/20/21 18:41	07/23/21 07:01	1
NMeFOSA	<0.049		0.20	0.049	ug/Kg		07/20/21 18:41	07/23/21 07:01	1
NMeFOSAA	<0.023		0.20	0.023	ug/Kg		07/20/21 18:41	07/23/21 07:01	1
NEtFOSAA	<0.048		0.20	0.048	ug/Kg		07/20/21 18:41	07/23/21 07:01	1
NMeFOSE	<0.047		0.20	0.047	ug/Kg		07/20/21 18:41	07/23/21 07:01	1
NEtFOSE	<0.028		0.20	0.028	ug/Kg		07/20/21 18:41	07/23/21 07:01	1
4:2 FTS	<0.051		0.20	0.051	ug/Kg		07/20/21 18:41	07/23/21 07:01	1
6:2 FTS	<0.027		0.20	0.027	ug/Kg		07/20/21 18:41	07/23/21 07:01	1
8:2 FTS	<0.035		0.20	0.035	ug/Kg		07/20/21 18:41	07/23/21 07:01	1
DONA	<0.039		0.20	0.039	ug/Kg		07/20/21 18:41	07/23/21 07:01	1
HFPO-DA (GenX)	<0.041		0.20	0.041	ug/Kg		07/20/21 18:41	07/23/21 07:01	1
F-53B Major	<0.035		0.20	0.035	ug/Kg		07/20/21 18:41	07/23/21 07:01	1
F-53B Minor	<0.031		0.20	0.031	ug/Kg		07/20/21 18:41	07/23/21 07:01	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*64*		*25 - 150*	*07/20/21 18:41*	*07/23/21 07:01*	*1*
13C5 PFPeA	*70*		*25 - 150*	*07/20/21 18:41*	*07/23/21 07:01*	*1*
13C2 PFHxA	*71*		*25 - 150*	*07/20/21 18:41*	*07/23/21 07:01*	*1*
13C4 PFHpA	*74*		*25 - 150*	*07/20/21 18:41*	*07/23/21 07:01*	*1*
13C4 PFOA	*71*		*25 - 150*	*07/20/21 18:41*	*07/23/21 07:01*	*1*
13C5 PFNA	*73*		*25 - 150*	*07/20/21 18:41*	*07/23/21 07:01*	*1*
13C2 PFDA	*73*		*25 - 150*	*07/20/21 18:41*	*07/23/21 07:01*	*1*
13C2 PFUnA	*72*		*25 - 150*	*07/20/21 18:41*	*07/23/21 07:01*	*1*
13C2 PFDoA	*73*		*25 - 150*	*07/20/21 18:41*	*07/23/21 07:01*	*1*
13C2 PFTeDA	*72*		*25 - 150*	*07/20/21 18:41*	*07/23/21 07:01*	*1*
13C3 PFBS	*77*		*25 - 150*	*07/20/21 18:41*	*07/23/21 07:01*	*1*

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

Lab Sample ID: MB 320-508643/1-A
Matrix: Solid
Analysis Batch: 509929

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 508643

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
18O2 PFHxS	74		25 - 150	07/20/21 18:41	07/23/21 07:01	1
13C4 PFOS	67		25 - 150	07/20/21 18:41	07/23/21 07:01	1
13C8 FOSA	70		10 - 150	07/20/21 18:41	07/23/21 07:01	1
d3-NMeFOSAA	78		25 - 150	07/20/21 18:41	07/23/21 07:01	1
d5-NEtFOSAA	77		25 - 150	07/20/21 18:41	07/23/21 07:01	1
d-N-MeFOSA-M	73		10 - 150	07/20/21 18:41	07/23/21 07:01	1
d-N-EtFOSA-M	67		10 - 150	07/20/21 18:41	07/23/21 07:01	1
d7-N-MeFOSE-M	56		10 - 150	07/20/21 18:41	07/23/21 07:01	1
d9-N-EtFOSE-M	61		10 - 150	07/20/21 18:41	07/23/21 07:01	1
M2-4:2 FTS	79		25 - 150	07/20/21 18:41	07/23/21 07:01	1
M2-6:2 FTS	79		25 - 150	07/20/21 18:41	07/23/21 07:01	1
M2-8:2 FTS	87		25 - 150	07/20/21 18:41	07/23/21 07:01	1
13C3 HFPO-DA	73		25 - 150	07/20/21 18:41	07/23/21 07:01	1
13C2 10:2 FTS	81		25 - 150	07/20/21 18:41	07/23/21 07:01	1

Lab Sample ID: LCS 320-508643/2-A
Matrix: Solid
Analysis Batch: 509929

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 508643

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorobutanoic acid (PFBA)	2.00	2.38		ug/Kg		119	60 - 135
Perfluoropentanoic acid (PFPeA)	2.00	2.16		ug/Kg		108	60 - 135
Perfluorohexanoic acid (PFHxA)	2.00	2.37		ug/Kg		118	60 - 135
Perfluoroheptanoic acid (PFHpA)	2.00	2.34		ug/Kg		117	60 - 135
Perfluorooctanoic acid (PFOA)	2.00	2.25		ug/Kg		112	60 - 135
Perfluorononanoic acid (PFNA)	2.00	2.38		ug/Kg		119	60 - 135
Perfluorodecanoic acid (PFDA)	2.00	2.07		ug/Kg		103	60 - 135
Perfluoroundecanoic acid (PFUnA)	2.00	2.27		ug/Kg		113	60 - 135
Perfluorododecanoic acid (PFDoA)	2.00	2.19		ug/Kg		110	60 - 135
Perfluorotridecanoic acid (PFTriA)	2.00	2.01		ug/Kg		100	60 - 135
Perfluorotetradecanoic acid (PFTeA)	2.00	2.23		ug/Kg		112	60 - 135
Perfluoro-n-hexadecanoic acid (PFHxDA)	2.00	2.09		ug/Kg		104	60 - 135
Perfluoro-n-octadecanoic acid (PFODA)	2.00	2.03		ug/Kg		102	60 - 135
Perfluorobutanesulfonic acid (PFBS)	1.77	1.59		ug/Kg		90	60 - 135
Perfluoropentanesulfonic acid (PFPeS)	1.88	1.71		ug/Kg		91	60 - 135
Perfluorohexanesulfonic acid (PFHxS)	1.82	1.82		ug/Kg		100	60 - 135
Perfluoroheptanesulfonic Acid (PFHpS)	1.90	2.02		ug/Kg		106	60 - 135
Perfluorooctanesulfonic acid (PFOS)	1.86	1.95		ug/Kg		105	60 - 135
Perfluorononanesulfonic acid (PFNS)	1.92	1.88		ug/Kg		98	60 - 135

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

Lab Sample ID: LCS 320-508643/2-A
Matrix: Solid
Analysis Batch: 509929

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 508643

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorodecanesulfonic acid (PFDS)	1.93	2.03		ug/Kg		105	60 - 135
Perfluorododecanesulfonic acid (PFDoS)	1.94	1.97		ug/Kg		102	60 - 135
Perfluorooctanesulfonamide (FOSA)	2.00	2.12		ug/Kg		106	60 - 135
NEtFOSA	2.00	2.14		ug/Kg		107	60 - 135
NMeFOSA	2.00	1.84		ug/Kg		92	60 - 135
NMeFOSAA	2.00	2.36		ug/Kg		118	60 - 135
NEtFOSAA	2.00	2.06		ug/Kg		103	60 - 135
NMeFOSE	2.00	1.99		ug/Kg		99	60 - 135
NEtFOSE	2.00	2.36		ug/Kg		118	60 - 135
4:2 FTS	1.87	1.79		ug/Kg		96	60 - 135
6:2 FTS	1.90	1.62		ug/Kg		85	60 - 135
8:2 FTS	1.92	2.07		ug/Kg		108	60 - 135
10:2 FTS	1.93	1.77		ug/Kg		92	60 - 135
DONA	1.88	2.18		ug/Kg		116	60 - 135
HFPO-DA (GenX)	2.00	2.11		ug/Kg		106	60 - 135
F-53B Major	1.86	1.90		ug/Kg		102	60 - 135
F-53B Minor	1.88	1.82		ug/Kg		97	60 - 135

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C4 PFBA	*70*		*25 - 150*
13C5 PFPeA	*76*		*25 - 150*
13C2 PFHxA	*76*		*25 - 150*
13C4 PFHpA	*77*		*25 - 150*
13C4 PFOA	*77*		*25 - 150*
13C5 PFNA	*76*		*25 - 150*
13C2 PFDA	*75*		*25 - 150*
13C2 PFUnA	*77*		*25 - 150*
13C2 PFDoA	*77*		*25 - 150*
13C2 PFTeDA	*74*		*25 - 150*
13C3 PFBS	*87*		*25 - 150*
18O2 PFHxS	*80*		*25 - 150*
13C4 PFOS	*76*		*25 - 150*
13C8 FOSA	*72*		*10 - 150*
d3-NMeFOSAA	*79*		*25 - 150*
d5-NEtFOSAA	*78*		*25 - 150*
d-N-MeFOSA-M	*74*		*10 - 150*
d-N-EtFOSA-M	*71*		*10 - 150*
d7-N-MeFOSE-M	*66*		*10 - 150*
d9-N-EtFOSE-M	*60*		*10 - 150*
M2-4:2 FTS	*76*		*25 - 150*
M2-6:2 FTS	*93*		*25 - 150*
M2-8:2 FTS	*80*		*25 - 150*
13C3 HFPO-DA	*73*		*25 - 150*
13C2 10:2 FTS	*76*		*25 - 150*

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

Lab Sample ID: MB 320-508645/1-A
Matrix: Water
Analysis Batch: 508965

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 508645

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<2.4		5.0	2.4	ng/L		07/20/21 19:23	07/21/21 21:07	1
Perfluoropentanoic acid (PFPeA)	<0.49		2.0	0.49	ng/L		07/20/21 19:23	07/21/21 21:07	1
Perfluorohexanoic acid (PFHxA)	<0.58		2.0	0.58	ng/L		07/20/21 19:23	07/21/21 21:07	1
Perfluoroheptanoic acid (PFHpA)	<0.25		2.0	0.25	ng/L		07/20/21 19:23	07/21/21 21:07	1
Perfluorooctanoic acid (PFOA)	<0.85		2.0	0.85	ng/L		07/20/21 19:23	07/21/21 21:07	1
Perfluorononanoic acid (PFNA)	<0.27		2.0	0.27	ng/L		07/20/21 19:23	07/21/21 21:07	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	0.31	ng/L		07/20/21 19:23	07/21/21 21:07	1
Perfluoroundecanoic acid (PFUnA)	<1.1		2.0	1.1	ng/L		07/20/21 19:23	07/21/21 21:07	1
Perfluorododecanoic acid (PFDoA)	<0.55		2.0	0.55	ng/L		07/20/21 19:23	07/21/21 21:07	1
Perfluorotridecanoic acid (PFTriA)	<1.3		2.0	1.3	ng/L		07/20/21 19:23	07/21/21 21:07	1
Perfluorotetradecanoic acid (PFTeA)	<0.73		2.0	0.73	ng/L		07/20/21 19:23	07/21/21 21:07	1
Perfluorobutanesulfonic acid (PFBS)	<0.20		2.0	0.20	ng/L		07/20/21 19:23	07/21/21 21:07	1
Perfluoropentanesulfonic acid (PFPeS)	<0.30		2.0	0.30	ng/L		07/20/21 19:23	07/21/21 21:07	1
Perfluorohexanesulfonic acid (PFHxS)	<0.57		2.0	0.57	ng/L		07/20/21 19:23	07/21/21 21:07	1
Perfluoroheptanesulfonic Acid (PFHpS)	<0.19		2.0	0.19	ng/L		07/20/21 19:23	07/21/21 21:07	1
Perfluorooctanesulfonic acid (PFOS)	<0.54		2.0	0.54	ng/L		07/20/21 19:23	07/21/21 21:07	1
Perfluorononanesulfonic acid (PFNS)	<0.37		2.0	0.37	ng/L		07/20/21 19:23	07/21/21 21:07	1
Perfluorodecanesulfonic acid (PFDS)	<0.32		2.0	0.32	ng/L		07/20/21 19:23	07/21/21 21:07	1
Perfluorododecanesulfonic acid (PFDoS)	<0.97		2.0	0.97	ng/L		07/20/21 19:23	07/21/21 21:07	1
Perfluorooctanesulfonamide (FOSA)	<0.98		2.0	0.98	ng/L		07/20/21 19:23	07/21/21 21:07	1
NEtFOSA	<0.87		2.0	0.87	ng/L		07/20/21 19:23	07/21/21 21:07	1
NMeFOSA	<0.43		2.0	0.43	ng/L		07/20/21 19:23	07/21/21 21:07	1
NMeFOSAA	<1.2		5.0	1.2	ng/L		07/20/21 19:23	07/21/21 21:07	1
NEtFOSAA	<1.3		5.0	1.3	ng/L		07/20/21 19:23	07/21/21 21:07	1
NMeFOSE	<1.4		4.0	1.4	ng/L		07/20/21 19:23	07/21/21 21:07	1
NEtFOSE	<0.85		2.0	0.85	ng/L		07/20/21 19:23	07/21/21 21:07	1
4:2 FTS	<0.24		2.0	0.24	ng/L		07/20/21 19:23	07/21/21 21:07	1
6:2 FTS	<2.5		5.0	2.5	ng/L		07/20/21 19:23	07/21/21 21:07	1
8:2 FTS	<0.46		2.0	0.46	ng/L		07/20/21 19:23	07/21/21 21:07	1
DONA	<0.40		2.0	0.40	ng/L		07/20/21 19:23	07/21/21 21:07	1
HFPO-DA (GenX)	<1.5		4.0	1.5	ng/L		07/20/21 19:23	07/21/21 21:07	1
F-53B Major	<0.24		2.0	0.24	ng/L		07/20/21 19:23	07/21/21 21:07	1
F-53B Minor	<0.32		2.0	0.32	ng/L		07/20/21 19:23	07/21/21 21:07	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*100*		*25 - 150*	*07/20/21 19:23*	*07/21/21 21:07*	*1*
13C5 PFPeA	*96*		*25 - 150*	*07/20/21 19:23*	*07/21/21 21:07*	*1*
13C2 PFHxA	*83*		*25 - 150*	*07/20/21 19:23*	*07/21/21 21:07*	*1*
13C4 PFHpA	*93*		*25 - 150*	*07/20/21 19:23*	*07/21/21 21:07*	*1*
13C4 PFOA	*101*		*25 - 150*	*07/20/21 19:23*	*07/21/21 21:07*	*1*
13C5 PFNA	*91*		*25 - 150*	*07/20/21 19:23*	*07/21/21 21:07*	*1*
13C2 PFDA	*88*		*25 - 150*	*07/20/21 19:23*	*07/21/21 21:07*	*1*
13C2 PFUnA	*86*		*25 - 150*	*07/20/21 19:23*	*07/21/21 21:07*	*1*
13C2 PFDoA	*88*		*25 - 150*	*07/20/21 19:23*	*07/21/21 21:07*	*1*
13C2 PFTeDA	*97*		*25 - 150*	*07/20/21 19:23*	*07/21/21 21:07*	*1*
13C3 PFBS	*100*		*25 - 150*	*07/20/21 19:23*	*07/21/21 21:07*	*1*

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

Lab Sample ID: MB 320-508645/1-A
Matrix: Water
Analysis Batch: 508965

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 508645

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
18O2 PFHxS	89		25 - 150	07/20/21 19:23	07/21/21 21:07	1
13C4 PFOS	90		25 - 150	07/20/21 19:23	07/21/21 21:07	1
13C8 FOSA	84		10 - 150	07/20/21 19:23	07/21/21 21:07	1
d3-NMeFOSAA	79		25 - 150	07/20/21 19:23	07/21/21 21:07	1
d5-NEtFOSAA	92		25 - 150	07/20/21 19:23	07/21/21 21:07	1
d-N-MeFOSA-M	77		10 - 150	07/20/21 19:23	07/21/21 21:07	1
d-N-EtFOSA-M	75		10 - 150	07/20/21 19:23	07/21/21 21:07	1
d7-N-MeFOSE-M	86		10 - 150	07/20/21 19:23	07/21/21 21:07	1
d9-N-EtFOSE-M	79		10 - 150	07/20/21 19:23	07/21/21 21:07	1
M2-4:2 FTS	69		25 - 150	07/20/21 19:23	07/21/21 21:07	1
M2-6:2 FTS	84		25 - 150	07/20/21 19:23	07/21/21 21:07	1
M2-8:2 FTS	92		25 - 150	07/20/21 19:23	07/21/21 21:07	1
13C3 HFPO-DA	95		25 - 150	07/20/21 19:23	07/21/21 21:07	1
13C2 10:2 FTS	89		25 - 150	07/20/21 19:23	07/21/21 21:07	1

Lab Sample ID: LCS 320-508645/2-A
Matrix: Water
Analysis Batch: 508965

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 508645

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorobutanoic acid (PFBA)	40.0	36.8		ng/L		92	60 - 135
Perfluoropentanoic acid (PFPeA)	40.0	37.4		ng/L		93	60 - 135
Perfluorohexanoic acid (PFHxA)	40.0	37.9		ng/L		95	60 - 135
Perfluoroheptanoic acid (PFHpA)	40.0	37.9		ng/L		95	60 - 135
Perfluorooctanoic acid (PFOA)	40.0	35.9		ng/L		90	60 - 135
Perfluorononanoic acid (PFNA)	40.0	39.9		ng/L		100	60 - 135
Perfluorodecanoic acid (PFDA)	40.0	33.5		ng/L		84	60 - 135
Perfluoroundecanoic acid (PFUnA)	40.0	40.2		ng/L		101	60 - 135
Perfluorododecanoic acid (PFDoA)	40.0	32.3		ng/L		81	60 - 135
Perfluorotridecanoic acid (PFTriA)	40.0	39.3		ng/L		98	60 - 135
Perfluorotetradecanoic acid (PFTeA)	40.0	38.5		ng/L		96	60 - 135
Perfluoro-n-hexadecanoic acid (PFHxDA)	40.0	35.4		ng/L		89	60 - 135
Perfluoro-n-octadecanoic acid (PFODA)	40.0	29.7		ng/L		74	60 - 135
Perfluorobutanesulfonic acid (PFBS)	35.4	27.9		ng/L		79	60 - 135
Perfluoropentanesulfonic acid (PFPeS)	37.5	29.0		ng/L		77	60 - 135
Perfluorohexanesulfonic acid (PFHxS)	36.4	31.8		ng/L		87	60 - 135
Perfluoroheptanesulfonic Acid (PFHpS)	38.1	37.7		ng/L		99	60 - 135
Perfluorooctanesulfonic acid (PFOS)	37.1	30.4		ng/L		82	60 - 135
Perfluorononanesulfonic acid (PFNS)	38.4	29.8		ng/L		78	60 - 135

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

Lab Sample ID: LCS 320-508645/2-A
Matrix: Water
Analysis Batch: 508965

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 508645

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorodecanesulfonic acid (PFDS)	38.6	34.7		ng/L		90	60 - 135
Perfluorododecanesulfonic acid (PFDoS)	38.7	36.9		ng/L		95	60 - 135
Perfluorooctanesulfonamide (FOSA)	40.0	38.3		ng/L		96	60 - 135
NEtFOSA	40.0	35.7		ng/L		89	60 - 135
NMeFOSA	40.0	33.0		ng/L		82	60 - 135
NMeFOSAA	40.0	34.8		ng/L		87	60 - 135
NEtFOSAA	40.0	34.3		ng/L		86	60 - 135
NMeFOSE	40.0	35.6		ng/L		89	60 - 135
NEtFOSE	40.0	39.0		ng/L		97	60 - 135
4:2 FTS	37.4	31.0		ng/L		83	60 - 135
6:2 FTS	37.9	34.6		ng/L		91	60 - 135
8:2 FTS	38.3	42.3		ng/L		110	60 - 135
10:2 FTS	38.6	35.6		ng/L		92	60 - 135
DONA	37.7	37.2		ng/L		99	60 - 135
HFPO-DA (GenX)	40.0	40.1		ng/L		100	60 - 135
F-53B Major	37.3	35.7		ng/L		96	60 - 135
F-53B Minor	37.7	36.6		ng/L		97	60 - 135

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C4 PFBA	*95*		*25 - 150*
13C5 PFPeA	*87*		*25 - 150*
13C2 PFHxA	*80*		*25 - 150*
13C4 PFHpA	*85*		*25 - 150*
13C4 PFOA	*96*		*25 - 150*
13C5 PFNA	*82*		*25 - 150*
13C2 PFDA	*91*		*25 - 150*
13C2 PFUnA	*81*		*25 - 150*
13C2 PFDoA	*89*		*25 - 150*
13C2 PFTeDA	*82*		*25 - 150*
13C3 PFBS	*91*		*25 - 150*
18O2 PFHxS	*88*		*25 - 150*
13C4 PFOS	*89*		*25 - 150*
13C8 FOSA	*80*		*10 - 150*
d3-NMeFOSAA	*77*		*25 - 150*
d5-NEtFOSAA	*82*		*25 - 150*
d-N-MeFOSA-M	*80*		*10 - 150*
d-N-EtFOSA-M	*75*		*10 - 150*
d7-N-MeFOSE-M	*85*		*10 - 150*
d9-N-EtFOSE-M	*74*		*10 - 150*
M2-4:2 FTS	*65*		*25 - 150*
M2-6:2 FTS	*73*		*25 - 150*
M2-8:2 FTS	*66*		*25 - 150*
13C3 HFPO-DA	*81*		*25 - 150*
13C2 10:2 FTS	*81*		*25 - 150*

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

Lab Sample ID: LCSD 320-508645/3-A
Matrix: Water
Analysis Batch: 508965

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 508645

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perfluorobutanoic acid (PFBA)			40.0	35.8		ng/L		90	60 - 135	3	30
Perfluoropentanoic acid (PFPeA)			40.0	39.3		ng/L		98	60 - 135	5	30
Perfluorohexanoic acid (PFHxA)			40.0	37.9		ng/L		95	60 - 135	0	30
Perfluoroheptanoic acid (PFHpA)			40.0	36.4		ng/L		91	60 - 135	4	30
Perfluorooctanoic acid (PFOA)			40.0	34.8		ng/L		87	60 - 135	3	30
Perfluorononanoic acid (PFNA)			40.0	39.2		ng/L		98	60 - 135	2	30
Perfluorodecanoic acid (PFDA)			40.0	34.4		ng/L		86	60 - 135	3	30
Perfluoroundecanoic acid (PFUnA)			40.0	35.3		ng/L		88	60 - 135	13	30
Perfluorododecanoic acid (PFDoA)			40.0	33.9		ng/L		85	60 - 135	5	30
Perfluorotridecanoic acid (PFTriA)			40.0	38.6		ng/L		97	60 - 135	2	30
Perfluorotetradecanoic acid (PFTeA)			40.0	40.4		ng/L		101	60 - 135	5	30
Perfluoro-n-hexadecanoic acid (PFHxDA)			40.0	38.6		ng/L		96	60 - 135	8	30
Perfluoro-n-octadecanoic acid (PFODA)			40.0	33.7		ng/L		84	60 - 135	13	30
Perfluorobutanesulfonic acid (PFBS)			35.4	26.4		ng/L		75	60 - 135	5	30
Perfluoropentanesulfonic acid (PFPeS)			37.5	30.1		ng/L		80	60 - 135	4	30
Perfluorohexanesulfonic acid (PFHxS)			36.4	33.0		ng/L		91	60 - 135	4	30
Perfluoroheptanesulfonic Acid (PFHpS)			38.1	38.5		ng/L		101	60 - 135	2	30
Perfluorooctanesulfonic acid (PFOS)			37.1	33.9		ng/L		91	60 - 135	11	30
Perfluorononanesulfonic acid (PFNS)			38.4	33.0		ng/L		86	60 - 135	10	30
Perfluorodecanesulfonic acid (PFDS)			38.6	37.0		ng/L		96	60 - 135	6	30
Perfluorododecanesulfonic acid (PFDoS)			38.7	40.1		ng/L		104	60 - 135	8	30
Perfluorooctanesulfonamide (FOSA)			40.0	38.5		ng/L		96	60 - 135	0	30
NEtFOSA			40.0	43.8		ng/L		110	60 - 135	21	30
NMeFOSA			40.0	36.2		ng/L		90	60 - 135	9	30
NMeFOSAA			40.0	37.4		ng/L		94	60 - 135	7	30
NEtFOSAA			40.0	33.4		ng/L		83	60 - 135	3	30
NMeFOSE			40.0	35.6		ng/L		89	60 - 135	0	30
NEtFOSE			40.0	39.1		ng/L		98	60 - 135	0	30
4:2 FTS			37.4	38.2		ng/L		102	60 - 135	21	30
6:2 FTS			37.9	33.6		ng/L		89	60 - 135	3	30
8:2 FTS			38.3	37.8		ng/L		99	60 - 135	11	30
10:2 FTS			38.6	35.6		ng/L		92	60 - 135	0	30
DONA			37.7	40.1		ng/L		107	60 - 135	8	30
HFPO-DA (GenX)			40.0	38.1		ng/L		95	60 - 135	5	30
F-53B Major			37.3	37.2		ng/L		100	60 - 135	4	30
F-53B Minor			37.7	41.5		ng/L		110	60 - 135	13	30

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

Isotope Dilution	LCSD %Recovery	LCSD Qualifier	Limits
13C4 PFBA	104		25 - 150
13C5 PFPeA	92		25 - 150
13C2 PFHxA	88		25 - 150
13C4 PFHpA	95		25 - 150
13C4 PFOA	108		25 - 150
13C5 PFNA	92		25 - 150
13C2 PFDA	99		25 - 150
13C2 PFUnA	94		25 - 150
13C2 PFDoA	98		25 - 150
13C2 PFTeDA	89		25 - 150
13C3 PFBS	104		25 - 150
18O2 PFHxS	98		25 - 150
13C4 PFOS	93		25 - 150
13C8 FOSA	87		10 - 150
d3-NMeFOSAA	88		25 - 150
d5-NEtFOSAA	96		25 - 150
d-N-MeFOSA-M	78		10 - 150
d-N-EtFOSA-M	69		10 - 150
d7-N-MeFOSE-M	90		10 - 150
d9-N-EtFOSE-M	83		10 - 150
M2-4:2 FTS	68		25 - 150
M2-6:2 FTS	83		25 - 150
M2-8:2 FTS	77		25 - 150
13C3 HFPO-DA	92		25 - 150
13C2 10:2 FTS	85		25 - 150

Lab Sample ID: MB 320-510504/1-A
Matrix: Solid
Analysis Batch: 510816

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 510504

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<0.046		0.20	0.046	ug/Kg		07/27/21 04:48	07/28/21 04:09	1
Perfluoropentanoic acid (PFPeA)	<0.041		0.20	0.041	ug/Kg		07/27/21 04:48	07/28/21 04:09	1
Perfluorohexanoic acid (PFHxA)	<0.031		0.20	0.031	ug/Kg		07/27/21 04:48	07/28/21 04:09	1
Perfluoroheptanoic acid (PFHpA)	<0.038		0.20	0.038	ug/Kg		07/27/21 04:48	07/28/21 04:09	1
Perfluorooctanoic acid (PFOA)	<0.053		0.20	0.053	ug/Kg		07/27/21 04:48	07/28/21 04:09	1
Perfluorononanoic acid (PFNA)	<0.022		0.20	0.022	ug/Kg		07/27/21 04:48	07/28/21 04:09	1
Perfluorodecanoic acid (PFDA)	<0.048		0.20	0.048	ug/Kg		07/27/21 04:48	07/28/21 04:09	1
Perfluoroundecanoic acid (PFUnA)	<0.042		0.20	0.042	ug/Kg		07/27/21 04:48	07/28/21 04:09	1
Perfluorododecanoic acid (PFDoA)	<0.030		0.20	0.030	ug/Kg		07/27/21 04:48	07/28/21 04:09	1
Perfluorotridecanoic acid (PFTriA)	<0.021		0.20	0.021	ug/Kg		07/27/21 04:48	07/28/21 04:09	1
Perfluorotetradecanoic acid (PFTeA)	<0.037		0.20	0.037	ug/Kg		07/27/21 04:48	07/28/21 04:09	1
Perfluorobutanesulfonic acid (PFBS)	<0.038		0.20	0.038	ug/Kg		07/27/21 04:48	07/28/21 04:09	1
Perfluoropentanesulfonic acid (PFPeS)	<0.037		0.20	0.037	ug/Kg		07/27/21 04:48	07/28/21 04:09	1
Perfluorohexanesulfonic acid (PFHxS)	<0.029		0.20	0.029	ug/Kg		07/27/21 04:48	07/28/21 04:09	1
Perfluoroheptanesulfonic Acid (PFHpS)	<0.049		0.20	0.049	ug/Kg		07/27/21 04:48	07/28/21 04:09	1
Perfluorooctanesulfonic acid (PFOS)	<0.043		0.20	0.043	ug/Kg		07/27/21 04:48	07/28/21 04:09	1
Perfluorononanesulfonic acid (PFNS)	<0.029		0.20	0.029	ug/Kg		07/27/21 04:48	07/28/21 04:09	1
Perfluorodecanesulfonic acid (PFDS)	<0.052		0.20	0.052	ug/Kg		07/27/21 04:48	07/28/21 04:09	1
Perfluorododecanesulfonic acid (PFDoS)	<0.047		0.20	0.047	ug/Kg		07/27/21 04:48	07/28/21 04:09	1

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

Lab Sample ID: MB 320-510504/1-A
Matrix: Solid
Analysis Batch: 510816

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 510504

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonamide (FOSA)	<0.033		0.20	0.033	ug/Kg		07/27/21 04:48	07/28/21 04:09	1
NEtFOSA	<0.047		0.20	0.047	ug/Kg		07/27/21 04:48	07/28/21 04:09	1
NMeFOSA	<0.049		0.20	0.049	ug/Kg		07/27/21 04:48	07/28/21 04:09	1
NMeFOSAA	<0.023		0.20	0.023	ug/Kg		07/27/21 04:48	07/28/21 04:09	1
NEtFOSAA	<0.048		0.20	0.048	ug/Kg		07/27/21 04:48	07/28/21 04:09	1
NMeFOSE	<0.047		0.20	0.047	ug/Kg		07/27/21 04:48	07/28/21 04:09	1
NEtFOSE	<0.028		0.20	0.028	ug/Kg		07/27/21 04:48	07/28/21 04:09	1
4:2 FTS	<0.051		0.20	0.051	ug/Kg		07/27/21 04:48	07/28/21 04:09	1
6:2 FTS	<0.027		0.20	0.027	ug/Kg		07/27/21 04:48	07/28/21 04:09	1
8:2 FTS	<0.035		0.20	0.035	ug/Kg		07/27/21 04:48	07/28/21 04:09	1
DONA	<0.039		0.20	0.039	ug/Kg		07/27/21 04:48	07/28/21 04:09	1
HFPO-DA (GenX)	<0.041		0.20	0.041	ug/Kg		07/27/21 04:48	07/28/21 04:09	1
F-53B Major	<0.035		0.20	0.035	ug/Kg		07/27/21 04:48	07/28/21 04:09	1
F-53B Minor	<0.031		0.20	0.031	ug/Kg		07/27/21 04:48	07/28/21 04:09	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*78*		*25 - 150*	*07/27/21 04:48*	*07/28/21 04:09*	*1*
13C5 PFPeA	*82*		*25 - 150*	*07/27/21 04:48*	*07/28/21 04:09*	*1*
13C2 PFHxA	*85*		*25 - 150*	*07/27/21 04:48*	*07/28/21 04:09*	*1*
13C4 PFHpA	*88*		*25 - 150*	*07/27/21 04:48*	*07/28/21 04:09*	*1*
13C4 PFOA	*85*		*25 - 150*	*07/27/21 04:48*	*07/28/21 04:09*	*1*
13C5 PFNA	*87*		*25 - 150*	*07/27/21 04:48*	*07/28/21 04:09*	*1*
13C2 PFDA	*74*		*25 - 150*	*07/27/21 04:48*	*07/28/21 04:09*	*1*
13C2 PFUnA	*89*		*25 - 150*	*07/27/21 04:48*	*07/28/21 04:09*	*1*
13C2 PFDoA	*77*		*25 - 150*	*07/27/21 04:48*	*07/28/21 04:09*	*1*
13C2 PFTeDA	*76*		*25 - 150*	*07/27/21 04:48*	*07/28/21 04:09*	*1*
13C3 PFBS	*78*		*25 - 150*	*07/27/21 04:48*	*07/28/21 04:09*	*1*
18O2 PFHxS	*82*		*25 - 150*	*07/27/21 04:48*	*07/28/21 04:09*	*1*
13C4 PFOS	*88*		*25 - 150*	*07/27/21 04:48*	*07/28/21 04:09*	*1*
13C8 FOSA	*90*		*10 - 150*	*07/27/21 04:48*	*07/28/21 04:09*	*1*
d3-NMeFOSAA	*67*		*25 - 150*	*07/27/21 04:48*	*07/28/21 04:09*	*1*
d5-NEtFOSAA	*76*		*25 - 150*	*07/27/21 04:48*	*07/28/21 04:09*	*1*
d-N-MeFOSA-M	*79*		*10 - 150*	*07/27/21 04:48*	*07/28/21 04:09*	*1*
d-N-EtFOSA-M	*79*		*10 - 150*	*07/27/21 04:48*	*07/28/21 04:09*	*1*
d7-N-MeFOSE-M	*58*		*10 - 150*	*07/27/21 04:48*	*07/28/21 04:09*	*1*
d9-N-EtFOSE-M	*64*		*10 - 150*	*07/27/21 04:48*	*07/28/21 04:09*	*1*
M2-4:2 FTS	*89*		*25 - 150*	*07/27/21 04:48*	*07/28/21 04:09*	*1*
M2-6:2 FTS	*91*		*25 - 150*	*07/27/21 04:48*	*07/28/21 04:09*	*1*
M2-8:2 FTS	*86*		*25 - 150*	*07/27/21 04:48*	*07/28/21 04:09*	*1*
13C3 HFPO-DA	*86*		*25 - 150*	*07/27/21 04:48*	*07/28/21 04:09*	*1*
13C2 10:2 FTS	*74*		*25 - 150*	*07/27/21 04:48*	*07/28/21 04:09*	*1*

Lab Sample ID: LCS 320-510504/2-A
Matrix: Solid
Analysis Batch: 510816

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 510504

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorobutanoic acid (PFBA)	2.00	2.02		ug/Kg		101	60 - 135
Perfluoropentanoic acid (PFPeA)	2.00	1.88		ug/Kg		94	60 - 135

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

Lab Sample ID: LCS 320-510504/2-A
Matrix: Solid
Analysis Batch: 510816

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 510504

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorohexanoic acid (PFHxA)	2.00	1.85		ug/Kg		92	60 - 135
Perfluoroheptanoic acid (PFHpA)	2.00	1.95		ug/Kg		98	60 - 135
Perfluorooctanoic acid (PFOA)	2.00	2.07		ug/Kg		104	60 - 135
Perfluorononanoic acid (PFNA)	2.00	1.88		ug/Kg		94	60 - 135
Perfluorodecanoic acid (PFDA)	2.00	2.16		ug/Kg		108	60 - 135
Perfluoroundecanoic acid (PFUnA)	2.00	2.15		ug/Kg		107	60 - 135
Perfluorododecanoic acid (PFDoA)	2.00	2.27		ug/Kg		113	60 - 135
Perfluorotridecanoic acid (PFTriA)	2.00	1.87		ug/Kg		93	60 - 135
Perfluorotetradecanoic acid (PFTeA)	2.00	2.00		ug/Kg		100	60 - 135
Perfluoro-n-hexadecanoic acid (PFHxDA)	2.00	1.93		ug/Kg		97	60 - 135
Perfluoro-n-octadecanoic acid (PFODA)	2.00	2.01		ug/Kg		101	60 - 135
Perfluorobutanesulfonic acid (PFBS)	1.77	1.77		ug/Kg		100	60 - 135
Perfluoropentanesulfonic acid (PFPeS)	1.88	1.81		ug/Kg		96	60 - 135
Perfluorohexanesulfonic acid (PFHxS)	1.82	1.70		ug/Kg		93	60 - 135
Perfluoroheptanesulfonic Acid (PFHpS)	1.90	1.89		ug/Kg		99	60 - 135
Perfluorooctanesulfonic acid (PFOS)	1.86	1.85		ug/Kg		100	60 - 135
Perfluorononanesulfonic acid (PFNS)	1.92	1.77		ug/Kg		92	60 - 135
Perfluorodecanesulfonic acid (PFDS)	1.93	1.68		ug/Kg		87	60 - 135
Perfluorododecanesulfonic acid (PFDoS)	1.94	1.81		ug/Kg		94	60 - 135
Perfluorooctanesulfonamide (FOSA)	2.00	1.90		ug/Kg		95	60 - 135
NEtFOSA	2.00	1.95		ug/Kg		97	60 - 135
NMeFOSA	2.00	2.09		ug/Kg		104	60 - 135
NMeFOSAA	2.00	1.80		ug/Kg		90	60 - 135
NEtFOSAA	2.00	2.02		ug/Kg		101	60 - 135
NMeFOSE	2.00	2.07		ug/Kg		103	60 - 135
NEtFOSE	2.00	2.01		ug/Kg		101	60 - 135
4:2 FTS	1.87	1.73		ug/Kg		92	60 - 135
6:2 FTS	1.90	1.91		ug/Kg		101	60 - 135
8:2 FTS	1.92	2.12		ug/Kg		111	60 - 135
10:2 FTS	1.93	1.88		ug/Kg		98	60 - 135
DONA	1.88	1.73		ug/Kg		92	60 - 135
HFPO-DA (GenX)	2.00	1.97		ug/Kg		98	60 - 135
F-53B Major	1.86	1.82		ug/Kg		98	60 - 135
F-53B Minor	1.88	1.71		ug/Kg		91	60 - 135

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C4 PFBA	*84*		*25 - 150*

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

Lab Sample ID: LCS 320-510504/2-A
Matrix: Solid
Analysis Batch: 510816

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 510504

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C5 PFPeA	94		25 - 150
13C2 PFHxA	92		25 - 150
13C4 PFHpA	96		25 - 150
13C4 PFOA	94		25 - 150
13C5 PFNA	99		25 - 150
13C2 PFDA	84		25 - 150
13C2 PFUnA	89		25 - 150
13C2 PFDoA	86		25 - 150
13C2 PFTeDA	92		25 - 150
13C3 PFBS	91		25 - 150
18O2 PFHxS	98		25 - 150
13C4 PFOS	100		25 - 150
13C8 FOSA	99		10 - 150
d3-NMeFOSAA	84		25 - 150
d5-NEtFOSAA	81		25 - 150
d-N-MeFOSA-M	90		10 - 150
d-N-EtFOSA-M	95		10 - 150
d7-N-MeFOSE-M	78		10 - 150
d9-N-EtFOSE-M	75		10 - 150
M2-4:2 FTS	101		25 - 150
M2-6:2 FTS	100		25 - 150
M2-8:2 FTS	89		25 - 150
13C3 HFPO-DA	93		25 - 150
13C2 10:2 FTS	86		25 - 150

Lab Sample ID: 320-76427-1 MS
Matrix: Solid
Analysis Batch: 510816

Client Sample ID: SB-1 (0-0.5)
Prep Type: Total/NA
Prep Batch: 510504

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorobutanoic acid (PFBA)	5.3		12.2	14.9		ug/Kg	☼	80	70 - 130
Perfluoropentanoic acid (PFPeA)	18	F1	12.2	23.0	F1	ug/Kg	☼	38	70 - 130
Perfluorohexanoic acid (PFHxA)	6.7		12.2	15.2		ug/Kg	☼	70	70 - 130
Perfluoroheptanoic acid (PFHpA)	6.0		12.2	16.1		ug/Kg	☼	83	70 - 130
Perfluorooctanoic acid (PFOA)	18	F2 F1	12.2	23.0	F1	ug/Kg	☼	42	70 - 130
Perfluorononanoic acid (PFNA)	7.3		12.2	17.1		ug/Kg	☼	81	70 - 130
Perfluorodecanoic acid (PFDA)	2.4		12.2	13.6		ug/Kg	☼	92	70 - 130
Perfluoroundecanoic acid (PFUnA)	0.57	J	12.2	12.4		ug/Kg	☼	97	70 - 130
Perfluorododecanoic acid (PFDoA)	0.48	J	12.2	13.1		ug/Kg	☼	104	70 - 130
Perfluorotridecanoic acid (PFTriA)	<0.13		12.2	12.4		ug/Kg	☼	102	70 - 130
Perfluorotetradecanoic acid (PFTeA)	<0.22		12.2	13.7		ug/Kg	☼	112	70 - 130
Perfluoro-n-hexadecanoic acid (PFHxDA)	<0.23		12.2	13.0		ug/Kg	☼	107	70 - 130
Perfluoro-n-octadecanoic acid (PFODA)	<0.39	F2	12.2	14.5		ug/Kg	☼	119	70 - 130
Perfluorobutanesulfonic acid (PFBS)	<0.23		10.7	10.4		ug/Kg	☼	97	70 - 130

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

Lab Sample ID: 320-76427-1 MS
Matrix: Solid
Analysis Batch: 510816

Client Sample ID: SB-1 (0-0.5)
Prep Type: Total/NA
Prep Batch: 510504

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluoropentanesulfonic acid (PFPeS)	<0.22		11.4	11.1		ug/Kg	☼	97	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	<0.17		11.1	10.9		ug/Kg	☼	98	70 - 130
Perfluoroheptanesulfonic Acid (PFHpS)	<0.29		11.6	11.0		ug/Kg	☼	95	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<0.26		11.3	11.2		ug/Kg	☼	99	70 - 130
Perfluorononanesulfonic acid (PFNS)	<0.17		11.7	10.3		ug/Kg	☼	88	70 - 130
Perfluorodecanesulfonic acid (PFDS)	<0.31		11.7	9.90		ug/Kg	☼	85	70 - 130
Perfluorododecanesulfonic acid (PFDoS)	<0.28		11.8	9.22		ug/Kg	☼	78	70 - 130
Perfluorooctanesulfonamide (FOSA)	<0.20		12.2	11.8		ug/Kg	☼	97	70 - 130
NEtFOSA	<0.28		12.2	12.2		ug/Kg	☼	100	70 - 130
NMeFOSA	<0.29		12.2	12.2		ug/Kg	☼	101	70 - 130
NMeFOSAA	<0.14		12.2	10.8		ug/Kg	☼	89	70 - 130
NEtFOSAA	<0.29		12.2	12.3		ug/Kg	☼	101	70 - 130
NMeFOSE	<0.28		12.2	12.3		ug/Kg	☼	101	70 - 130
NEtFOSE	<0.17		12.2	12.8		ug/Kg	☼	105	70 - 130
4:2 FTS	<0.30		11.4	11.3		ug/Kg	☼	99	70 - 130
6:2 FTS	6.4		11.5	17.0		ug/Kg	☼	92	70 - 130
8:2 FTS	66	F2	11.6	40.0	4	ug/Kg	☼	-227	70 - 130
10:2 FTS	4.3		11.7	14.8		ug/Kg	☼	90	70 - 130
DONA	<0.23		11.4	11.2		ug/Kg	☼	98	70 - 130
HFPO-DA (GenX)	<0.24		12.2	11.6		ug/Kg	☼	95	70 - 130
F-53B Major	<0.21		11.3	10.3		ug/Kg	☼	91	70 - 130
F-53B Minor	<0.18		11.4	9.95		ug/Kg	☼	87	70 - 130

Isotope Dilution	*MS %Recovery*	*MS Qualifier*	*Limits*
13C4 PFBA	*73*		*25 - 150*
13C5 PFPeA	*90*		*25 - 150*
13C2 PFHxA	*97*		*25 - 150*
13C4 PFHpA	*95*		*25 - 150*
13C4 PFOA	*97*		*25 - 150*
13C5 PFNA	*97*		*25 - 150*
13C2 PFDA	*88*		*25 - 150*
13C2 PFUnA	*89*		*25 - 150*
13C2 PFDoA	*84*		*25 - 150*
13C2 PFTeDA	*80*		*25 - 150*
13C3 PFBS	*87*		*25 - 150*
18O2 PFHxS	*92*		*25 - 150*
13C4 PFOS	*96*		*25 - 150*
13C8 FOSA	*97*		*10 - 150*
d3-NMeFOSAA	*81*		*25 - 150*
d5-NEtFOSAA	*84*		*25 - 150*
d-N-MeFOSA-M	*93*		*10 - 150*
d-N-EtFOSA-M	*89*		*10 - 150*
d7-N-MeFOSE-M	*72*		*10 - 150*

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

Lab Sample ID: 320-76427-1 MS
Matrix: Solid
Analysis Batch: 510816

Client Sample ID: SB-1 (0-0.5)
Prep Type: Total/NA
Prep Batch: 510504

Isotope Dilution	*MS %Recovery*	*MS Qualifier*	*Limits*
d9-N-EtFOSE-M	*71*		*10 - 150*
M2-4:2 FTS	*99*		*25 - 150*
M2-6:2 FTS	*103*		*25 - 150*
M2-8:2 FTS	*100*		*25 - 150*
13C3 HFPO-DA	*99*		*25 - 150*
13C2 10:2 FTS	*80*		*25 - 150*

Lab Sample ID: 320-76427-1 MSD
Matrix: Solid
Analysis Batch: 510816

Client Sample ID: SB-1 (0-0.5)
Prep Type: Total/NA
Prep Batch: 510504

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perfluorobutanoic acid (PFBA)	5.3		11.9	17.2		ug/Kg	☼	101	70 - 130	14	30
Perfluoropentanoic acid (PFPeA)	18	F1	11.9	29.5		ug/Kg	☼	93	70 - 130	25	30
Perfluorohexanoic acid (PFHxA)	6.7		11.9	17.5		ug/Kg	☼	90	70 - 130	14	30
Perfluoroheptanoic acid (PFHpA)	6.0		11.9	17.7		ug/Kg	☼	98	70 - 130	9	30
Perfluorooctanoic acid (PFOA)	18	F2 F1	11.9	32.9	F2	ug/Kg	☼	126	70 - 130	35	30
Perfluorononanoic acid (PFNA)	7.3		11.9	21.3		ug/Kg	☼	118	70 - 130	22	30
Perfluorodecanoic acid (PFDA)	2.4		11.9	15.3		ug/Kg	☼	108	70 - 130	12	30
Perfluoroundecanoic acid (PFUnA)	0.57	J	11.9	10.7		ug/Kg	☼	85	70 - 130	15	30
Perfluorododecanoic acid (PFDoA)	0.48	J	11.9	11.8		ug/Kg	☼	95	70 - 130	10	30
Perfluorotridecanoic acid (PFTriA)	<0.13		11.9	11.9		ug/Kg	☼	100	70 - 130	4	30
Perfluorotetradecanoic acid (PFTeA)	<0.22		11.9	13.6		ug/Kg	☼	114	70 - 130	0	30
Perfluoro-n-hexadecanoic acid (PFHxDA)	<0.23		11.9	13.5		ug/Kg	☼	113	70 - 130	4	30
Perfluoro-n-octadecanoic acid (PFODA)	<0.39	F2	11.9	10.5	F2	ug/Kg	☼	88	70 - 130	31	30
Perfluorobutanesulfonic acid (PFBS)	<0.23		10.5	10.6		ug/Kg	☼	101	70 - 130	2	30
Perfluoropentanesulfonic acid (PFPeS)	<0.22		11.2	10.9		ug/Kg	☼	97	70 - 130	2	30
Perfluorohexanesulfonic acid (PFHxS)	<0.17		10.8	10.1		ug/Kg	☼	93	70 - 130	7	30
Perfluoroheptanesulfonic Acid (PFHpS)	<0.29		11.3	11.0		ug/Kg	☼	97	70 - 130	0	30
Perfluorooctanesulfonic acid (PFOS)	<0.26		11.1	10.6		ug/Kg	☼	96	70 - 130	5	30
Perfluorononanesulfonic acid (PFNS)	<0.17		11.4	9.58		ug/Kg	☼	84	70 - 130	7	30
Perfluorodecanesulfonic acid (PFDS)	<0.31		11.5	9.14		ug/Kg	☼	80	70 - 130	8	30
Perfluorododecanesulfonic acid (PFDoS)	<0.28		11.5	8.90		ug/Kg	☼	77	70 - 130	4	30
Perfluorooctanesulfonamide (FOSA)	<0.20		11.9	10.5		ug/Kg	☼	88	70 - 130	12	30
NEtFOSA	<0.28		11.9	11.8		ug/Kg	☼	99	70 - 130	3	30
NMeFOSA	<0.29		11.9	11.8		ug/Kg	☼	99	70 - 130	4	30
NMeFOSAA	<0.14		11.9	11.2		ug/Kg	☼	94	70 - 130	3	30
NEtFOSAA	<0.29		11.9	12.3		ug/Kg	☼	103	70 - 130	0	30

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

Lab Sample ID: 320-76427-1 MSD
Matrix: Solid
Analysis Batch: 510816

Client Sample ID: SB-1 (0-0.5)
Prep Type: Total/NA
Prep Batch: 510504

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
NMeFOSE	<0.28		11.9	11.8		ug/Kg	☼	99	70 - 130	4	30
NEtFOSE	<0.17		11.9	12.0		ug/Kg	☼	100	70 - 130	7	30
4:2 FTS	<0.30		11.1	10.7		ug/Kg	☼	96	70 - 130	5	30
6:2 FTS	6.4		11.3	19.0		ug/Kg	☼	111	70 - 130	11	30
8:2 FTS	66	F2	11.4	79.8	4 F2	ug/Kg	☼	118	70 - 130	66	30
10:2 FTS	4.3		11.5	17.0		ug/Kg	☼	110	70 - 130	13	30
DONA	<0.23		11.2	11.1		ug/Kg	☼	99	70 - 130	1	30
HFPO-DA (GenX)	<0.24		11.9	11.1		ug/Kg	☼	93	70 - 130	4	30
F-53B Major	<0.21		11.1	10.2		ug/Kg	☼	92	70 - 130	2	30
F-53B Minor	<0.18		11.2	9.17		ug/Kg	☼	82	70 - 130	8	30

Isotope Dilution	*MSD %Recovery*	*MSD Qualifier*	*Limits*
13C4 PFBA	*76*		*25 - 150*
13C5 PFPeA	*95*		*25 - 150*
13C2 PFHxA	*96*		*25 - 150*
13C4 PFHpA	*97*		*25 - 150*
13C4 PFOA	*96*		*25 - 150*
13C5 PFNA	*93*		*25 - 150*
13C2 PFDA	*83*		*25 - 150*
13C2 PFUnA	*95*		*25 - 150*
13C2 PFDoA	*87*		*25 - 150*
13C2 PFTeDA	*72*		*25 - 150*
13C3 PFBS	*85*		*25 - 150*
18O2 PFHxS	*92*		*25 - 150*
13C4 PFOS	*95*		*25 - 150*
13C8 FOSA	*104*		*10 - 150*
d3-NMeFOSAA	*82*		*25 - 150*
d5-NEtFOSAA	*79*		*25 - 150*
d-N-MeFOSA-M	*93*		*10 - 150*
d-N-EtFOSA-M	*90*		*10 - 150*
d7-N-MeFOSE-M	*70*		*10 - 150*
d9-N-EtFOSE-M	*72*		*10 - 150*
M2-4:2 FTS	*100*		*25 - 150*
M2-6:2 FTS	*101*		*25 - 150*
M2-8:2 FTS	*87*		*25 - 150*
13C3 HFPO-DA	*99*		*25 - 150*
13C2 10:2 FTS	*74*		*25 - 150*

Method: D 2216 - Percent Moisture

Lab Sample ID: 320-76427-9 DU
Matrix: Solid
Analysis Batch: 508430

Client Sample ID: SB-4 (7-9) DUP
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Percent Moisture	20.5			19.3		%				6	20
Percent Solids	79.5			80.7		%				1	20

LCMS

Prep Batch: 508643

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76427-2	SB-2 (8-9)	Total/NA	Solid	SHAKE	
320-76427-5	SB-3 (3-4)	Total/NA	Solid	SHAKE	
320-76427-6	SED-COMP	Total/NA	Solid	SHAKE	
320-76427-6 - DL	SED-COMP	Total/NA	Solid	SHAKE	
320-76427-7	SED-COMP-DUP	Total/NA	Solid	SHAKE	
320-76427-8	SB-4 (7-9)	Total/NA	Solid	SHAKE	
320-76427-9	SB-4 (7-9) DUP	Total/NA	Solid	SHAKE	
MB 320-508643/1-A	Method Blank	Total/NA	Solid	SHAKE	
LCS 320-508643/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	

Prep Batch: 508645

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76427-3	FB-01-210714	Total/NA	Water	3535	
320-76427-4	EB-01-210714	Total/NA	Water	3535	
MB 320-508645/1-A	Method Blank	Total/NA	Water	3535	
LCS 320-508645/2-A	Lab Control Sample	Total/NA	Water	3535	
LCSD 320-508645/3-A	Lab Control Sample Dup	Total/NA	Water	3535	

Analysis Batch: 508965

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76427-3	FB-01-210714	Total/NA	Water	537 (modified)	508645
320-76427-4	EB-01-210714	Total/NA	Water	537 (modified)	508645
MB 320-508645/1-A	Method Blank	Total/NA	Water	537 (modified)	508645
LCS 320-508645/2-A	Lab Control Sample	Total/NA	Water	537 (modified)	508645
LCSD 320-508645/3-A	Lab Control Sample Dup	Total/NA	Water	537 (modified)	508645

Analysis Batch: 509929

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76427-2	SB-2 (8-9)	Total/NA	Solid	537 (modified)	508643
320-76427-5	SB-3 (3-4)	Total/NA	Solid	537 (modified)	508643
320-76427-8	SB-4 (7-9)	Total/NA	Solid	537 (modified)	508643
320-76427-9	SB-4 (7-9) DUP	Total/NA	Solid	537 (modified)	508643
MB 320-508643/1-A	Method Blank	Total/NA	Solid	537 (modified)	508643
LCS 320-508643/2-A	Lab Control Sample	Total/NA	Solid	537 (modified)	508643

Analysis Batch: 510022

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76427-6 - DL	SED-COMP	Total/NA	Solid	537 (modified)	508643
320-76427-6	SED-COMP	Total/NA	Solid	537 (modified)	508643
320-76427-7	SED-COMP-DUP	Total/NA	Solid	537 (modified)	508643

Prep Batch: 510504

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76427-1	SB-1 (0-0.5)	Total/NA	Solid	SHAKE	
MB 320-510504/1-A	Method Blank	Total/NA	Solid	SHAKE	
LCS 320-510504/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	
320-76427-1 MS	SB-1 (0-0.5)	Total/NA	Solid	SHAKE	
320-76427-1 MSD	SB-1 (0-0.5)	Total/NA	Solid	SHAKE	

QC Association Summary

Client: Ramboll US Corporation
Project/Site: Reichhold Oak Creek

Job ID: 320-76427-1

LCMS

Analysis Batch: 510816

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76427-1	SB-1 (0-0.5)	Total/NA	Solid	537 (modified)	510504
MB 320-510504/1-A	Method Blank	Total/NA	Solid	537 (modified)	510504
LCS 320-510504/2-A	Lab Control Sample	Total/NA	Solid	537 (modified)	510504
320-76427-1 MS	SB-1 (0-0.5)	Total/NA	Solid	537 (modified)	510504
320-76427-1 MSD	SB-1 (0-0.5)	Total/NA	Solid	537 (modified)	510504

General Chemistry

Analysis Batch: 508430

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76427-1	SB-1 (0-0.5)	Total/NA	Solid	D 2216	
320-76427-2	SB-2 (8-9)	Total/NA	Solid	D 2216	
320-76427-5	SB-3 (3-4)	Total/NA	Solid	D 2216	
320-76427-6	SED-COMP	Total/NA	Solid	D 2216	
320-76427-7	SED-COMP-DUP	Total/NA	Solid	D 2216	
320-76427-8	SB-4 (7-9)	Total/NA	Solid	D 2216	
320-76427-9	SB-4 (7-9) DUP	Total/NA	Solid	D 2216	
320-76427-9 DU	SB-4 (7-9) DUP	Total/NA	Solid	D 2216	

Lab Chronicle

Client: Ramboll US Corporation
Project/Site: Reichhold Oak Creek

Job ID: 320-76427-1

Client Sample ID: SB-1 (0-0.5)
Date Collected: 07/14/21 08:50
Date Received: 07/19/21 08:47

Lab Sample ID: 320-76427-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			508430	07/20/21 12:16	KDB	TAL SAC

Client Sample ID: SB-1 (0-0.5)
Date Collected: 07/14/21 08:50
Date Received: 07/19/21 08:47

Lab Sample ID: 320-76427-1
Matrix: Solid
Percent Solids: 81.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			1.03 g	10.0 mL	510504	07/27/21 04:48	HK	TAL SAC
Total/NA	Analysis	537 (modified)		1			510816	07/28/21 06:17	JRB	TAL SAC

Client Sample ID: SB-2 (8-9)
Date Collected: 07/14/21 10:50
Date Received: 07/19/21 08:47

Lab Sample ID: 320-76427-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			508430	07/20/21 12:16	KDB	TAL SAC

Client Sample ID: SB-2 (8-9)
Date Collected: 07/14/21 10:50
Date Received: 07/19/21 08:47

Lab Sample ID: 320-76427-2
Matrix: Solid
Percent Solids: 74.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			5.08 g	10.0 mL	508643	07/20/21 18:41	AM	TAL SAC
Total/NA	Analysis	537 (modified)		1			509929	07/23/21 07:48	S1M	TAL SAC

Client Sample ID: FB-01-210714
Date Collected: 07/14/21 12:05
Date Received: 07/19/21 08:47

Lab Sample ID: 320-76427-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			300.8 mL	10.0 mL	508645	07/20/21 19:23	AP	TAL SAC
Total/NA	Analysis	537 (modified)		1			508965	07/21/21 22:22	D1R	TAL SAC

Client Sample ID: EB-01-210714
Date Collected: 07/14/21 12:15
Date Received: 07/19/21 08:47

Lab Sample ID: 320-76427-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			290.9 mL	10.0 mL	508645	07/20/21 19:23	AP	TAL SAC
Total/NA	Analysis	537 (modified)		1			508965	07/21/21 22:32	D1R	TAL SAC

Lab Chronicle

Client: Ramboll US Corporation
Project/Site: Reichhold Oak Creek

Job ID: 320-76427-1

Client Sample ID: SB-3 (3-4)
Date Collected: 07/14/21 12:50
Date Received: 07/19/21 08:47

Lab Sample ID: 320-76427-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			508430	07/20/21 12:16	KDB	TAL SAC

Client Sample ID: SB-3 (3-4)
Date Collected: 07/14/21 12:50
Date Received: 07/19/21 08:47

Lab Sample ID: 320-76427-5
Matrix: Solid
Percent Solids: 77.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			5.40 g	10.0 mL	508643	07/20/21 18:41	AM	TAL SAC
Total/NA	Analysis	537 (modified)		1			509929	07/23/21 07:57	S1M	TAL SAC

Client Sample ID: SED-COMP
Date Collected: 07/14/21 13:50
Date Received: 07/19/21 08:47

Lab Sample ID: 320-76427-6
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			508430	07/20/21 12:16	KDB	TAL SAC

Client Sample ID: SED-COMP
Date Collected: 07/14/21 13:50
Date Received: 07/19/21 08:47

Lab Sample ID: 320-76427-6
Matrix: Solid
Percent Solids: 9.9

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE	DL		5.18 g	10.0 mL	508643	07/20/21 18:41	AM	TAL SAC
Total/NA	Analysis	537 (modified)	DL	10			510022	07/24/21 18:16	D1R	TAL SAC
Total/NA	Prep	SHAKE			5.18 g	10.0 mL	508643	07/20/21 18:41	AM	TAL SAC
Total/NA	Analysis	537 (modified)		1			510022	07/24/21 18:35	D1R	TAL SAC

Client Sample ID: SED-COMP-DUP
Date Collected: 07/14/21 13:50
Date Received: 07/19/21 08:47

Lab Sample ID: 320-76427-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			508430	07/20/21 12:16	KDB	TAL SAC

Client Sample ID: SED-COMP-DUP
Date Collected: 07/14/21 13:50
Date Received: 07/19/21 08:47

Lab Sample ID: 320-76427-7
Matrix: Solid
Percent Solids: 11.2

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			5.23 g	10.0 mL	508643	07/20/21 18:41	AM	TAL SAC
Total/NA	Analysis	537 (modified)		1			510022	07/24/21 18:44	D1R	TAL SAC

Lab Chronicle

Client: Ramboll US Corporation
Project/Site: Reichhold Oak Creek

Job ID: 320-76427-1

Client Sample ID: SB-4 (7-9)
Date Collected: 07/14/21 14:30
Date Received: 07/19/21 08:47

Lab Sample ID: 320-76427-8
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			508430	07/20/21 12:16	KDB	TAL SAC

Client Sample ID: SB-4 (7-9)
Date Collected: 07/14/21 14:30
Date Received: 07/19/21 08:47

Lab Sample ID: 320-76427-8
Matrix: Solid
Percent Solids: 78.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			5.41 g	10.0 mL	508643	07/20/21 18:41	AM	TAL SAC
Total/NA	Analysis	537 (modified)		1			509929	07/23/21 08:45	S1M	TAL SAC

Client Sample ID: SB-4 (7-9) DUP
Date Collected: 07/14/21 14:30
Date Received: 07/19/21 08:47

Lab Sample ID: 320-76427-9
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			508430	07/20/21 12:16	KDB	TAL SAC

Client Sample ID: SB-4 (7-9) DUP
Date Collected: 07/14/21 14:30
Date Received: 07/19/21 08:47

Lab Sample ID: 320-76427-9
Matrix: Solid
Percent Solids: 79.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			5.60 g	10.0 mL	508643	07/20/21 18:41	AM	TAL SAC
Total/NA	Analysis	537 (modified)		1			509929	07/23/21 08:54	S1M	TAL SAC

Laboratory References:

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

Accreditation/Certification Summary

Client: Ramboll US Corporation
Project/Site: Reichhold Oak Creek

Job ID: 320-76427-1

Laboratory: Eurofins TestAmerica, Sacramento

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

Authority	Program	Identification Number	Expiration Date
Wisconsin	State	998204680	08-31-21

Method Summary

Client: Ramboll US Corporation
Project/Site: Reichhold Oak Creek

Job ID: 320-76427-1

Method	Method Description	Protocol	Laboratory
537 (modified)	Fluorinated Alkyl Substances	EPA	TAL SAC
D 2216	Percent Moisture	ASTM	TAL SAC
3535	Solid-Phase Extraction (SPE)	SW846	TAL SAC
SHAKE	Shake Extraction with Ultrasonic Bath Extraction	SW846	TAL SAC

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

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

Laboratory References:

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

Sample Summary

Client: Ramboll US Corporation
Project/Site: Reichhold Oak Creek

Job ID: 320-76427-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-76427-1	SB-1 (0-0.5)	Solid	07/14/21 08:50	07/19/21 08:47
320-76427-2	SB-2 (8-9)	Solid	07/14/21 10:50	07/19/21 08:47
320-76427-3	FB-01-210714	Water	07/14/21 12:05	07/19/21 08:47
320-76427-4	EB-01-210714	Water	07/14/21 12:15	07/19/21 08:47
320-76427-5	SB-3 (3-4)	Solid	07/14/21 12:50	07/19/21 08:47
320-76427-6	SED-COMP	Solid	07/14/21 13:50	07/19/21 08:47
320-76427-7	SED-COMP-DUP	Solid	07/14/21 13:50	07/19/21 08:47
320-76427-8	SB-4 (7-9)	Solid	07/14/21 14:30	07/19/21 08:47
320-76427-9	SB-4 (7-9) DUP	Solid	07/14/21 14:30	07/19/21 08:47

Eurofins TestAmerica, Chicago
2417 Bond Street
University Park, IL 60484
Phone: 708-534-5200 Fax: 708-534-5211

Chain of Custody Record

eurofins | Environment Testing America

Client Information	Sampler: Liz Bonicki	Lab PM: Fredrick, Sandie	Carrier Tracking No(s):	COC No: 500-92911-41393.1
Client Contact: Abby Small	Phone: 262.758.1488	E-Mail: sandra.fredrick@eurofinset.com	State of Origin: Wisconsin	Page: Page 1 of 1
Company: Ramboll US Corporation	PWSID:			Job #:
Address: 5050 Lincoln Drive, Suite 440	Due Date Requested:			
City: Edina	TAT Requested (days): Standard TAT			
State, Zip: MN, 55436	Compliance Project: Δ Yes Δ No			
Phone:	PO #: Purchase Order not required			
Email: asmall@ramboll.com	WO #:			
Project Name: Reichhold Oak Creek	Project #: 50019135			
Site:	SSOW#:			

Analysis Requested

320-76427 Chain of Custody

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

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)	PFAs	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
SB-1 (0-0.5)	7.14.2021	0850	G	Solid			X		
SB-2 (8-9)	7.14.2021	1050	G	Solid			X		
FB-01-210714	7.14.2021	1205	G	Water			X		
EB-01-210714	7.14.2021	1215	G	Water			X		
SB-3 (3-4)	7.14.2021	1250	G	Solid			X		
SED-COMP	7.14.2021	1350	G	Solid			X		
SED-COMP-DUP	7.14.2021	1350	G	Solid			X		
SB-4 (7-9)	7.14.2021	1430	G	Solid			X		
SB-4 (7-9) DUP	7.14.2021	1430	G	Solid			X		
				Water					
				Water					

7.15.2021

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		Date/Time	Company
Relinquished by: Liz Bonicki	7.15.2021 / 1135	Ramboll	Received by:	7-15-21 1135	TA
Relinquished by:	7-15-21 1700	TA	Received by:	7/19/21 847	EA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: X Yes Δ No | Custody Seal No.: 1600504

Cooler Temperature(s) C and Other Remarks: 21.3

Ver: 11/01/2020

Login Sample Receipt Checklist

Client: Ramboll US Corporation

Job Number: 320-76427-1

Login Number: 76427
List Number: 1
Creator: Guzman, Juan

List Source: Eurofins TestAmerica, Sacramento

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	1600504
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.	False	Water present in cooler; indicates evidence of melted ice.
Cooler Temperature is acceptable.	False	Refer to Job Narrative for details.
Cooler Temperature is recorded.	True	
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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ANALYTICAL REPORT

Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Tel: (916)373-5600

Laboratory Job ID: 320-76907-1
Client Project/Site: DIC Liquid Facility - Oak Creek 1690021164
Revision: 1

For:
Ramboll US Corporation
5050 Lincoln Drive, Suite 440
Edina, Minnesota 55436

Attn: Abby Small

Authorized for release by:
8/17/2021 11:38:59 AM

Sandie Fredrick, Project Manager II
(920)261-1660
sandra.fredrick@eurofinset.com

LINKS

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The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Table of Contents

Definitions/Glossary

Client: Ramboll US Corporation
Job ID: 320-76907-1
Project/Site: DIC Liquid Facility - Oak Creek 1690021164

Qualifiers

LCMS

Qualifier	Qualifier Description
*5+	Isotope dilution analyte is outside acceptance limits, high biased.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

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

Job ID: 320-76907-1

Laboratory: Eurofins TestAmerica, Sacramento

Narrative

Job Narrative
320-76907-1

Comments
No additional comments.

Receipt
The samples were received on 7/29/2021 9:30 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 3.1º C.

Receipt Exceptions
Client updated analyte list for PFAS testing

LCMS
Method 537 (modified): The "I" qualifier means the transition mass ratio for the indicated analyte was outside of the established ratio limit. The qualitative identification of the analyte has some degree of uncertainty, and the reported value may have some high bias. However, analyst judgment was used to positively identify the analyte Perfluorohexanoic acid (PFHxA), which recovered within the established limit. (CCVL 320-512174/2)

Method 537 (modified): Isotope Dilution Analyte (IDA) recovery is above the method recommended limit for the following samples: MW-2 (320-76907-2). The samples were re-analyzed with concurring results. Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries.

Method 537 (modified): The transition mass ion ratio was outside of the established limits for 6:2 FTS in (CCVL 320-513215/2) associated to this data set. This is indicated by the "I" flag in the raw data. As the flagged analyte is in control in the CCV, there is no adverse impact to the data.

Method 537 (modified): Results for samples MW-2 (320-76907-2), MW-1 (320-76907-3) and MW-2 DUP (320-76907-4) were reported from the analysis of a diluted extract due to high concentration of the matrix in the analysis of the undiluted extract. The dilution factor was applied to the labeled internal standard area counts and these area counts were within acceptance limits.

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

Organic Prep
Method 3535: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 320-512164. PFC_IDA_WI Water

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

Detection Summary

Client: Ramboll US Corporation
Job ID: 320-76907-1
Project/Site: DIC Liquid Facility - Oak Creek 1690021164

Client Sample ID: MW-3 — Lab Sample ID: 320-76907-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	26		4.6	2.2	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	32		1.8	0.45	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	4.5		1.8	0.53	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	1.4	J	1.8	0.23	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	1.4	J	1.8	0.78	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.32	J	1.8	0.18	ng/L	1		537 (modified)	Total/NA

Client Sample ID: MW-2 — Lab Sample ID: 320-76907-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	250		4.5	2.2	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	240		1.8	0.52	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	11		1.8	0.23	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	1.0	J	1.8	0.77	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.44	J	1.8	0.18	ng/L	1		537 (modified)	Total/NA
4:2 FTS	5.3		1.8	0.22	ng/L	1		537 (modified)	Total/NA
6:2 FTS	31		4.5	2.3	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA) - DL	900		9.0	2.2	ng/L	5		537 (modified)	Total/NA

Client Sample ID: MW-1 — Lab Sample ID: 320-76907-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanoic acid (PFOA)	180		1.8	0.77	ng/L	1		537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	9.7		1.8	0.24	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.83	J	1.8	0.18	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	0.58	J	1.8	0.52	ng/L	1		537 (modified)	Total/NA
4:2 FTS	50		1.8	0.22	ng/L	1		537 (modified)	Total/NA
8:2 FTS	1.4	J	1.8	0.42	ng/L	1		537 (modified)	Total/NA
Perfluorobutanoic acid (PFBA) - DL	1800		450	220	ng/L	100		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA) - DL	12000		180	44	ng/L	100		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA) - DL	7600		180	52	ng/L	100		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA) - DL	980		180	23	ng/L	100		537 (modified)	Total/NA
6:2 FTS - DL	2400		450	230	ng/L	100		537 (modified)	Total/NA

Client Sample ID: MW-2 DUP — Lab Sample ID: 320-76907-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	300		4.5	2.2	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	300		1.8	0.52	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	13		1.8	0.23	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	1.5	J	1.8	0.77	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.65	J	1.8	0.18	ng/L	1		537 (modified)	Total/NA
4:2 FTS	9.1		1.8	0.22	ng/L	1		537 (modified)	Total/NA
6:2 FTS	35		4.5	2.3	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA) - DL	1000		9.0	2.2	ng/L	5		537 (modified)	Total/NA

Client Sample ID: FB-1 — Lab Sample ID: 320-76907-5

No Detections.

Client Sample ID: EB-1 — Lab Sample ID: 320-76907-6

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Sacramento

Client: Ramboll US Corporation
Project/Site: DIC Liquid Facility - Oak Creek 1690021164

Job ID: 320-76907-1

Client Sample ID: MW-3
Date Collected: 07/28/21 09:10
Date Received: 07/29/21 09:30

Lab Sample ID: 320-76907-1
Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**26**		4.6	2.2	ng/L		08/02/21 04:28	08/03/21 15:55	1
Perfluoropentanoic acid (PFPeA)	**32**		1.8	0.45	ng/L		08/02/21 04:28	08/03/21 15:55	1
Perfluorohexanoic acid (PFHxA)	**4.5**		1.8	0.53	ng/L		08/02/21 04:28	08/03/21 15:55	1
Perfluoroheptanoic acid (PFHpA)	**1.4**	**J**	1.8	0.23	ng/L		08/02/21 04:28	08/03/21 15:55	1
Perfluorooctanoic acid (PFOA)	**1.4**	**J**	1.8	0.78	ng/L		08/02/21 04:28	08/03/21 15:55	1
Perfluorononanoic acid (PFNA)	<0.25		1.8	0.25	ng/L		08/02/21 04:28	08/03/21 15:55	1
Perfluorodecanoic acid (PFDA)	<0.28		1.8	0.28	ng/L		08/02/21 04:28	08/03/21 15:55	1
Perfluoroundecanoic acid (PFUnA)	<1.0		1.8	1.0	ng/L		08/02/21 04:28	08/03/21 15:55	1
Perfluorododecanoic acid (PFDoA)	<0.50		1.8	0.50	ng/L		08/02/21 04:28	08/03/21 15:55	1
Perfluorotridecanoic acid (PFTriA)	<1.2		1.8	1.2	ng/L		08/02/21 04:28	08/03/21 15:55	1
Perfluorotetradecanoic acid (PFTeA)	<0.67		1.8	0.67	ng/L		08/02/21 04:28	08/03/21 15:55	1
Perfluorobutanesulfonic acid (PFBS)	**0.32**	**J**	1.8	0.18	ng/L		08/02/21 04:28	08/03/21 15:55	1
Perfluoropentanesulfonic acid (PFPeS)	<0.27		1.8	0.27	ng/L		08/02/21 04:28	08/03/21 15:55	1
Perfluorohexanesulfonic acid (PFHxS)	<0.52		1.8	0.52	ng/L		08/02/21 04:28	08/03/21 15:55	1
Perfluoroheptanesulfonic Acid (PFHpS)	<0.17		1.8	0.17	ng/L		08/02/21 04:28	08/03/21 15:55	1
Perfluorooctanesulfonic acid (PFOS)	<0.49		1.8	0.49	ng/L		08/02/21 04:28	08/03/21 15:55	1
Perfluorononanesulfonic acid (PFNS)	<0.34		1.8	0.34	ng/L		08/02/21 04:28	08/03/21 15:55	1
Perfluorodecanesulfonic acid (PFDS)	<0.29		1.8	0.29	ng/L		08/02/21 04:28	08/03/21 15:55	1
Perfluorododecanesulfonic acid (PFDoS)	<0.89		1.8	0.89	ng/L		08/02/21 04:28	08/03/21 15:55	1
Perfluorooctanesulfonamide (FOSA)	<0.90		1.8	0.90	ng/L		08/02/21 04:28	08/03/21 15:55	1
NEtFOSA	<0.80		1.8	0.80	ng/L		08/02/21 04:28	08/03/21 15:55	1
NMeFOSA	<0.39		1.8	0.39	ng/L		08/02/21 04:28	08/03/21 15:55	1
NMeFOSAA	<1.1		4.6	1.1	ng/L		08/02/21 04:28	08/03/21 15:55	1
NEtFOSAA	<1.2		4.6	1.2	ng/L		08/02/21 04:28	08/03/21 15:55	1
NMeFOSE	<1.3		3.7	1.3	ng/L		08/02/21 04:28	08/03/21 15:55	1
NEtFOSE	<0.78		1.8	0.78	ng/L		08/02/21 04:28	08/03/21 15:55	1
4:2 FTS	<0.22		1.8	0.22	ng/L		08/02/21 04:28	08/03/21 15:55	1
6:2 FTS	<2.3		4.6	2.3	ng/L		08/02/21 04:28	08/03/21 15:55	1
8:2 FTS	<0.42		1.8	0.42	ng/L		08/02/21 04:28	08/03/21 15:55	1
DONA	<0.37		1.8	0.37	ng/L		08/02/21 04:28	08/03/21 15:55	1
HFPO-DA (GenX)	<1.4		3.7	1.4	ng/L		08/02/21 04:28	08/03/21 15:55	1
F-53B Major	<0.22		1.8	0.22	ng/L		08/02/21 04:28	08/03/21 15:55	1
F-53B Minor	<0.29		1.8	0.29	ng/L		08/02/21 04:28	08/03/21 15:55	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*82*		*25 - 150*	*08/02/21 04:28*	*08/03/21 15:55*	*1*
13C5 PFPeA	*57*		*25 - 150*	*08/02/21 04:28*	*08/03/21 15:55*	*1*
13C2 PFHxA	*112*		*25 - 150*	*08/02/21 04:28*	*08/03/21 15:55*	*1*
13C4 PFHpA	*86*		*25 - 150*	*08/02/21 04:28*	*08/03/21 15:55*	*1*
13C4 PFOA	*102*		*25 - 150*	*08/02/21 04:28*	*08/03/21 15:55*	*1*
13C5 PFNA	*107*		*25 - 150*	*08/02/21 04:28*	*08/03/21 15:55*	*1*
13C2 PFDA	*127*		*25 - 150*	*08/02/21 04:28*	*08/03/21 15:55*	*1*
13C2 PFUnA	*123*		*25 - 150*	*08/02/21 04:28*	*08/03/21 15:55*	*1*
13C2 PFDoA	*109*		*25 - 150*	*08/02/21 04:28*	*08/03/21 15:55*	*1*
13C2 PFTeDA	*109*		*25 - 150*	*08/02/21 04:28*	*08/03/21 15:55*	*1*
13C3 PFBS	*87*		*25 - 150*	*08/02/21 04:28*	*08/03/21 15:55*	*1*
18O2 PFHxS	*101*		*25 - 150*	*08/02/21 04:28*	*08/03/21 15:55*	*1*

Client: Ramboll US Corporation
Job ID: 320-76907-1
Project/Site: DIC Liquid Facility - Oak Creek 1690021164

Client Sample ID: MW-3
Lab Sample ID: 320-76907-1
Date Collected: 07/28/21 09:10
Matrix: Water
Date Received: 07/29/21 09:30

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFOS	120		25 - 150	08/02/21 04:28	08/03/21 15:55	1
13C8 FOSA	119		10 - 150	08/02/21 04:28	08/03/21 15:55	1
d3-NMeFOSAA	111		25 - 150	08/02/21 04:28	08/03/21 15:55	1
d5-NEtFOSAA	106		25 - 150	08/02/21 04:28	08/03/21 15:55	1
d-N-MeFOSA-M	104		10 - 150	08/02/21 04:28	08/03/21 15:55	1
d-N-EtFOSA-M	104		10 - 150	08/02/21 04:28	08/03/21 15:55	1
d7-N-MeFOSE-M	97		10 - 150	08/02/21 04:28	08/03/21 15:55	1
d9-N-EtFOSE-M	91		10 - 150	08/02/21 04:28	08/03/21 15:55	1
M2-4:2 FTS	137		25 - 150	08/02/21 04:28	08/03/21 15:55	1
M2-6:2 FTS	135		25 - 150	08/02/21 04:28	08/03/21 15:55	1
M2-8:2 FTS	144		25 - 150	08/02/21 04:28	08/03/21 15:55	1
13C3 HFPO-DA	89		25 - 150	08/02/21 04:28	08/03/21 15:55	1
13C2 10:2 FTS	141		25 - 150	08/02/21 04:28	08/03/21 15:55	1

Client: Ramboll US Corporation
Project/Site: DIC Liquid Facility - Oak Creek 1690021164

Job ID: 320-76907-1

Client Sample ID: MW-2

Date Collected: 07/28/21 10:00
Date Received: 07/29/21 09:30

Lab Sample ID: 320-76907-2

Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**250**		4.5	2.2	ng/L		08/02/21 04:28	08/03/21 16:04	1
Perfluorohexanoic acid (PFHxA)	**240**		1.8	0.52	ng/L		08/02/21 04:28	08/03/21 16:04	1
Perfluoroheptanoic acid (PFHpA)	**11**		1.8	0.23	ng/L		08/02/21 04:28	08/03/21 16:04	1
Perfluorooctanoic acid (PFOA)	**1.0**	**J**	1.8	0.77	ng/L		08/02/21 04:28	08/03/21 16:04	1
Perfluorononanoic acid (PFNA)	<0.24		1.8	0.24	ng/L		08/02/21 04:28	08/03/21 16:04	1
Perfluoroundecanoic acid (PFUnA)	<0.99		1.8	0.99	ng/L		08/02/21 04:28	08/03/21 16:04	1
Perfluorododecanoic acid (PFDoA)	<0.50		1.8	0.50	ng/L		08/02/21 04:28	08/03/21 16:04	1
Perfluorotridecanoic acid (PFTriA)	<1.2		1.8	1.2	ng/L		08/02/21 04:28	08/03/21 16:04	1
Perfluorotetradecanoic acid (PFTeA)	<0.66		1.8	0.66	ng/L		08/02/21 04:28	08/03/21 16:04	1
Perfluorobutanesulfonic acid (PFBS)	**0.44**	**J**	1.8	0.18	ng/L		08/02/21 04:28	08/03/21 16:04	1
Perfluoropentanesulfonic acid (PFPeS)	<0.27		1.8	0.27	ng/L		08/02/21 04:28	08/03/21 16:04	1
Perfluorohexanesulfonic acid (PFHxS)	<0.51		1.8	0.51	ng/L		08/02/21 04:28	08/03/21 16:04	1
Perfluoroheptanesulfonic Acid (PFHpS)	<0.17		1.8	0.17	ng/L		08/02/21 04:28	08/03/21 16:04	1
Perfluorooctanesulfonic acid (PFOS)	<0.49		1.8	0.49	ng/L		08/02/21 04:28	08/03/21 16:04	1
Perfluorononanesulfonic acid (PFNS)	<0.33		1.8	0.33	ng/L		08/02/21 04:28	08/03/21 16:04	1
Perfluorodecanesulfonic acid (PFDS)	<0.29		1.8	0.29	ng/L		08/02/21 04:28	08/03/21 16:04	1
Perfluorododecanesulfonic acid (PFDoS)	<0.87		1.8	0.87	ng/L		08/02/21 04:28	08/03/21 16:04	1
Perfluorooctanesulfonamide (FOSA)	<0.88		1.8	0.88	ng/L		08/02/21 04:28	08/03/21 16:04	1
NEtFOSA	<0.78		1.8	0.78	ng/L		08/02/21 04:28	08/03/21 16:04	1
NMeFOSA	<0.39		1.8	0.39	ng/L		08/02/21 04:28	08/03/21 16:04	1
NMeFOSAA	<1.1		4.5	1.1	ng/L		08/02/21 04:28	08/03/21 16:04	1
NEtFOSAA	<1.2		4.5	1.2	ng/L		08/02/21 04:28	08/03/21 16:04	1
NMeFOSE	<1.3		3.6	1.3	ng/L		08/02/21 04:28	08/03/21 16:04	1
NEtFOSE	<0.77		1.8	0.77	ng/L		08/02/21 04:28	08/03/21 16:04	1
4:2 FTS	**5.3**		1.8	0.22	ng/L		08/02/21 04:28	08/03/21 16:04	1
6:2 FTS	**31**		4.5	2.3	ng/L		08/02/21 04:28	08/03/21 16:04	1
8:2 FTS	<0.41		1.8	0.41	ng/L		08/02/21 04:28	08/03/21 16:04	1
DONA	<0.36		1.8	0.36	ng/L		08/02/21 04:28	08/03/21 16:04	1
HFPO-DA (GenX)	<1.4		3.6	1.4	ng/L		08/02/21 04:28	08/03/21 16:04	1
F-53B Major	<0.22		1.8	0.22	ng/L		08/02/21 04:28	08/03/21 16:04	1
F-53B Minor	<0.29		1.8	0.29	ng/L		08/02/21 04:28	08/03/21 16:04	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*96*		*25 - 150*	*08/02/21 04:28*	*08/03/21 16:04*	*1*
13C2 PFHxA	*137*		*25 - 150*	*08/02/21 04:28*	*08/03/21 16:04*	*1*
13C4 PFHpA	*110*		*25 - 150*	*08/02/21 04:28*	*08/03/21 16:04*	*1*
13C4 PFOA	*127*		*25 - 150*	*08/02/21 04:28*	*08/03/21 16:04*	*1*
13C5 PFNA	*121*		*25 - 150*	*08/02/21 04:28*	*08/03/21 16:04*	*1*
13C2 PFUnA	*154*	**5+*	*25 - 150*	*08/02/21 04:28*	*08/03/21 16:04*	*1*
13C2 PFDoA	*142*		*25 - 150*	*08/02/21 04:28*	*08/03/21 16:04*	*1*
13C2 PFTeDA	*146*		*25 - 150*	*08/02/21 04:28*	*08/03/21 16:04*	*1*
13C3 PFBS	*114*		*25 - 150*	*08/02/21 04:28*	*08/03/21 16:04*	*1*
18O2 PFHxS	*128*		*25 - 150*	*08/02/21 04:28*	*08/03/21 16:04*	*1*
13C4 PFOS	*161*	**5+*	*25 - 150*	*08/02/21 04:28*	*08/03/21 16:04*	*1*
13C8 FOSA	*150*		*10 - 150*	*08/02/21 04:28*	*08/03/21 16:04*	*1*
d3-NMeFOSAA	*131*		*25 - 150*	*08/02/21 04:28*	*08/03/21 16:04*	*1*
d5-NEtFOSAA	*137*		*25 - 150*	*08/02/21 04:28*	*08/03/21 16:04*	*1*

Client: Ramboll US Corporation
Job ID: 320-76907-1
Project/Site: DIC Liquid Facility - Oak Creek 1690021164

Client Sample ID: MW-2
Lab Sample ID: 320-76907-2
Date Collected: 07/28/21 10:00
Matrix: Water
Date Received: 07/29/21 09:30

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

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
d-N-MeFOSA-M	*144*		*10 - 150*	*08/02/21 04:28*	*08/03/21 16:04*	*1*
d-N-EtFOSA-M	*133*		*10 - 150*	*08/02/21 04:28*	*08/03/21 16:04*	*1*
d7-N-MeFOSE-M	*111*		*10 - 150*	*08/02/21 04:28*	*08/03/21 16:04*	*1*
d9-N-EtFOSE-M	*109*		*10 - 150*	*08/02/21 04:28*	*08/03/21 16:04*	*1*
M2-4:2 FTS	*139*		*25 - 150*	*08/02/21 04:28*	*08/03/21 16:04*	*1*
M2-6:2 FTS	*129*		*25 - 150*	*08/02/21 04:28*	*08/03/21 16:04*	*1*
M2-8:2 FTS	*170*	**5+*	*25 - 150*	*08/02/21 04:28*	*08/03/21 16:04*	*1*
13C3 HFPO-DA	*108*		*25 - 150*	*08/02/21 04:28*	*08/03/21 16:04*	*1*
13C2 10:2 FTS	*169*	**5+*	*25 - 150*	*08/02/21 04:28*	*08/03/21 16:04*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoropentanoic acid (PFPeA)	**900**		9.0	2.2	ng/L		08/02/21 04:28	08/05/21 09:17	5
Perfluorodecanoic acid (PFDA)	<1.4		9.0	1.4	ng/L		08/02/21 04:28	08/05/21 09:17	5

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C5 PFPeA	*92*		*25 - 150*	*08/02/21 04:28*	*08/05/21 09:17*	*5*
13C2 PFDA	*149*		*25 - 150*	*08/02/21 04:28*	*08/05/21 09:17*	*5*

Client: Ramboll US Corporation
Project/Site: DIC Liquid Facility - Oak Creek 1690021164

Job ID: 320-76907-1

Client Sample ID: MW-1
Date Collected: 07/28/21 10:55
Date Received: 07/29/21 09:30

Lab Sample ID: 320-76907-3
Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanoic acid (PFOA)	**180**		1.8	0.77	ng/L		08/02/21 04:28	08/03/21 16:14	1
Perfluorononanoic acid (PFNA)	**9.7**		1.8	0.24	ng/L		08/02/21 04:28	08/03/21 16:14	1
Perfluorodecanoic acid (PFDA)	<0.28		1.8	0.28	ng/L		08/02/21 04:28	08/03/21 16:14	1
Perfluoroundecanoic acid (PFUnA)	<0.99		1.8	0.99	ng/L		08/02/21 04:28	08/03/21 16:14	1
Perfluorododecanoic acid (PFDoA)	<0.50		1.8	0.50	ng/L		08/02/21 04:28	08/03/21 16:14	1
Perfluorotridecanoic acid (PFTriA)	<1.2		1.8	1.2	ng/L		08/02/21 04:28	08/03/21 16:14	1
Perfluorotetradecanoic acid (PFTeA)	<0.66		1.8	0.66	ng/L		08/02/21 04:28	08/03/21 16:14	1
Perfluorobutanesulfonic acid (PFBS)	**0.83**	**J**	1.8	0.18	ng/L		08/02/21 04:28	08/03/21 16:14	1
Perfluoropentanesulfonic acid (PFPeS)	<0.27		1.8	0.27	ng/L		08/02/21 04:28	08/03/21 16:14	1
Perfluorohexanesulfonic acid (PFHxS)	**0.58**	**J**	1.8	0.52	ng/L		08/02/21 04:28	08/03/21 16:14	1
Perfluoroheptanesulfonic Acid (PFHpS)	<0.17		1.8	0.17	ng/L		08/02/21 04:28	08/03/21 16:14	1
Perfluorooctanesulfonic acid (PFOS)	<0.49		1.8	0.49	ng/L		08/02/21 04:28	08/03/21 16:14	1
Perfluorononanesulfonic acid (PFNS)	<0.33		1.8	0.33	ng/L		08/02/21 04:28	08/03/21 16:14	1
Perfluorodecanesulfonic acid (PFDS)	<0.29		1.8	0.29	ng/L		08/02/21 04:28	08/03/21 16:14	1
Perfluorododecanesulfonic acid (PFDoS)	<0.88		1.8	0.88	ng/L		08/02/21 04:28	08/03/21 16:14	1
Perfluorooctanesulfonamide (FOSA)	<0.89		1.8	0.89	ng/L		08/02/21 04:28	08/03/21 16:14	1
NEtFOSA	<0.79		1.8	0.79	ng/L		08/02/21 04:28	08/03/21 16:14	1
NMeFOSA	<0.39		1.8	0.39	ng/L		08/02/21 04:28	08/03/21 16:14	1
NMeFOSAA	<1.1		4.5	1.1	ng/L		08/02/21 04:28	08/03/21 16:14	1
NEtFOSAA	<1.2		4.5	1.2	ng/L		08/02/21 04:28	08/03/21 16:14	1
NMeFOSE	<1.3		3.6	1.3	ng/L		08/02/21 04:28	08/03/21 16:14	1
NEtFOSE	<0.77		1.8	0.77	ng/L		08/02/21 04:28	08/03/21 16:14	1
4:2 FTS	**50**		1.8	0.22	ng/L		08/02/21 04:28	08/03/21 16:14	1
8:2 FTS	**1.4**	**J**	1.8	0.42	ng/L		08/02/21 04:28	08/03/21 16:14	1
DONA	<0.36		1.8	0.36	ng/L		08/02/21 04:28	08/03/21 16:14	1
HFPO-DA (GenX)	<1.4		3.6	1.4	ng/L		08/02/21 04:28	08/03/21 16:14	1
F-53B Major	<0.22		1.8	0.22	ng/L		08/02/21 04:28	08/03/21 16:14	1
F-53B Minor	<0.29		1.8	0.29	ng/L		08/02/21 04:28	08/03/21 16:14	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFOA	*106*		*25 - 150*	*08/02/21 04:28*	*08/03/21 16:14*	*1*
13C5 PFNA	*112*		*25 - 150*	*08/02/21 04:28*	*08/03/21 16:14*	*1*
13C2 PFDA	*134*		*25 - 150*	*08/02/21 04:28*	*08/03/21 16:14*	*1*
13C2 PFUnA	*134*		*25 - 150*	*08/02/21 04:28*	*08/03/21 16:14*	*1*
13C2 PFDoA	*124*		*25 - 150*	*08/02/21 04:28*	*08/03/21 16:14*	*1*
13C2 PFTeDA	*127*		*25 - 150*	*08/02/21 04:28*	*08/03/21 16:14*	*1*
13C3 PFBS	*89*		*25 - 150*	*08/02/21 04:28*	*08/03/21 16:14*	*1*
18O2 PFHxS	*110*		*25 - 150*	*08/02/21 04:28*	*08/03/21 16:14*	*1*
13C4 PFOS	*128*		*25 - 150*	*08/02/21 04:28*	*08/03/21 16:14*	*1*
13C8 FOSA	*140*		*10 - 150*	*08/02/21 04:28*	*08/03/21 16:14*	*1*
d3-NMeFOSAA	*109*		*25 - 150*	*08/02/21 04:28*	*08/03/21 16:14*	*1*
d5-NEtFOSAA	*116*		*25 - 150*	*08/02/21 04:28*	*08/03/21 16:14*	*1*
d-N-MeFOSA-M	*126*		*10 - 150*	*08/02/21 04:28*	*08/03/21 16:14*	*1*
d-N-EtFOSA-M	*118*		*10 - 150*	*08/02/21 04:28*	*08/03/21 16:14*	*1*
d7-N-MeFOSE-M	*99*		*10 - 150*	*08/02/21 04:28*	*08/03/21 16:14*	*1*
d9-N-EtFOSE-M	*103*		*10 - 150*	*08/02/21 04:28*	*08/03/21 16:14*	*1*

Client: Ramboll US Corporation
Job ID: 320-76907-1
Project/Site: DIC Liquid Facility - Oak Creek 1690021164

Client Sample ID: MW-1
Lab Sample ID: 320-76907-3
Date Collected: 07/28/21 10:55
Matrix: Water
Date Received: 07/29/21 09:30

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

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
M2-4:2 FTS	*71*		*25 - 150*	*08/02/21 04:28*	*08/03/21 16:14*	*1*
M2-8:2 FTS	*144*		*25 - 150*	*08/02/21 04:28*	*08/03/21 16:14*	*1*
13C3 HFPO-DA	*97*		*25 - 150*	*08/02/21 04:28*	*08/03/21 16:14*	*1*
13C2 10:2 FTS	*144*		*25 - 150*	*08/02/21 04:28*	*08/03/21 16:14*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**1800**		450	220	ng/L		08/02/21 04:28	08/05/21 09:36	100
Perfluoropentanoic acid (PFPeA)	**12000**		180	44	ng/L		08/02/21 04:28	08/05/21 09:36	100
Perfluorohexanoic acid (PFHxA)	**7600**		180	52	ng/L		08/02/21 04:28	08/05/21 09:36	100
Perfluoroheptanoic acid (PFHpA)	**980**		180	23	ng/L		08/02/21 04:28	08/05/21 09:36	100
6:2 FTS	**2400**		450	230	ng/L		08/02/21 04:28	08/05/21 09:36	100

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*94*		*25 - 150*	*08/02/21 04:28*	*08/05/21 09:36*	*100*
13C5 PFPeA	*96*		*25 - 150*	*08/02/21 04:28*	*08/05/21 09:36*	*100*
13C2 PFHxA	*113*		*25 - 150*	*08/02/21 04:28*	*08/05/21 09:36*	*100*
13C4 PFHpA	*96*		*25 - 150*	*08/02/21 04:28*	*08/05/21 09:36*	*100*
M2-6:2 FTS	*124*		*25 - 150*	*08/02/21 04:28*	*08/05/21 09:36*	*100*

Client: Ramboll US Corporation
Project/Site: DIC Liquid Facility - Oak Creek 1690021164

Job ID: 320-76907-1

Client Sample ID: MW-2 DUP

Date Collected: 07/28/21 10:00
Date Received: 07/29/21 09:30

Lab Sample ID: 320-76907-4

Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**300**		4.5	2.2	ng/L		08/02/21 04:28	08/03/21 16:23	1
Perfluorohexanoic acid (PFHxA)	**300**		1.8	0.52	ng/L		08/02/21 04:28	08/03/21 16:23	1
Perfluoroheptanoic acid (PFHpA)	**13**		1.8	0.23	ng/L		08/02/21 04:28	08/03/21 16:23	1
Perfluorooctanoic acid (PFOA)	**1.5**	**J**	1.8	0.77	ng/L		08/02/21 04:28	08/03/21 16:23	1
Perfluorononanoic acid (PFNA)	<0.24		1.8	0.24	ng/L		08/02/21 04:28	08/03/21 16:23	1
Perfluoroundecanoic acid (PFUnA)	<0.99		1.8	0.99	ng/L		08/02/21 04:28	08/03/21 16:23	1
Perfluorododecanoic acid (PFDoA)	<0.50		1.8	0.50	ng/L		08/02/21 04:28	08/03/21 16:23	1
Perfluorotridecanoic acid (PFTriA)	<1.2		1.8	1.2	ng/L		08/02/21 04:28	08/03/21 16:23	1
Perfluorotetradecanoic acid (PFTeA)	<0.66		1.8	0.66	ng/L		08/02/21 04:28	08/03/21 16:23	1
Perfluorobutanesulfonic acid (PFBS)	**0.65**	**J**	1.8	0.18	ng/L		08/02/21 04:28	08/03/21 16:23	1
Perfluoropentanesulfonic acid (PFPeS)	<0.27		1.8	0.27	ng/L		08/02/21 04:28	08/03/21 16:23	1
Perfluorohexanesulfonic acid (PFHxS)	<0.51		1.8	0.51	ng/L		08/02/21 04:28	08/03/21 16:23	1
Perfluoroheptanesulfonic Acid (PFHpS)	<0.17		1.8	0.17	ng/L		08/02/21 04:28	08/03/21 16:23	1
Perfluorooctanesulfonic acid (PFOS)	<0.49		1.8	0.49	ng/L		08/02/21 04:28	08/03/21 16:23	1
Perfluorononanesulfonic acid (PFNS)	<0.33		1.8	0.33	ng/L		08/02/21 04:28	08/03/21 16:23	1
Perfluorodecanesulfonic acid (PFDS)	<0.29		1.8	0.29	ng/L		08/02/21 04:28	08/03/21 16:23	1
Perfluorododecanesulfonic acid (PFDoS)	<0.88		1.8	0.88	ng/L		08/02/21 04:28	08/03/21 16:23	1
Perfluorooctanesulfonamide (FOSA)	<0.88		1.8	0.88	ng/L		08/02/21 04:28	08/03/21 16:23	1
NEtFOSA	<0.79		1.8	0.79	ng/L		08/02/21 04:28	08/03/21 16:23	1
NMeFOSA	<0.39		1.8	0.39	ng/L		08/02/21 04:28	08/03/21 16:23	1
NMeFOSAA	<1.1		4.5	1.1	ng/L		08/02/21 04:28	08/03/21 16:23	1
NEtFOSAA	<1.2		4.5	1.2	ng/L		08/02/21 04:28	08/03/21 16:23	1
NMeFOSE	<1.3		3.6	1.3	ng/L		08/02/21 04:28	08/03/21 16:23	1
NEtFOSE	<0.77		1.8	0.77	ng/L		08/02/21 04:28	08/03/21 16:23	1
4:2 FTS	**9.1**		1.8	0.22	ng/L		08/02/21 04:28	08/03/21 16:23	1
6:2 FTS	**35**		4.5	2.3	ng/L		08/02/21 04:28	08/03/21 16:23	1
8:2 FTS	<0.42		1.8	0.42	ng/L		08/02/21 04:28	08/03/21 16:23	1
DONA	<0.36		1.8	0.36	ng/L		08/02/21 04:28	08/03/21 16:23	1
HFPO-DA (GenX)	<1.4		3.6	1.4	ng/L		08/02/21 04:28	08/03/21 16:23	1
F-53B Major	<0.22		1.8	0.22	ng/L		08/02/21 04:28	08/03/21 16:23	1
F-53B Minor	<0.29		1.8	0.29	ng/L		08/02/21 04:28	08/03/21 16:23	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*75*		*25 - 150*	*08/02/21 04:28*	*08/03/21 16:23*	*1*
13C2 PFHxA	*109*		*25 - 150*	*08/02/21 04:28*	*08/03/21 16:23*	*1*
13C4 PFHpA	*83*		*25 - 150*	*08/02/21 04:28*	*08/03/21 16:23*	*1*
13C4 PFOA	*103*		*25 - 150*	*08/02/21 04:28*	*08/03/21 16:23*	*1*
13C5 PFNA	*101*		*25 - 150*	*08/02/21 04:28*	*08/03/21 16:23*	*1*
13C2 PFUnA	*122*		*25 - 150*	*08/02/21 04:28*	*08/03/21 16:23*	*1*
13C2 PFDoA	*114*		*25 - 150*	*08/02/21 04:28*	*08/03/21 16:23*	*1*
13C2 PFTeDA	*110*		*25 - 150*	*08/02/21 04:28*	*08/03/21 16:23*	*1*
13C3 PFBS	*88*		*25 - 150*	*08/02/21 04:28*	*08/03/21 16:23*	*1*
18O2 PFHxS	*102*		*25 - 150*	*08/02/21 04:28*	*08/03/21 16:23*	*1*
13C4 PFOS	*113*		*25 - 150*	*08/02/21 04:28*	*08/03/21 16:23*	*1*
13C8 FOSA	*115*		*10 - 150*	*08/02/21 04:28*	*08/03/21 16:23*	*1*
d3-NMeFOSAA	*104*		*25 - 150*	*08/02/21 04:28*	*08/03/21 16:23*	*1*
d5-NEtFOSAA	*105*		*25 - 150*	*08/02/21 04:28*	*08/03/21 16:23*	*1*

Client: Ramboll US Corporation
Job ID: 320-76907-1
Project/Site: DIC Liquid Facility - Oak Creek 1690021164

Client Sample ID: MW-2 DUP
Lab Sample ID: 320-76907-4
Date Collected: 07/28/21 10:00
Matrix: Water
Date Received: 07/29/21 09:30

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

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
d-N-MeFOSA-M	*113*		*10 - 150*	*08/02/21 04:28*	*08/03/21 16:23*	*1*
d-N-EtFOSA-M	*103*		*10 - 150*	*08/02/21 04:28*	*08/03/21 16:23*	*1*
d7-N-MeFOSE-M	*84*		*10 - 150*	*08/02/21 04:28*	*08/03/21 16:23*	*1*
d9-N-EtFOSE-M	*93*		*10 - 150*	*08/02/21 04:28*	*08/03/21 16:23*	*1*
M2-4:2 FTS	*87*		*25 - 150*	*08/02/21 04:28*	*08/03/21 16:23*	*1*
M2-6:2 FTS	*103*		*25 - 150*	*08/02/21 04:28*	*08/03/21 16:23*	*1*
M2-8:2 FTS	*128*		*25 - 150*	*08/02/21 04:28*	*08/03/21 16:23*	*1*
13C3 HFPO-DA	*91*		*25 - 150*	*08/02/21 04:28*	*08/03/21 16:23*	*1*
13C2 10:2 FTS	*129*		*25 - 150*	*08/02/21 04:28*	*08/03/21 16:23*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoropentanoic acid (PFPeA)	**1000**		9.0	2.2	ng/L		08/02/21 04:28	08/05/21 09:27	5
Perfluorodecanoic acid (PFDA)	<1.4		9.0	1.4	ng/L		08/02/21 04:28	08/05/21 09:27	5

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C5 PFPeA	*73*		*25 - 150*	*08/02/21 04:28*	*08/05/21 09:27*	*5*
13C2 PFDA	*108*		*25 - 150*	*08/02/21 04:28*	*08/05/21 09:27*	*5*

Client: Ramboll US Corporation
Job ID: 320-76907-1
Project/Site: DIC Liquid Facility - Oak Creek 1690021164

Client Sample ID: FB-1
Date Collected: 07/28/21 11:20
Date Received: 07/29/21 09:30

Lab Sample ID: 320-76907-5
Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<2.1		4.5	2.1	ng/L		08/02/21 04:28	08/02/21 15:57	1
Perfluoropentanoic acid (PFPeA)	<0.44		1.8	0.44	ng/L		08/02/21 04:28	08/02/21 15:57	1
Perfluorohexanoic acid (PFHxA)	<0.52		1.8	0.52	ng/L		08/02/21 04:28	08/02/21 15:57	1
Perfluoroheptanoic acid (PFHpA)	<0.22		1.8	0.22	ng/L		08/02/21 04:28	08/02/21 15:57	1
Perfluorooctanoic acid (PFOA)	<0.76		1.8	0.76	ng/L		08/02/21 04:28	08/02/21 15:57	1
Perfluorononanoic acid (PFNA)	<0.24		1.8	0.24	ng/L		08/02/21 04:28	08/02/21 15:57	1
Perfluorodecanoic acid (PFDA)	<0.28		1.8	0.28	ng/L		08/02/21 04:28	08/02/21 15:57	1
Perfluoroundecanoic acid (PFUnA)	<0.98		1.8	0.98	ng/L		08/02/21 04:28	08/02/21 15:57	1
Perfluorododecanoic acid (PFDoA)	<0.49		1.8	0.49	ng/L		08/02/21 04:28	08/02/21 15:57	1
Perfluorotridecanoic acid (PFTriA)	<1.2		1.8	1.2	ng/L		08/02/21 04:28	08/02/21 15:57	1
Perfluorotetradecanoic acid (PFTeA)	<0.65		1.8	0.65	ng/L		08/02/21 04:28	08/02/21 15:57	1
Perfluorobutanesulfonic acid (PFBS)	<0.18		1.8	0.18	ng/L		08/02/21 04:28	08/02/21 15:57	1
Perfluoropentanesulfonic acid (PFPeS)	<0.27		1.8	0.27	ng/L		08/02/21 04:28	08/02/21 15:57	1
Perfluorohexanesulfonic acid (PFHxS)	<0.51		1.8	0.51	ng/L		08/02/21 04:28	08/02/21 15:57	1
Perfluoroheptanesulfonic Acid (PFHpS)	<0.17		1.8	0.17	ng/L		08/02/21 04:28	08/02/21 15:57	1
Perfluorooctanesulfonic acid (PFOS)	<0.48		1.8	0.48	ng/L		08/02/21 04:28	08/02/21 15:57	1
Perfluorononanesulfonic acid (PFNS)	<0.33		1.8	0.33	ng/L		08/02/21 04:28	08/02/21 15:57	1
Perfluorodecanesulfonic acid (PFDS)	<0.28		1.8	0.28	ng/L		08/02/21 04:28	08/02/21 15:57	1
Perfluorododecanesulfonic acid (PFDoS)	<0.86		1.8	0.86	ng/L		08/02/21 04:28	08/02/21 15:57	1
Perfluorooctanesulfonamide (FOSA)	<0.87		1.8	0.87	ng/L		08/02/21 04:28	08/02/21 15:57	1
NEtFOSA	<0.77		1.8	0.77	ng/L		08/02/21 04:28	08/02/21 15:57	1
NMeFOSA	<0.38		1.8	0.38	ng/L		08/02/21 04:28	08/02/21 15:57	1
NMeFOSAA	<1.1		4.5	1.1	ng/L		08/02/21 04:28	08/02/21 15:57	1
NEtFOSAA	<1.2		4.5	1.2	ng/L		08/02/21 04:28	08/02/21 15:57	1
NMeFOSE	<1.2		3.6	1.2	ng/L		08/02/21 04:28	08/02/21 15:57	1
NEtFOSE	<0.76		1.8	0.76	ng/L		08/02/21 04:28	08/02/21 15:57	1
4:2 FTS	<0.21		1.8	0.21	ng/L		08/02/21 04:28	08/02/21 15:57	1
6:2 FTS	<2.2		4.5	2.2	ng/L		08/02/21 04:28	08/02/21 15:57	1
8:2 FTS	<0.41		1.8	0.41	ng/L		08/02/21 04:28	08/02/21 15:57	1
DONA	<0.36		1.8	0.36	ng/L		08/02/21 04:28	08/02/21 15:57	1
HFPO-DA (GenX)	<1.3		3.6	1.3	ng/L		08/02/21 04:28	08/02/21 15:57	1
F-53B Major	<0.21		1.8	0.21	ng/L		08/02/21 04:28	08/02/21 15:57	1
F-53B Minor	<0.28		1.8	0.28	ng/L		08/02/21 04:28	08/02/21 15:57	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*95*		*25 - 150*	*08/02/21 04:28*	*08/02/21 15:57*	*1*
13C5 PFPeA	*89*		*25 - 150*	*08/02/21 04:28*	*08/02/21 15:57*	*1*
13C2 PFHxA	*118*		*25 - 150*	*08/02/21 04:28*	*08/02/21 15:57*	*1*
13C4 PFHpA	*100*		*25 - 150*	*08/02/21 04:28*	*08/02/21 15:57*	*1*
13C4 PFOA	*105*		*25 - 150*	*08/02/21 04:28*	*08/02/21 15:57*	*1*
13C5 PFNA	*106*		*25 - 150*	*08/02/21 04:28*	*08/02/21 15:57*	*1*
13C2 PFDA	*113*		*25 - 150*	*08/02/21 04:28*	*08/02/21 15:57*	*1*
13C2 PFUnA	*117*		*25 - 150*	*08/02/21 04:28*	*08/02/21 15:57*	*1*
13C2 PFDoA	*107*		*25 - 150*	*08/02/21 04:28*	*08/02/21 15:57*	*1*
13C2 PFTeDA	*117*		*25 - 150*	*08/02/21 04:28*	*08/02/21 15:57*	*1*
13C3 PFBS	*103*		*25 - 150*	*08/02/21 04:28*	*08/02/21 15:57*	*1*
18O2 PFHxS	*104*		*25 - 150*	*08/02/21 04:28*	*08/02/21 15:57*	*1*
13C4 PFOS	*121*		*25 - 150*	*08/02/21 04:28*	*08/02/21 15:57*	*1*

Client: Ramboll US Corporation
Job ID: 320-76907-1
Project/Site: DIC Liquid Facility - Oak Creek 1690021164

Client Sample ID: FB-1
Lab Sample ID: 320-76907-5
Date Collected: 07/28/21 11:20
Matrix: Water
Date Received: 07/29/21 09:30

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 FOSA	116		10 - 150	08/02/21 04:28	08/02/21 15:57	1
d3-NMeFOSAA	105		25 - 150	08/02/21 04:28	08/02/21 15:57	1
d5-NEtFOSAA	110		25 - 150	08/02/21 04:28	08/02/21 15:57	1
d-N-MeFOSA-M	92		10 - 150	08/02/21 04:28	08/02/21 15:57	1
d-N-EtFOSA-M	95		10 - 150	08/02/21 04:28	08/02/21 15:57	1
d7-N-MeFOSE-M	85		10 - 150	08/02/21 04:28	08/02/21 15:57	1
d9-N-EtFOSE-M	90		10 - 150	08/02/21 04:28	08/02/21 15:57	1
M2-4:2 FTS	109		25 - 150	08/02/21 04:28	08/02/21 15:57	1
M2-6:2 FTS	114		25 - 150	08/02/21 04:28	08/02/21 15:57	1
M2-8:2 FTS	125		25 - 150	08/02/21 04:28	08/02/21 15:57	1
13C3 HFPO-DA	90		25 - 150	08/02/21 04:28	08/02/21 15:57	1
13C2 10:2 FTS	127		25 - 150	08/02/21 04:28	08/02/21 15:57	1

Client: Ramboll US Corporation
Job ID: 320-76907-1
Project/Site: DIC Liquid Facility - Oak Creek 1690021164

Client Sample ID: EB-1
Date Collected: 07/28/21 11:25
Date Received: 07/29/21 09:30

Lab Sample ID: 320-76907-6
Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<2.2		4.5	2.2	ng/L		08/02/21 04:28	08/02/21 16:07	1
Perfluoropentanoic acid (PFPeA)	<0.44		1.8	0.44	ng/L		08/02/21 04:28	08/02/21 16:07	1
Perfluorohexanoic acid (PFHxA)	<0.52		1.8	0.52	ng/L		08/02/21 04:28	08/02/21 16:07	1
Perfluoroheptanoic acid (PFHpA)	<0.22		1.8	0.22	ng/L		08/02/21 04:28	08/02/21 16:07	1
Perfluorooctanoic acid (PFOA)	<0.76		1.8	0.76	ng/L		08/02/21 04:28	08/02/21 16:07	1
Perfluorononanoic acid (PFNA)	<0.24		1.8	0.24	ng/L		08/02/21 04:28	08/02/21 16:07	1
Perfluorodecanoic acid (PFDA)	<0.28		1.8	0.28	ng/L		08/02/21 04:28	08/02/21 16:07	1
Perfluoroundecanoic acid (PFUnA)	<0.99		1.8	0.99	ng/L		08/02/21 04:28	08/02/21 16:07	1
Perfluorododecanoic acid (PFDoA)	<0.49		1.8	0.49	ng/L		08/02/21 04:28	08/02/21 16:07	1
Perfluorotridecanoic acid (PFTriA)	<1.2		1.8	1.2	ng/L		08/02/21 04:28	08/02/21 16:07	1
Perfluorotetradecanoic acid (PFTeA)	<0.66		1.8	0.66	ng/L		08/02/21 04:28	08/02/21 16:07	1
Perfluorobutanesulfonic acid (PFBS)	<0.18		1.8	0.18	ng/L		08/02/21 04:28	08/02/21 16:07	1
Perfluoropentanesulfonic acid (PFPeS)	<0.27		1.8	0.27	ng/L		08/02/21 04:28	08/02/21 16:07	1
Perfluorohexanesulfonic acid (PFHxS)	<0.51		1.8	0.51	ng/L		08/02/21 04:28	08/02/21 16:07	1
Perfluoroheptanesulfonic Acid (PFHpS)	<0.17		1.8	0.17	ng/L		08/02/21 04:28	08/02/21 16:07	1
Perfluorooctanesulfonic acid (PFOS)	<0.48		1.8	0.48	ng/L		08/02/21 04:28	08/02/21 16:07	1
Perfluorononanesulfonic acid (PFNS)	<0.33		1.8	0.33	ng/L		08/02/21 04:28	08/02/21 16:07	1
Perfluorodecanesulfonic acid (PFDS)	<0.29		1.8	0.29	ng/L		08/02/21 04:28	08/02/21 16:07	1
Perfluorododecanesulfonic acid (PFDoS)	<0.87		1.8	0.87	ng/L		08/02/21 04:28	08/02/21 16:07	1
Perfluorooctanesulfonamide (FOSA)	<0.88		1.8	0.88	ng/L		08/02/21 04:28	08/02/21 16:07	1
NEtFOSA	<0.78		1.8	0.78	ng/L		08/02/21 04:28	08/02/21 16:07	1
NMeFOSA	<0.39		1.8	0.39	ng/L		08/02/21 04:28	08/02/21 16:07	1
NMeFOSAA	<1.1		4.5	1.1	ng/L		08/02/21 04:28	08/02/21 16:07	1
NEtFOSAA	<1.2		4.5	1.2	ng/L		08/02/21 04:28	08/02/21 16:07	1
NMeFOSE	<1.3		3.6	1.3	ng/L		08/02/21 04:28	08/02/21 16:07	1
NEtFOSE	<0.76		1.8	0.76	ng/L		08/02/21 04:28	08/02/21 16:07	1
4:2 FTS	<0.22		1.8	0.22	ng/L		08/02/21 04:28	08/02/21 16:07	1
6:2 FTS	<2.2		4.5	2.2	ng/L		08/02/21 04:28	08/02/21 16:07	1
8:2 FTS	<0.41		1.8	0.41	ng/L		08/02/21 04:28	08/02/21 16:07	1
DONA	<0.36		1.8	0.36	ng/L		08/02/21 04:28	08/02/21 16:07	1
HFPO-DA (GenX)	<1.3		3.6	1.3	ng/L		08/02/21 04:28	08/02/21 16:07	1
F-53B Major	<0.22		1.8	0.22	ng/L		08/02/21 04:28	08/02/21 16:07	1
F-53B Minor	<0.29		1.8	0.29	ng/L		08/02/21 04:28	08/02/21 16:07	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*97*		*25 - 150*	*08/02/21 04:28*	*08/02/21 16:07*	*1*
13C5 PFPeA	*96*		*25 - 150*	*08/02/21 04:28*	*08/02/21 16:07*	*1*
13C2 PFHxA	*111*		*25 - 150*	*08/02/21 04:28*	*08/02/21 16:07*	*1*
13C4 PFHpA	*98*		*25 - 150*	*08/02/21 04:28*	*08/02/21 16:07*	*1*
13C4 PFOA	*101*		*25 - 150*	*08/02/21 04:28*	*08/02/21 16:07*	*1*
13C5 PFNA	*100*		*25 - 150*	*08/02/21 04:28*	*08/02/21 16:07*	*1*
13C2 PFDA	*117*		*25 - 150*	*08/02/21 04:28*	*08/02/21 16:07*	*1*
13C2 PFUnA	*112*		*25 - 150*	*08/02/21 04:28*	*08/02/21 16:07*	*1*
13C2 PFDoA	*113*		*25 - 150*	*08/02/21 04:28*	*08/02/21 16:07*	*1*
13C2 PFTeDA	*111*		*25 - 150*	*08/02/21 04:28*	*08/02/21 16:07*	*1*
13C3 PFBS	*97*		*25 - 150*	*08/02/21 04:28*	*08/02/21 16:07*	*1*
18O2 PFHxS	*100*		*25 - 150*	*08/02/21 04:28*	*08/02/21 16:07*	*1*
13C4 PFOS	*113*		*25 - 150*	*08/02/21 04:28*	*08/02/21 16:07*	*1*

Client: Ramboll US Corporation
Job ID: 320-76907-1
Project/Site: DIC Liquid Facility - Oak Creek 1690021164

Client Sample ID: EB-1
Lab Sample ID: 320-76907-6
Date Collected: 07/28/21 11:25
Matrix: Water
Date Received: 07/29/21 09:30

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 FOSA	110		10 - 150	08/02/21 04:28	08/02/21 16:07	1
d3-NMeFOSAA	105		25 - 150	08/02/21 04:28	08/02/21 16:07	1
d5-NEtFOSAA	114		25 - 150	08/02/21 04:28	08/02/21 16:07	1
d-N-MeFOSA-M	88		10 - 150	08/02/21 04:28	08/02/21 16:07	1
d-N-EtFOSA-M	99		10 - 150	08/02/21 04:28	08/02/21 16:07	1
d7-N-MeFOSE-M	89		10 - 150	08/02/21 04:28	08/02/21 16:07	1
d9-N-EtFOSE-M	93		10 - 150	08/02/21 04:28	08/02/21 16:07	1
M2-4:2 FTS	124		25 - 150	08/02/21 04:28	08/02/21 16:07	1
M2-6:2 FTS	119		25 - 150	08/02/21 04:28	08/02/21 16:07	1
M2-8:2 FTS	116		25 - 150	08/02/21 04:28	08/02/21 16:07	1
13C3 HFPO-DA	90		25 - 150	08/02/21 04:28	08/02/21 16:07	1
13C2 10:2 FTS	126		25 - 150	08/02/21 04:28	08/02/21 16:07	1

Isotope Dilution Summary

Client: Ramboll US Corporation
Project/Site: DIC Liquid Facility - Oak Creek 1690021164

Job ID: 320-76907-1

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)
320-76907-1	MW-3	82	57	112	86	102	107	127	123
320-76907-2	MW-2	96		137	110	127	121		154 *5+
320-76907-2 - DL	MW-2		92					149	
320-76907-3	MW-1					106	112	134	134
320-76907-3 - DL	MW-1	94	96	113	96				
320-76907-4	MW-2 DUP	75		109	83	103	101		122
320-76907-4 - DL	MW-2 DUP		73					108	
320-76907-5	FB-1	95	89	118	100	105	106	113	117
320-76907-6	EB-1	97	96	111	98	101	100	117	112
LCS 320-512164/2-A	Lab Control Sample	98	91	112	103	104	105	113	119
LCSD 320-512164/3-A	Lab Control Sample Dup	103	92	116	97	105	107	114	120
MB 320-512164/1-A	Method Blank	96	89	109	96	98	97	109	112

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)
320-76907-1	MW-3	109	109	87	101	120	119	111	106
320-76907-2	MW-2	142	146	114	128	161 *5+	150	131	137
320-76907-2 - DL	MW-2								
320-76907-3	MW-1	124	127	89	110	128	140	109	116
320-76907-3 - DL	MW-1								
320-76907-4	MW-2 DUP	114	110	88	102	113	115	104	105
320-76907-4 - DL	MW-2 DUP								
320-76907-5	FB-1	107	117	103	104	121	116	105	110
320-76907-6	EB-1	113	111	97	100	113	110	105	114
LCS 320-512164/2-A	Lab Control Sample	102	115	106	109	123	109	116	108
LCSD 320-512164/3-A	Lab Control Sample Dup	115	109	106	109	115	105	111	100
MB 320-512164/1-A	Method Blank	97	97	103	102	107	105	105	107

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)
320-76907-1	MW-3	104	104	97	91	137	135	144	89
320-76907-2	MW-2	144	133	111	109	139	129	170 *5+	108
320-76907-2 - DL	MW-2								
320-76907-3	MW-1	126	118	99	103	71		144	97
320-76907-3 - DL	MW-1						124		
320-76907-4	MW-2 DUP	113	103	84	93	87	103	128	91
320-76907-4 - DL	MW-2 DUP								
320-76907-5	FB-1	92	95	85	90	109	114	125	90
320-76907-6	EB-1	88	99	89	93	124	119	116	90
LCS 320-512164/2-A	Lab Control Sample	90	92	87	85	126	110	135	85
LCSD 320-512164/3-A	Lab Control Sample Dup	89	91	85	86	139	119	138	88
MB 320-512164/1-A	Method Blank	76	78	83	72	122	117	149	82

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	M102FTS (25-150)
320-76907-1	MW-3	141
320-76907-2	MW-2	169 *5+
320-76907-2 - DL	MW-2	
320-76907-3	MW-1	144

Isotope Dilution Summary

Client: Ramboll US Corporation
Job ID: 320-76907-1
Project/Site: DIC Liquid Facility - Oak Creek 1690021164

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

Matrix: Water
Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)						
Lab Sample ID	**Client Sample ID**	**M102FTS (25-150)**						
320-76907-3 - DL	MW-1							
320-76907-4	MW-2 DUP	129						
320-76907-4 - DL	MW-2 DUP							
320-76907-5	FB-1	127						
320-76907-6	EB-1	126						
LCS 320-512164/2-A	Lab Control Sample	123						
LCSD 320-512164/3-A	Lab Control Sample Dup	113						
MB 320-512164/1-A	Method Blank	129						

Surrogate Legend

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

Method: 537 (modified) - Fluorinated Alkyl Substances

Lab Sample ID: MB 320-512164/1-A
Matrix: Water
Analysis Batch: 512382

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 512164

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<2.4		5.0	2.4	ng/L		08/02/21 04:28	08/02/21 13:08	1
Perfluoropentanoic acid (PFPeA)	<0.49		2.0	0.49	ng/L		08/02/21 04:28	08/02/21 13:08	1
Perfluorohexanoic acid (PFHxA)	<0.58		2.0	0.58	ng/L		08/02/21 04:28	08/02/21 13:08	1
Perfluoroheptanoic acid (PFHpA)	<0.25		2.0	0.25	ng/L		08/02/21 04:28	08/02/21 13:08	1
Perfluorooctanoic acid (PFOA)	<0.85		2.0	0.85	ng/L		08/02/21 04:28	08/02/21 13:08	1
Perfluorononanoic acid (PFNA)	<0.27		2.0	0.27	ng/L		08/02/21 04:28	08/02/21 13:08	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	0.31	ng/L		08/02/21 04:28	08/02/21 13:08	1
Perfluoroundecanoic acid (PFUnA)	<1.1		2.0	1.1	ng/L		08/02/21 04:28	08/02/21 13:08	1
Perfluorododecanoic acid (PFDoA)	<0.55		2.0	0.55	ng/L		08/02/21 04:28	08/02/21 13:08	1
Perfluorotridecanoic acid (PFTriA)	<1.3		2.0	1.3	ng/L		08/02/21 04:28	08/02/21 13:08	1
Perfluorotetradecanoic acid (PFTeA)	<0.73		2.0	0.73	ng/L		08/02/21 04:28	08/02/21 13:08	1
Perfluorobutanesulfonic acid (PFBS)	<0.20		2.0	0.20	ng/L		08/02/21 04:28	08/02/21 13:08	1
Perfluoropentanesulfonic acid (PFPeS)	<0.30		2.0	0.30	ng/L		08/02/21 04:28	08/02/21 13:08	1
Perfluorohexanesulfonic acid (PFHxS)	<0.57		2.0	0.57	ng/L		08/02/21 04:28	08/02/21 13:08	1
Perfluoroheptanesulfonic Acid (PFHpS)	<0.19		2.0	0.19	ng/L		08/02/21 04:28	08/02/21 13:08	1
Perfluorooctanesulfonic acid (PFOS)	<0.54		2.0	0.54	ng/L		08/02/21 04:28	08/02/21 13:08	1
Perfluorononanesulfonic acid (PFNS)	<0.37		2.0	0.37	ng/L		08/02/21 04:28	08/02/21 13:08	1
Perfluorodecanesulfonic acid (PFDS)	<0.32		2.0	0.32	ng/L		08/02/21 04:28	08/02/21 13:08	1
Perfluorododecanesulfonic acid (PFDoS)	<0.97		2.0	0.97	ng/L		08/02/21 04:28	08/02/21 13:08	1
Perfluorooctanesulfonamide (FOSA)	<0.98		2.0	0.98	ng/L		08/02/21 04:28	08/02/21 13:08	1
NEtFOSA	<0.87		2.0	0.87	ng/L		08/02/21 04:28	08/02/21 13:08	1
NMeFOSA	<0.43		2.0	0.43	ng/L		08/02/21 04:28	08/02/21 13:08	1
NMeFOSAA	<1.2		5.0	1.2	ng/L		08/02/21 04:28	08/02/21 13:08	1
NEtFOSAA	<1.3		5.0	1.3	ng/L		08/02/21 04:28	08/02/21 13:08	1
NMeFOSE	<1.4		4.0	1.4	ng/L		08/02/21 04:28	08/02/21 13:08	1
NEtFOSE	<0.85		2.0	0.85	ng/L		08/02/21 04:28	08/02/21 13:08	1
4:2 FTS	<0.24		2.0	0.24	ng/L		08/02/21 04:28	08/02/21 13:08	1
6:2 FTS	<2.5		5.0	2.5	ng/L		08/02/21 04:28	08/02/21 13:08	1
8:2 FTS	<0.46		2.0	0.46	ng/L		08/02/21 04:28	08/02/21 13:08	1
DONA	<0.40		2.0	0.40	ng/L		08/02/21 04:28	08/02/21 13:08	1
HFPO-DA (GenX)	<1.5		4.0	1.5	ng/L		08/02/21 04:28	08/02/21 13:08	1
F-53B Major	<0.24		2.0	0.24	ng/L		08/02/21 04:28	08/02/21 13:08	1
F-53B Minor	<0.32		2.0	0.32	ng/L		08/02/21 04:28	08/02/21 13:08	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*96*		*25 - 150*	*08/02/21 04:28*	*08/02/21 13:08*	*1*
13C5 PFPeA	*89*		*25 - 150*	*08/02/21 04:28*	*08/02/21 13:08*	*1*
13C2 PFHxA	*109*		*25 - 150*	*08/02/21 04:28*	*08/02/21 13:08*	*1*
13C4 PFHpA	*96*		*25 - 150*	*08/02/21 04:28*	*08/02/21 13:08*	*1*
13C4 PFOA	*98*		*25 - 150*	*08/02/21 04:28*	*08/02/21 13:08*	*1*
13C5 PFNA	*97*		*25 - 150*	*08/02/21 04:28*	*08/02/21 13:08*	*1*
13C2 PFDA	*109*		*25 - 150*	*08/02/21 04:28*	*08/02/21 13:08*	*1*
13C2 PFUnA	*112*		*25 - 150*	*08/02/21 04:28*	*08/02/21 13:08*	*1*
13C2 PFDoA	*97*		*25 - 150*	*08/02/21 04:28*	*08/02/21 13:08*	*1*
13C2 PFTeDA	*97*		*25 - 150*	*08/02/21 04:28*	*08/02/21 13:08*	*1*
13C3 PFBS	*103*		*25 - 150*	*08/02/21 04:28*	*08/02/21 13:08*	*1*

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

Lab Sample ID: MB 320-512164/1-A
Matrix: Water
Analysis Batch: 512382

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 512164

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
18O2 PFHxS	102		25 - 150	08/02/21 04:28	08/02/21 13:08	1
13C4 PFOS	107		25 - 150	08/02/21 04:28	08/02/21 13:08	1
13C8 FOSA	105		10 - 150	08/02/21 04:28	08/02/21 13:08	1
d3-NMeFOSAA	105		25 - 150	08/02/21 04:28	08/02/21 13:08	1
d5-NEtFOSAA	107		25 - 150	08/02/21 04:28	08/02/21 13:08	1
d-N-MeFOSA-M	76		10 - 150	08/02/21 04:28	08/02/21 13:08	1
d-N-EtFOSA-M	78		10 - 150	08/02/21 04:28	08/02/21 13:08	1
d7-N-MeFOSE-M	83		10 - 150	08/02/21 04:28	08/02/21 13:08	1
d9-N-EtFOSE-M	72		10 - 150	08/02/21 04:28	08/02/21 13:08	1
M2-4:2 FTS	122		25 - 150	08/02/21 04:28	08/02/21 13:08	1
M2-6:2 FTS	117		25 - 150	08/02/21 04:28	08/02/21 13:08	1
M2-8:2 FTS	149		25 - 150	08/02/21 04:28	08/02/21 13:08	1
13C3 HFPO-DA	82		25 - 150	08/02/21 04:28	08/02/21 13:08	1
13C2 10:2 FTS	129		25 - 150	08/02/21 04:28	08/02/21 13:08	1

Lab Sample ID: LCS 320-512164/2-A
Matrix: Water
Analysis Batch: 512382

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 512164

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorobutanoic acid (PFBA)	40.0	39.5		ng/L		99	60 - 135
Perfluoropentanoic acid (PFPeA)	40.0	39.2		ng/L		98	60 - 135
Perfluorohexanoic acid (PFHxA)	40.0	40.0		ng/L		100	60 - 135
Perfluoroheptanoic acid (PFHpA)	40.0	39.4		ng/L		99	60 - 135
Perfluorooctanoic acid (PFOA)	40.0	39.3		ng/L		98	60 - 135
Perfluorononanoic acid (PFNA)	40.0	41.3		ng/L		103	60 - 135
Perfluorodecanoic acid (PFDA)	40.0	37.1		ng/L		93	60 - 135
Perfluoroundecanoic acid (PFUnA)	40.0	41.6		ng/L		104	60 - 135
Perfluorododecanoic acid (PFDoA)	40.0	45.2		ng/L		113	60 - 135
Perfluorotridecanoic acid (PFTriA)	40.0	44.4		ng/L		111	60 - 135
Perfluorotetradecanoic acid (PFTeA)	40.0	36.4		ng/L		91	60 - 135
Perfluoro-n-hexadecanoic acid (PFHxDA)	40.0	39.1		ng/L		98	60 - 135
Perfluoro-n-octadecanoic acid (PFODA)	40.0	37.1		ng/L		93	60 - 135
Perfluorobutanesulfonic acid (PFBS)	35.4	35.9		ng/L		101	60 - 135
Perfluoropentanesulfonic acid (PFPeS)	37.5	34.6		ng/L		92	60 - 135
Perfluorohexanesulfonic acid (PFHxS)	36.4	35.4		ng/L		97	60 - 135
Perfluoroheptanesulfonic Acid (PFHpS)	38.1	32.9		ng/L		86	60 - 135
Perfluorooctanesulfonic acid (PFOS)	37.1	34.2		ng/L		92	60 - 135
Perfluorononanesulfonic acid (PFNS)	38.4	34.7		ng/L		90	60 - 135

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

Lab Sample ID: LCS 320-512164/2-A
Matrix: Water
Analysis Batch: 512382

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 512164

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorodecanesulfonic acid (PFDS)	38.6	32.4		ng/L		84	60 - 135
Perfluorododecanesulfonic acid (PFDoS)	38.7	35.4		ng/L		92	60 - 135
Perfluorooctanesulfonamide (FOSA)	40.0	35.9		ng/L		90	60 - 135
NEtFOSA	40.0	38.3		ng/L		96	60 - 135
NMeFOSA	40.0	38.3		ng/L		96	60 - 135
NMeFOSAA	40.0	42.8		ng/L		107	60 - 135
NEtFOSAA	40.0	39.7		ng/L		99	60 - 135
NMeFOSE	40.0	40.8		ng/L		102	60 - 135
NEtFOSE	40.0	40.6		ng/L		101	60 - 135
4:2 FTS	37.4	38.0		ng/L		102	60 - 135
6:2 FTS	37.9	41.8		ng/L		110	60 - 135
8:2 FTS	38.3	35.9		ng/L		94	60 - 135
10:2 FTS	38.6	35.1		ng/L		91	60 - 135
DONA	37.7	30.6		ng/L		81	60 - 135
HFPO-DA (GenX)	40.0	43.8		ng/L		110	60 - 135
F-53B Major	37.3	34.3		ng/L		92	60 - 135
F-53B Minor	37.7	34.9		ng/L		93	60 - 135

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C4 PFBA	*98*		*25 - 150*
13C5 PFPeA	*91*		*25 - 150*
13C2 PFHxA	*112*		*25 - 150*
13C4 PFHpA	*103*		*25 - 150*
13C4 PFOA	*104*		*25 - 150*
13C5 PFNA	*105*		*25 - 150*
13C2 PFDA	*113*		*25 - 150*
13C2 PFUnA	*119*		*25 - 150*
13C2 PFDoA	*102*		*25 - 150*
13C2 PFTeDA	*115*		*25 - 150*
13C3 PFBS	*106*		*25 - 150*
18O2 PFHxS	*109*		*25 - 150*
13C4 PFOS	*123*		*25 - 150*
13C8 FOSA	*109*		*10 - 150*
d3-NMeFOSAA	*116*		*25 - 150*
d5-NEtFOSAA	*108*		*25 - 150*
d-N-MeFOSA-M	*90*		*10 - 150*
d-N-EtFOSA-M	*92*		*10 - 150*
d7-N-MeFOSE-M	*87*		*10 - 150*
d9-N-EtFOSE-M	*85*		*10 - 150*
M2-4:2 FTS	*126*		*25 - 150*
M2-6:2 FTS	*110*		*25 - 150*
M2-8:2 FTS	*135*		*25 - 150*
13C3 HFPO-DA	*85*		*25 - 150*
13C2 10:2 FTS	*123*		*25 - 150*

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

Lab Sample ID: LCSD 320-512164/3-A
Matrix: Water
Analysis Batch: 512382

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 512164

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perfluorobutanoic acid (PFBA)	40.0	38.1		ng/L		95	60 - 135	3	30
Perfluoropentanoic acid (PFPeA)	40.0	41.1		ng/L		103	60 - 135	5	30
Perfluorohexanoic acid (PFHxA)	40.0	39.4		ng/L		98	60 - 135	2	30
Perfluoroheptanoic acid (PFHpA)	40.0	42.1		ng/L		105	60 - 135	7	30
Perfluorooctanoic acid (PFOA)	40.0	40.6		ng/L		101	60 - 135	3	30
Perfluorononanoic acid (PFNA)	40.0	40.7		ng/L		102	60 - 135	2	30
Perfluorodecanoic acid (PFDA)	40.0	39.1		ng/L		98	60 - 135	5	30
Perfluoroundecanoic acid (PFUnA)	40.0	42.3		ng/L		106	60 - 135	2	30
Perfluorododecanoic acid (PFDoA)	40.0	38.6		ng/L		97	60 - 135	16	30
Perfluorotridecanoic acid (PFTriA)	40.0	38.8		ng/L		97	60 - 135	14	30
Perfluorotetradecanoic acid (PFTeA)	40.0	36.8		ng/L		92	60 - 135	1	30
Perfluoro-n-hexadecanoic acid (PFHxDA)	40.0	41.6		ng/L		104	60 - 135	6	30
Perfluoro-n-octadecanoic acid (PFODA)	40.0	32.9		ng/L		82	60 - 135	12	30
Perfluorobutanesulfonic acid (PFBS)	35.4	37.8		ng/L		107	60 - 135	5	30
Perfluoropentanesulfonic acid (PFPeS)	37.5	35.7		ng/L		95	60 - 135	3	30
Perfluorohexanesulfonic acid (PFHxS)	36.4	34.4		ng/L		95	60 - 135	3	30
Perfluoroheptanesulfonic Acid (PFHpS)	38.1	39.0		ng/L		103	60 - 135	17	30
Perfluorooctanesulfonic acid (PFOS)	37.1	36.7		ng/L		99	60 - 135	7	30
Perfluorononanesulfonic acid (PFNS)	38.4	42.2		ng/L		110	60 - 135	19	30
Perfluorodecanesulfonic acid (PFDS)	38.6	33.3		ng/L		86	60 - 135	3	30
Perfluorododecanesulfonic acid (PFDoS)	38.7	38.1		ng/L		98	60 - 135	7	30
Perfluorooctanesulfonamide (FOSA)	40.0	40.5		ng/L		101	60 - 135	12	30
NEtFOSA	40.0	39.7		ng/L		99	60 - 135	4	30
NMeFOSA	40.0	38.8		ng/L		97	60 - 135	1	30
NMeFOSAA	40.0	42.0		ng/L		105	60 - 135	2	30
NEtFOSAA	40.0	44.6		ng/L		111	60 - 135	12	30
NMeFOSE	40.0	37.8		ng/L		95	60 - 135	8	30
NEtFOSE	40.0	41.7		ng/L		104	60 - 135	3	30
4:2 FTS	37.4	35.7		ng/L		95	60 - 135	6	30
6:2 FTS	37.9	35.7		ng/L		94	60 - 135	16	30
8:2 FTS	38.3	37.6		ng/L		98	60 - 135	5	30
10:2 FTS	38.6	39.6		ng/L		103	60 - 135	12	30
DONA	37.7	34.4		ng/L		91	60 - 135	12	30
HFPO-DA (GenX)	40.0	44.5		ng/L		111	60 - 135	1	30
F-53B Major	37.3	36.9		ng/L		99	60 - 135	7	30
F-53B Minor	37.7	38.7		ng/L		103	60 - 135	11	30

Client: Ramboll US Corporation
Job ID: 320-76907-1
Project/Site: DIC Liquid Facility - Oak Creek 1690021164

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

Isotope Dilution	LCSD %Recovery	LCSD Qualifier	Limits
13C4 PFBA	103		25 - 150
13C5 PFPeA	92		25 - 150
13C2 PFHxA	116		25 - 150
13C4 PFHpA	97		25 - 150
13C4 PFOA	105		25 - 150
13C5 PFNA	107		25 - 150
13C2 PFDA	114		25 - 150
13C2 PFUnA	120		25 - 150
13C2 PFDoA	115		25 - 150
13C2 PFTeDA	109		25 - 150
13C3 PFBS	106		25 - 150
18O2 PFHxS	109		25 - 150
13C4 PFOS	115		25 - 150
13C8 FOSA	105		10 - 150
d3-NMeFOSAA	111		25 - 150
d5-NEtFOSAA	100		25 - 150
d-N-MeFOSA-M	89		10 - 150
d-N-EtFOSA-M	91		10 - 150
d7-N-MeFOSE-M	85		10 - 150
d9-N-EtFOSE-M	86		10 - 150
M2-4:2 FTS	139		25 - 150
M2-6:2 FTS	119		25 - 150
M2-8:2 FTS	138		25 - 150
13C3 HFPO-DA	88		25 - 150
13C2 10:2 FTS	113		25 - 150

QC Association Summary

Client: Ramboll US Corporation
Project/Site: DIC Liquid Facility - Oak Creek 1690021164

Job ID: 320-76907-1

LCMS

Prep Batch: 512164

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76907-1	MW-3	Total/NA	Water	3535	
320-76907-2 - DL	MW-2	Total/NA	Water	3535	
320-76907-2	MW-2	Total/NA	Water	3535	
320-76907-3 - DL	MW-1	Total/NA	Water	3535	
320-76907-3	MW-1	Total/NA	Water	3535	
320-76907-4	MW-2 DUP	Total/NA	Water	3535	
320-76907-4 - DL	MW-2 DUP	Total/NA	Water	3535	
320-76907-5	FB-1	Total/NA	Water	3535	
320-76907-6	EB-1	Total/NA	Water	3535	
MB 320-512164/1-A	Method Blank	Total/NA	Water	3535	
LCS 320-512164/2-A	Lab Control Sample	Total/NA	Water	3535	
LCSD 320-512164/3-A	Lab Control Sample Dup	Total/NA	Water	3535	

Analysis Batch: 512382

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76907-5	FB-1	Total/NA	Water	537 (modified)	512164
320-76907-6	EB-1	Total/NA	Water	537 (modified)	512164
MB 320-512164/1-A	Method Blank	Total/NA	Water	537 (modified)	512164
LCS 320-512164/2-A	Lab Control Sample	Total/NA	Water	537 (modified)	512164
LCSD 320-512164/3-A	Lab Control Sample Dup	Total/NA	Water	537 (modified)	512164

Analysis Batch: 512730

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76907-1	MW-3	Total/NA	Water	537 (modified)	512164
320-76907-2	MW-2	Total/NA	Water	537 (modified)	512164
320-76907-3	MW-1	Total/NA	Water	537 (modified)	512164
320-76907-4	MW-2 DUP	Total/NA	Water	537 (modified)	512164

Analysis Batch: 513220

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76907-2 - DL	MW-2	Total/NA	Water	537 (modified)	512164
320-76907-3 - DL	MW-1	Total/NA	Water	537 (modified)	512164
320-76907-4 - DL	MW-2 DUP	Total/NA	Water	537 (modified)	512164

Lab Chronicle

Client: Ramboll US Corporation
Project/Site: DIC Liquid Facility - Oak Creek 1690021164

Job ID: 320-76907-1

Client Sample ID: MW-3
Date Collected: 07/28/21 09:10
Date Received: 07/29/21 09:30

Lab Sample ID: 320-76907-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			273.2 mL	10.0 mL	512164	08/02/21 04:28	HK	TAL SAC
Total/NA	Analysis	537 (modified)		1			512730	08/03/21 15:55	GWO	TAL SAC

Client Sample ID: MW-2
Date Collected: 07/28/21 10:00
Date Received: 07/29/21 09:30

Lab Sample ID: 320-76907-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			277.4 mL	10.0 mL	512164	08/02/21 04:28	HK	TAL SAC
Total/NA	Analysis	537 (modified)		1			512730	08/03/21 16:04	GWO	TAL SAC
Total/NA	Prep	3535	DL		277.4 mL	10.0 mL	512164	08/02/21 04:28	HK	TAL SAC
Total/NA	Analysis	537 (modified)	DL	5			513220	08/05/21 09:17	JY1	TAL SAC

Client Sample ID: MW-1
Date Collected: 07/28/21 10:55
Date Received: 07/29/21 09:30

Lab Sample ID: 320-76907-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			276.6 mL	10.0 mL	512164	08/02/21 04:28	HK	TAL SAC
Total/NA	Analysis	537 (modified)		1			512730	08/03/21 16:14	GWO	TAL SAC
Total/NA	Prep	3535	DL		276.6 mL	10.0 mL	512164	08/02/21 04:28	HK	TAL SAC
Total/NA	Analysis	537 (modified)	DL	100			513220	08/05/21 09:36	JY1	TAL SAC

Client Sample ID: MW-2 DUP
Date Collected: 07/28/21 10:00
Date Received: 07/29/21 09:30

Lab Sample ID: 320-76907-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			276.9 mL	10.0 mL	512164	08/02/21 04:28	HK	TAL SAC
Total/NA	Analysis	537 (modified)		1			512730	08/03/21 16:23	GWO	TAL SAC
Total/NA	Prep	3535	DL		276.9 mL	10.0 mL	512164	08/02/21 04:28	HK	TAL SAC
Total/NA	Analysis	537 (modified)	DL	5			513220	08/05/21 09:27	JY1	TAL SAC

Client Sample ID: FB-1
Date Collected: 07/28/21 11:20
Date Received: 07/29/21 09:30

Lab Sample ID: 320-76907-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			280.8 mL	10.0 mL	512164	08/02/21 04:28	HK	TAL SAC
Total/NA	Analysis	537 (modified)		1			512382	08/02/21 15:57	K1S	TAL SAC

Lab Chronicle

Client: Ramboll US Corporation
Job ID: 320-76907-1
Project/Site: DIC Liquid Facility - Oak Creek 1690021164

Client Sample ID: EB-1
Date Collected: 07/28/21 11:25
Date Received: 07/29/21 09:30

Lab Sample ID: 320-76907-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			278.5 mL	10.0 mL	512164	08/02/21 04:28	HK	TAL SAC
Total/NA	Analysis	537 (modified)		1			512382	08/02/21 16:07	K1S	TAL SAC

Laboratory References:

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

Accreditation/Certification Summary

Client: Ramboll US Corporation
Job ID: 320-76907-1
Project/Site: DIC Liquid Facility - Oak Creek 1690021164

Laboratory: Eurofins TestAmerica, Sacramento

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

Authority	Program	Identification Number	Expiration Date
Wisconsin	State	998204680	08-31-21

Method Summary

Client: Ramboll US Corporation
Job ID: 320-76907-1
Project/Site: DIC Liquid Facility - Oak Creek 1690021164

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

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

Sample Summary

Client: Ramboll US Corporation
Job ID: 320-76907-1
Project/Site: DIC Liquid Facility - Oak Creek 1690021164

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-76907-1	MW-3	Water	07/28/21 09:10	07/29/21 09:30
320-76907-2	MW-2	Water	07/28/21 10:00	07/29/21 09:30
320-76907-3	MW-1	Water	07/28/21 10:55	07/29/21 09:30
320-76907-4	MW-2 DUP	Water	07/28/21 10:00	07/29/21 09:30
320-76907-5	FB-1	Water	07/28/21 11:20	07/29/21 09:30
320-76907-6	EB-1	Water	07/28/21 11:25	07/29/21 09:30

Eurofins TestAmerica, Chicago
2417 Bond Street
University Park, IL 60484
Phone: 708-534-5200 Fax: 708-534-5211

Chain of Custody Record

eurofins | Environment Testing America

Client Information	Sampler: DUNCAN GUASFORD	Lab PM: Fredrick, Sandie	Carrier Tracking No(s):	COC No: 500-92910-41392.1
Client Contact: Abby Small	Phone: 2625736315	E-Mail: sandra.fredrick@eurofinset.com	State of Origin:	Page: Page 1 of 1
Company: Ramboll US Corporation	PWSID:			Job #:
Address: 5050 Lincoln Drive, Suite 440	Due Date Requested:			
City: Edina	TAT Requested (days):			
State, Zip: MN, 55436	Compliance Project: ∆ Yes ∆ No			
Phone:	PO #: Purchase Order not required			
Email: asmall@ramboll.com	WO #:			
Project Name: LIQUID FACILITY DIC Imaging Products USA Inc - Oak Creek	Project #: 50019134			
Site: 16900 21164	SSOW#:			

Analysis Requested

320-76907 Chain of Custody

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

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)	PFAS	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
MW-3	7-28-21	910	G	Solid			X		
MW-2		1000		Solid			X		
MW-1		1055		Solid			X		
MW-2 DUP		1000		Solid			X		
FB-1		1120		Solid			X		
EB-1		1125		Solid			X		
				Solid					
				Solid					
				Water					
				Water					
				Water					

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

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

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

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:		
Relinquished by:	Date/Time: 7-28-21	Company: Ramboll	Received by:	Date/Time: 7-28-21 1430	Company: TA
Relinquished by:	Date/Time: 7-28-21 1700	Company: TA	Received by:	Date/Time: 7/29/21 9:30	Company: ESTORAC
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ∆ Yes ∆ No | Custody Seal No.: 1600 620

Cooler Temperature(s) °C and Other Remarks: 3.1c

Ver: 11.01.2020

Login Sample Receipt Checklist

Client: Ramboll US Corporation

Job Number: 320-76907-1

Login Number: 76907
List Number: 1
Creator: Nelson, Kym D

List Source: Eurofins TestAmerica, Sacramento

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	1600620
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	
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	