RIVERSIDE COUNTY
DEPARTMENT OF
WASTE RESOURCES
Hans W. Kernkamp, General Manager-Chief Engineer

August 4, 2020

William Rice, Water Resource Control Engineer
Land Disposal Section
California Regional Water Quality
Control Board - Santa Ana Region
3737 Main Street, Suite 500
Riverside, CA 92501

RE: PFAS Water Quality Sampling and Analysis
Corona Sanitary Landfill
Southwest Corner of El Camino Avenue and Magnolia Avenue
Corona, California

Dear Mr. Rice:

The following letter report was prepared pursuant to the Riverside County Department of Waste Resources' (DWR) Revised Workplan for PFAS Water Quality Sampling and Analysis for the Corona Sanitary Landfill, dated February 11, 2020. The Workplan was subsequently approved by the California Regional Water Quality Control Board – Santa Ana Region's (RWQCB) in an email, dated March 9, 2020.

1. Sampling Activities

On April 15, 2020, the DWR collected water samples for PFAS analysis from the gas condensate sump. On April 16, 2020, the DWR collected groundwater samples for PFAS analysis from the following monitoring wells at the Corona Sanitary Landfill: CG-02, CG-04, CG-05, CG-06A, CG-07 and CG-08. Refer to Figure 1 for a site map showing the sampling locations.

The DWR performed groundwater sampling at the Corona Sanitary Landfill in accordance with the sampling procedures stated in the Workplan. No field sampling issues of note were encountered during any of the sampling events. The DWR utilized laboratory provided PFAS-free water flowing through new disposable external sample tubing (composed of Tygon PVC tubing) to generate an equipment blank from the April 15, 2020 and April 16, 2020, sampling events.

Since several PFAS parameters were detected in the samples from the groundwater monitoring wells and the gas condensate collection system, the Department resampled the gas condensate collection system, upgradient groundwater monitoring well CG-05 and downgradient groundwater monitoring wells CG-02 and CG-08. The in-well dedicated low flow sampling equipment was removed from each well on May 16, 2020. This allowed the in-well groundwater conditions time to equilibrate with the surrounding aquifer prior to sampling.

On May 27, 2020, the DWR collected water samples for PFAS analysis from the gas condensate sump. On May 28, 2020, the DWR collected groundwater samples for PFAS analysis from groundwater monitoring wells CG-05, CG-02 and CG-08. The groundwater samples were collected with a new disposable high-density polyethylene bailer. The DWR utilized laboratory provided PFAS-free water flowing through a

new disposable bailer to generate an equipment blank sample for the May 27, 2020 and May 28, 2020, sampling events.

Field data observed and monitored is recorded on the data sheet (provided in Appendix A) and included the following items: number and description of the samples, the type of containers and preservatives used, the date and time of sampling and other relevant observations.

2. Laboratory Analysis

Eurofins Lancaster Laboratories Environmental, LLC (Eurofins), located in Lancaster, Pennsylvania, performed the PFAS analyses. Eurofins is a subcontract lab to BC Laboratories, Inc., who is the DWR's contract laboratory. The complete laboratory report for groundwater sampling events, which includes a copy of the sample Chain of Custody, is located in Appendix B. The complete laboratory report for gas condensate sampling events, which includes a copy of the sample Chain of Custody, is located in Appendix C.

The following notes are from the laboratory analysis narratives (a part of the laboratory report). The notes explain specific quality control issues related to the PFAS analyses. The quality control issues are noteworthy and do raise concerns regarding the integrity of the analyses. However, PFAS analyses standards for matrixes other than drinking water are still evolving and at the time of the analyses a published EPA Method did not exist. The DWR believes that the PFAS analyses reported by the laboratory, even with the noted limitations, are useful for initial evaluation purposes.

2.1 April 15, 2020 Sample Date

Gas condensate: The recovery for the labeled compound used as extraction standards is outside the QC acceptance limits as noted on the QC Summary. Thus, the sample was re-extracted within holding time. The re-extracted sample was also outside the QC acceptance limits. The data reported is from the initial trial of the sample. The recovery for one or more surrogates exceeded the acceptance window indicating a positive bias in the gas condensate sample.

Gas condensate equipment blank, field blank and travel blank: The recovery for a target analytes in the Laboratory Control Spike(s) were outside the QC acceptance limits as noted on the QC Summary. The recoveries for the following analytes in the LCS and/or LCDS were below the acceptance window: Perfluorobutanoic acid, Perfluoropentanesulfonic acid, Perfluoroheptane-sulfonic acid and Perfluorooctanoic acid. The recovery for one or more surrogates exceeded the acceptance window indicating a positive bias in the CG-EB sample.

2.2 April 16, 2020 Sample Date

CG-04: The recovery for extraction standard 13C2-4:2-FTS is outside of the QC acceptance limits as noted on the QC Summary.

CG-07: The recovery for extraction standard 13C8-PFOSA is outside of the QC acceptance limits as noted on the QC Summary.

2.3 May 27, 2020 Sample Date

Gas condensate: The labeled isotope recovery for the sample was outside of the QC acceptance limits, so the sample was re-extracted within the method holding time and the labeled isotope recovery was again outside of the QC acceptance limits. Eurofins stated that due to the fact that the isotope recovery was outside of the QC acceptance limit for both extractions, this would indicate matrix interference. Both results (initial and the re-extraction) are tabulated in the attached table.

Method blank and lab control sample: Target analytes in the laboratory control sample and method blank were below the QC acceptance limits for Perfluorobutanoic acid and Perfluoropentanoic acid. Eurofins did not have sufficient sample available to repeat the analysis.

2.4 May 28, 2020 Sample Date

CG-05: The recovery of the labeled compound used as extraction standards is outside of QC acceptance limits, as noted on the QC summary. The recovery for one or more surrogates were below the acceptance window for the CG-05 sample.

3. PFAS Analyses Results and Discussion

Attached Table 1 provides a tabulated summary of the PFAS analysis results for the groundwater and gas condensate samples. The summary table also includes the DWR's quality control sampling results.

PFAS parameters were detected in each of the groundwater monitoring well samples and gas condensate samples. The specific parameters and corresponding concentrations varied between the monitoring wells. Some of the notable detections are highlighted below:

- Many of the same PFAS parameters were detected in the gas condensate sample as were detected in the groundwater samples.

- Many of the same PFAS parameters that were detected at lower concentrations in the upgradient wells CG-04, CG-05 and CG-06A were also detected in downgradient wells CG-02, CG-07 and CG-08.

- No parameters were detected above the method detection limit in the site travel blank, equipment blank and field blank from the April 16, 2020, and May 28, 2020 groundwater monitoring well sampling events.

- Several PFAS parameters that were detected in the equipment blank from the April 15, 2020, gas condensate sampling event were also detected in the gas condensate sample. These detections could have affected the integrity of the gas condensate analysis results. This was one of reasons why a second gas condensate sampling event was conducted on May 27, 2020.

- 6:2-Fluorotelomersulfonic Acid and Perfluoroctanesulfonic Acid were detected in the gas condensate method blank for the April 15, 2020, gas condensate sample. 6:2-Fluoroetelomer-sulfonic Acid was not detected in the gas condensate sample. These detections did not have a significant effect on the integrity of the gas condensate analysis results.

- In general, there was not a significant difference in the PFAS parameters detected or in the magnitude of the concentrations detected between groundwater samples collected via dedicated in-wells pumps (where the potential for cross-contamination is not known) and new disposable bailers (composed of PFAS free materials).

4. Recommendations

Even though the dedicated in-well pumps do not appear to be a major source of PFAS, the Department is going to replace all current in-well pumps with new dedicated in-well pumps, which are certified by the manufacturer to be free of PFAS materials. The Department shall complete another PFAS sampling event once the new dedicated in-well pumps are installed. The Department will submit the results of the future PFAS sampling event to the RWQCB.

5. Closure

The PFAS water quality sampling and analysis described herein was completed in general accordance with the DWR Workplan. The DWR is committed to maintaining the Corona Landfill in compliance with applicable environmental law and strives to work with the RWQCB to maintain environmental regulatory compliance.

The work documented herein was conducted in a manner consistent with the level of care and skill ordinarily exercised by members of the profession, and in accordance with generally accepted practices of other professionals currently practicing in the same locality under similar conditions.

If you have any questions regarding the subject letter, please contact me at (951) 486-3261.

Sincerely,

8-4-2020

Todd D. Shibata, P.E.
Senior Civil Engineer

ACMD/TDS:pw

PD No. 256786 word document
PD No. 248762 PDF report letter

Attachments

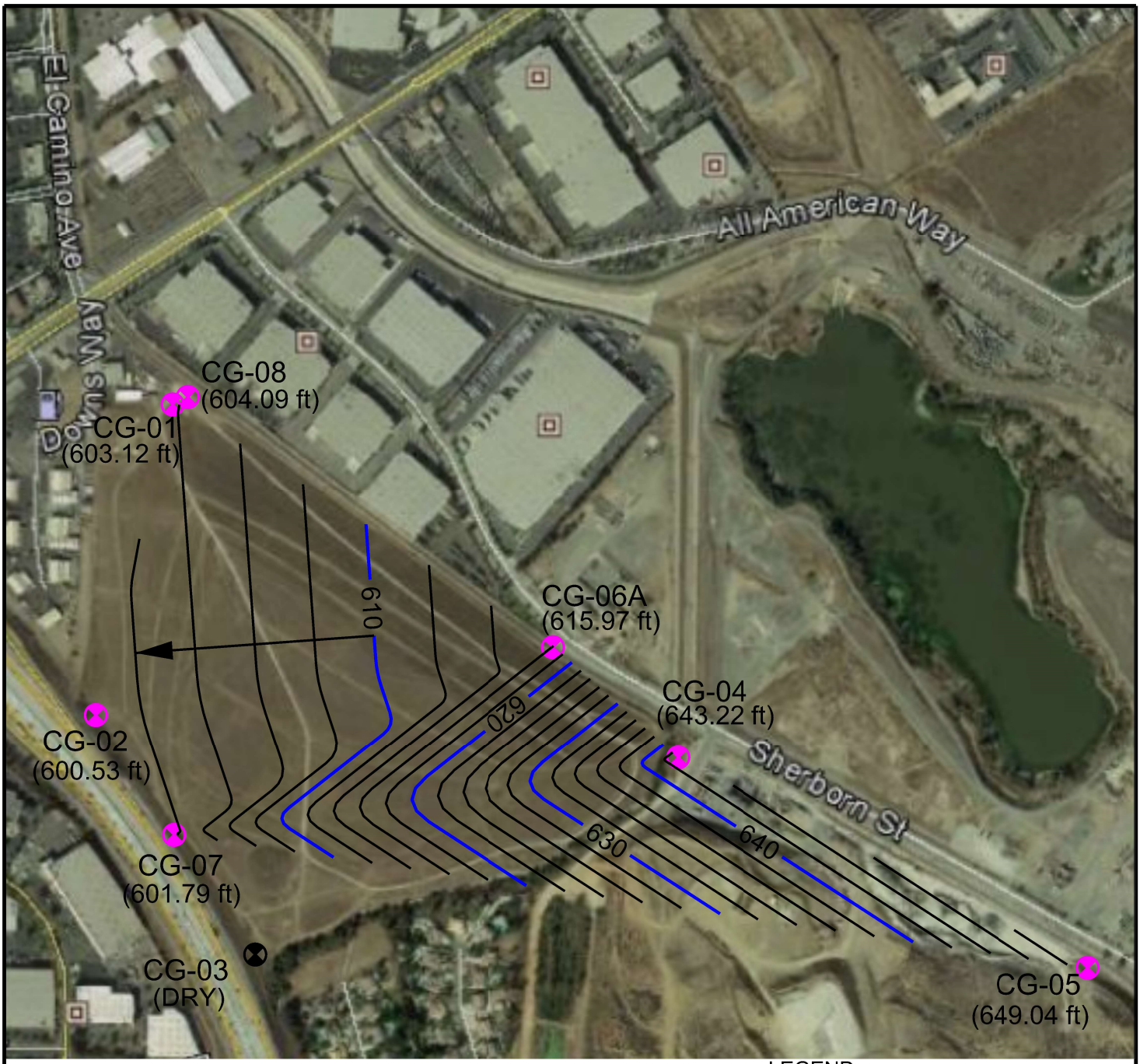
Figure 1 –Site Map

Table 1 – Summary of Detected PFAS

Appendix A – Field Data and Chain of Custody Sheets
Appendix B – Groundwater Laboratory Reports
Appendix C – Gas Condensate Laboratory Reports

cc: Justin Amon, City of Corona, DWP (electronic copy)

Figure 1 –Site Map



LEGEND

- Groundwater Monitoring Well
- PFAS Sampling Groundwater Well Location
- Landfill Footprint
- Property Line
- Groundwater Contours
- (596.64 ft) Groundwater Elevation Measurement in Parenthesis
- Groundwater Flow Direction

Scale: 1" = 600'

0 600 1200 1800

Well I.D.	Coordinate		Wellhead Elevation	Ground Elevation
	Northing	Easting		
CG-01	2261417.102	6170781.462	654.89	651.91
CG-02	2260168.372	6170472.840	684.86	681.10
CG-03	2259205.617	6171113.008	735.52	730.88
CG-04	2259997.984	6172812.904	667.91	663.72
CG-05	2259152.650	6174459.101	679.49	675.76
CG-06A	2260446.320	6172314.190	658.18	658.18
CG-07*	2259689.576	2259689.576	720.53	717.83
CG-08*	2261415.685	2261415.685	654.44	651.74

*Estimated northing and easting, survey data by Flood Control Department not available for this report.

RIVERSIDE COUNTY DEPARTMENT OF WASTE RESOURCES

Corona Sanitary Landfill - Third Quarter 2019

Groundwater Monitoring Well Locations and Groundwater Contour Map

Groundwater Elevations: August 2019	Scale: Bar Scale	Figure 1

File Directory:/Waste_1/environ/sites/corona/water/Figure 1 - PFAS sampling workplan.dgn

Table 1 – Summary of Detected PFAS

Corona Sanitary Landfill

Well ID	Sample Date	8:2 FTS	NEtFOSAA	NMeFOSAA	PFBA	PFBS	PFDA	PFDoDA	PFHpA	PFHpS	PFHxS	PFHxA	PFNA	FOSA	PFOS	PFOA	PFPeS	PFPeA	PFTeA	PFTrDA	PFUnDA
CGGC	4/15/2020	**4.9**	**140**	**32**	<1.5	<0.39	**5.8**	**4.1**	**2.8**	<0.39	**0.77J**	**7.6**	**1.9**	**22**	**19**	**62**	<0.39	**2**	**0.96J**	**0.53J**	**1.5J**
	5/27/2020	**10 | 9 (RE)**	**1500 (DL)| 1500-E (RE)**	**300 | 250 (RE)**	**2.8J |3.2J***	**16 |7.6 (RE)**	**14 | 12 (RE)**	**21 | 16**	**5.5 | 2.9 (RE)**	<0.39 | <0.39 (RE)	**0.89 J |<0.39 (RE)**	**8.7 | 7.3 (RE)**	**4.1 | 2.4 (RE)**	**68 |46 (RE)**	**34 | 17 (RE)**	**66 | 74 (RE)**	<0.39 | <0.39 (RE)	**2.9 | 1.5***	**9.8 | <0.39 (RE)**	**1.8 | <0.39 (RE)**	**6.2 | 4.0 (RE)**
CG-FB	4/15/2020	<0.78	<0.39	<0.47	<1.6	<0.39	<1.6	<0.39	<0.39	<0.39	**0.58J**	<0.39	<0.39	<0.39	**1.2JB**	**0.66J**	<0.39	<0.39	<0.39	<0.39	<0.39
	5/27/2020	<0.80	<0.40	<0.48	<1.6	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40
CG-TB	4/15/2020	<0.81	<0.41	<0.49	<0.41	<0.41	<0.41	<0.41	<0.41	<0.41	<0.41	<0.41	<0.41	<0.41	<0.41	<0.41	<0.41	<0.41	<0.41	<0.41	<0.41
	5/27/2020	<0.91	<0.45	<0.55	<1.8*	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45
CG-EB	4/15/2020	<0.78	**0.59J**	<0.47	**1.6J**	<0.39	**0.56J**	**1.8**	**0.71J**	<0.39	<0.39	**0.65J**	<0.39	<0.39	**0.98JB**	**1.7**	<0.39	**1.7**	**7**	**5.3**	**1.2J**
CG-02	4/16/2020	<0.79	<0.4	<0.48	**7.1**	**5.2**	<0.4	<0.4	**5**	**0.82J**	**12**	**5.1**	<0.4	<0.4	**35**	**24**	**3.4**	**4**	<0.4	<0.4	<0.4
	5/28/2020	<0.79	<0.4	<0.48	**6.8**	**6.7**	<0.4	<0.4	**1.1J**	**5.9**	**13**	**6.3**	<0.4	<0.4	**49**	**27**	**4.3**	**4.2**	<0.4	<0.4	<0.4
CG-04	4/16/2020	<0.77	<0.39	<0.46	**15**	**13**	**8.4**	<0.41	**9.1**	**0.71J**	**6.8**	**26**	**4.7**	<0.39	**42**	**30**	**1.6**	**22**	<0.39	<0.39	**0.97J**
CG-05	4/16/2020	<0.81	<0.41	<0.49	<1.6	**2.3**	<0.41	<0.39	**1.6J**	<0.41	**2.2**	**1.7**	<0.41	<0.41	**27**	**9.9**	**1J**	**0.97J**	<0.41	<0.41	<0.41
	5/28/2020	<0.80	<0.40	<0.48	**2.1J**	**1.9**	<0.40	<0.40	**1.3J**	<0.40	**1.9**	**2.3**	<0.40	<0.40	**23**	**11**	**0.93J**	**1.9**	<0.40	<0.40	<0.40
CG-06A	4/16/2020	<0.78	<0.39	<0.47	**29**	**34**	**3.8**	**0.42J**	**33**	**1.5J**	**23**	**66**	**4.9**	<0.39	**37**	**92**	**6.9**	**56**	<0.39	<0.39	**0.43J**
CG-07	4/16/2020	<0.79	<0.4	<0.48	**24**	**10**	**2.8**	<0.4	**1.5J**	**1.5J**	**14**	**3.2**	**4.5**	**1J**	**64**	**40**	**4.3**	**2.8**	<0.4	<0.4	<0.4
CG-08	4/16/2020	<0.77	<0.38	<0.46	**28**	**46**	**5.2**	<0.38	**59**	**3.7**	**44**	**73**	**6.1**	<0.38	**140**	**180**	**19**	**52**	<0.38	<0.38	<0.38
	5/28/2020	<0.79	<0.40	<0.48	**27**	**50**	**6**	<0.40	**52**	**3.8**	**44**	**69**	**6.2**	<0.40	**170**	**200**	**19**	**45**	<0.40	<0.40	<0.40
CG-FB	4/16/2020	<0.78	<0.39	<0.47	<1.6	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39
	5/28/2020	<0.80	<0.40	<0.48	<1.6	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40
CG-EB	4/16/2020	<0.78	<0.39	<0.47	<1.6	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39
	5/28/2020	<0.91	<0.45	<0.54	<1.8	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45
CG-TB	4/16/2020	<0.84	<0.42	<0.50	<1.7	<0.42	<0.42	<0.42	<0.42	<0.42	<0.42	<0.42	<0.42	<0.42	<0.42	<0.42	<0.42	<0.42	<0.42	<0.42	<0.42
	5/28/2020	<0.90	<0.45	<0.54	<1.8	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45

Notes:
All concentrations in ng/L
CG-EB: Equipment Blank
CG-TB: Travel Blank
CG-07: downgradient groundwater well
CG-08: downgradient groundwater well
A concentration denoted with a "J" indicates that a parameter was detected above the Method Detection Limit, but less than the Limit of Quantitation
B - indicates that the parameter was detected in the method blank. PFOS was detected in method blank at 4.9 ng/l
(RE) - indicates re-analysis and/or re-extraction of initial sample
E - indicates result exceeded calibration range
* - indicates LCS or LCSD is outside acceptance limits

Abbreviations for detected parameters:
8:2 Fluorotelomer sulfonic acid (8:2 FTS)
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)
Perfluorobutane sulfonic acid (PFBS)
Perfluorobutanoic acid (PFBA)
Perfluorodecanoic acid (PFDA)
Perfluorododecanoic acid (PFDoDA)
Perfluoroheptanoic acid (PFHpA)
Perfluoroheptane sulfonic acid (PFHpS)
Perfluorohexane sulfonic acid (PFHxS)
Perfluorohexanoic acid (PFHxA)
Perfluorononanoic acid (PFNA)
Perfluorooctance sulfonamide (FOSA)
Perfluorooctane sulfonic acid (PFOS)
Perfluorooctanoic acid (PFOA)
Perfluoropentane sulfonic acid (PFPeS)
Perfluoropentanoic acid (PFPeA)
Perfluorotetradecanoic acid (PFTeA)
Perfluorotridecanoic acid (PFTrDA)
Perfluoroundecanoic acid (PFUnDA)

PFAS parameters not detected above the Method Detection Limit listed below:
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid
4:2 Fluorotelomer sulfonic acid (4:2 FTS)
6:2 Fluorotelomer sulfonic acid (6:2 FTS)
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid
Perfluorodecane sulfonic acid (PFDS)

Appendix A – Field Data and Chain of Custody Sheets

Corona Groundwater: PFAS Sampling Event

TECH:	Mario Ramirez
DATE:	4/16/2020

Well ID	Water Depth	Casing Depth	Height of Water	Sample Time	Vol to Purge (Liters)	Total Purged (Liters)	Pump Pressure (psi)	Pump Time (sec)	Fill Time (Sec)	Purge Rate (ml/min)	Turbidity (NTU)
CG-01	Dry	63.45	Dry	N/A	2.61	N/A	45	14	18	480	N/A
CG-02	81.55	93.89	12.34	10:20	3.76	N/A	55	15	20	470	N/A
CG-03	Dry	133.25	Dry	See bailer field form - if sample is obtained							
CG-04	21.1	74.17	53.07	12:10	2.73	N/A	50	15	30	4.3	N/A
CG-05	24.6	76.43	51.83	11:30	2.75	N/A	50	15	30	470	N/A
CG-06A	35.95	60	24.05	13:00	2.7	N/A	45	10	30	270	N/A
CG-07	118.5	163.25	44.75	9:30	3.55	N/A	85	10	20	400	N/A
CG-08	45.75	90	44.25	10:50	2.86	N/A	35	15	25	400	N/A

Analysis	PFAS
Bottle Type	250 ml Poly
Preservative	Trizma

No field reading obtained. YSI equipment was down

Required Bottles	2	Required Total	Collected Total	Field Readings Obtained	
CG-01	Dry				
CG-02	2	2	2	Yes	X No
CG-03	Dry				
CG-04	2	2	2	Yes	X No
CG-05	2	2	2	Yes	X No
CG-06A	2	2	2	Yes	X No
CG-07	2	2	2	Yes	X No
CG-08	2	2	2	Yes	X No
CG-FB	1	1	1		
CG-TB	1	1	1		
CG-EB	1	1	1		

Corona Groundwater: PFAS Sampling Event

TECH:	Mario Ramirez
DATE:	5/28/2020

Well ID	Water Depth	Casing Depth	Height of Water	Sample Time	Vol to Purge (Liters)	Total Purged (Liters)	Pump Pressure (psi)	Pump Time (sec)	Fill Time (Sec)	Purge Rate (ml/min)	Turbidity (NTU)
CG-01		63.45					45	14	18	480	N/A
CG-02		93.89		11:30			55	15	20	470	N/A
CG-03		133.25		See bailer field form - if sample is obtained							
CG-04		74.17					50	15	30	4.3	N/A
CG-05		76.43		10:20			50	15	30	470	N/A
CG-06A		60					45	10	30	270	N/A
CG-07		163.25					85	10	20	400	N/A
CG-08		90		11:00			35	15	25	400	N/A

Analysis	PFAS
Bottle Type	250 ml Poly
Preservative	Trizma

No field reading obtained. Sample obtained by bailer.

	Required Bottles	Required Total	Collected Total	Field Readings Obtained	
CG-01	2				
CG-02	2	2	2	Yes	X No
CG-03	Dry				
CG-04				Yes	No
CG-05	2	2	2	Yes	X No
CG-06A				Yes	No
CG-07				Yes	No
CG-08	2	2	2	Yes	X No
CG-FB	1	1	1		
CG-TB	1	1	1		
CG-EB	1	1	1		

Appendix B – Groundwater Laboratory Reports

April 16, 2020

Date of Report: 04/28/2020

Panda Workman

Riverside County Dept of Waste Resources
14310 Frederick Street
Moreno Valley, CA 92553

Client Project:	PFAS - Subcontract
BCL Project:	Corona
BCL Work Order:	2011705
Invoice ID:	B378474

Enclosed are the results of analyses for samples received by the laboratory on 4/17/2020. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda
Client Service Rep

Stuart Buttram
Technical Director

Table of Contents

Riverside County Dept of Waste Resources
14310 Frederick Street
Moreno Valley, CA 92553

Reported: 04/28/2020 14:08
Project: Corona
Project Number: PFAS - Subcontract
Project Manager: Panda Workman

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
2011705-01	**COC Number:**	---	**Receive Date:**	04/17/2020 00:00
	Project Number:	---	**Sampling Date:**	04/16/2020 00:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	CG-TB	**Lab Matrix:**	Water
	Sampled By:	Mario Ramirez	**Sample Type:**	Water
2011705-02	**COC Number:**	---	**Receive Date:**	04/17/2020 00:00
	Project Number:	---	**Sampling Date:**	04/16/2020 00:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	CG-EB	**Lab Matrix:**	Water
	Sampled By:	Mario Ramirez	**Sample Type:**	Water
2011705-03	**COC Number:**	---	**Receive Date:**	04/17/2020 00:00
	Project Number:	---	**Sampling Date:**	04/16/2020 00:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	CG-FB	**Lab Matrix:**	Water
	Sampled By:	Mario Ramirez	**Sample Type:**	Water
2011705-04	**COC Number:**	---	**Receive Date:**	04/17/2020 00:00
	Project Number:	---	**Sampling Date:**	04/16/2020 10:20
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	CG-02	**Lab Matrix:**	Water
	Sampled By:	Mario Ramirez	**Sample Type:**	Water
2011705-05	**COC Number:**	---	**Receive Date:**	04/17/2020 00:00
	Project Number:	---	**Sampling Date:**	04/16/2020 12:10
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	CG-04	**Lab Matrix:**	Water
	Sampled By:	Mario Ramirez	**Sample Type:**	Water
2011705-06	**COC Number:**	---	**Receive Date:**	04/17/2020 00:00
	Project Number:	---	**Sampling Date:**	04/16/2020 11:30
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	CG-05	**Lab Matrix:**	Water
	Sampled By:	Mario Ramirez	**Sample Type:**	Water
2011705-07	**COC Number:**	---	**Receive Date:**	04/17/2020 00:00
	Project Number:	---	**Sampling Date:**	04/16/2020 13:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	CG-06A	**Lab Matrix:**	Water
	Sampled By:	Mario Ramirez	**Sample Type:**	Water

Riverside County Dept of Waste Resources
14310 Frederick Street
Moreno Valley, CA 92553

Reported: 04/28/2020 14:08
Project: Corona
Project Number: PFAS - Subcontract
Project Manager: Panda Workman

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
2011705-08	**COC Number:**	---	**Receive Date:**	04/17/2020 00:00
	Project Number:	---	**Sampling Date:**	04/16/2020 09:30
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	CG-07	**Lab Matrix:**	Water
	Sampled By:	Mario Ramirez	**Sample Type:**	Water
2011705-09	**COC Number:**	---	**Receive Date:**	04/17/2020 00:00
	Project Number:	---	**Sampling Date:**	04/16/2020 10:50
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	CG-08	**Lab Matrix:**	Water
	Sampled By:	Mario Ramirez	**Sample Type:**	Water

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BC Laboratories, Inc.
4100 Atlas Court
Bakersfield CA 93308

Report Date: April 28, 2020 10:06

Project: 2011705

Account #: 44261
Group Number: 2096665
SDG: BCL96
State of Sample Origin: CA

Electronic Copy To	BC Laboratories, Inc.	Attn: Molly Meyers
Electronic Copy To	BC Laboratories, Inc.	Attn: Tina Green

Respectfully Submitted,

Elizabeth M. Zanar

Elizabeth M. Zanar
Project Manager

(717) 556-7290

To view our laboratory's current scopes of accreditation please go to https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/ . Historical copies may be requested through your project manager.

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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
CG-TB Water	04/16/2020 09:30	1300785
CG-EB Water	04/16/2020 09:30	1300786
CG-FB Water	04/16/2020 09:30	1300787
CG-02 Water	04/16/2020 10:20	1300788
CG-04 Water	04/16/2020 12:10	1300789
CG-05 Water	04/16/2020 11:30	1300790
CG-06A Water	04/16/2020 13:00	1300791
CG-07 Water	04/16/2020 09:30	1300792
CG-08 Water	04/16/2020 10:50	1300793

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

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Case Narrative

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Project Name: 2011705
ELLE Group #: 2096665

General Comments:

See the Laboratory Sample Analysis Record section of the Analysis Report for the method references.

All QC met criteria unless otherwise noted in an Analysis Specific Comment below.
Refer to the QC Summary for specific values and acceptance criteria.

Project specific QC samples are not included in this data set.

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Surrogate recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in an Analysis Specific Comment below.

The samples were received at the appropriate temperature and in accordance with the chain of custody unless otherwise noted.

Analysis Specific Comments:

EPA 537 mod QSM 5.1 table B-15, LC/MS/MS Miscellaneous

Sample #s: 1300789

The recovery for extraction standard 13C2-4:2-FTS is outside of the QC acceptance limits as noted on the QC Summary.

Sample #s: 1300792

The recovery for extraction standard 13C8-PFOSA is outside of the QC acceptance limits as noted on the QC Summary.

Batch #: 20112018 (Sample number(s): 1300785, 1300787-1300788, 1300790-1300793)

The recovery(ies) for one or more surrogates were below the acceptance window for sample(s) 1300792

Batch #: 20115010 (Sample number(s): 1300786, 1300789)

The recovery(ies) for one or more surrogates exceeded the acceptance window indicating a positive bias for sample(s) 1300789

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Analysis Report

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Sample Description: CG-TB Water
PFAS Analysis

Project Name: 2011705

Submittal Date/Time: 04/17/2020 10:25
Collection Date/Time: 04/16/2020 09:30
SDG#: BCL96-01TB

BC Laboratories, Inc.
ELLE Sample #: GW 1300785
ELLE Group #: 2096665
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous	EPA 537 mod QSM 5.1 table B-15		ng/l	ng/l	ng/l	
14434	9Cl-PF3ONS	756426-58-1	N.D.	0.42	1.7	1
	9Cl-PF3ONS is the acronym for Potassium 9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid					
14434	11Cl-PF3OUdS	763051-92-9	N.D.	0.42	1.7	1
	11Cl-PF3OUdS is the acronym for 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid					
14434	4:2-Fluorotelomersulfonic acid	757124-72-4	N.D.	0.42	1.7	1
14434	6:2-Fluorotelomersulfonic acid	27619-97-2	N.D.	1.7	4.2	1
14434	8:2-Fluorotelomersulfonic acid	39108-34-4	N.D.	0.84	2.5	1
14434	NEtFOSAA	2991-50-6	N.D.	0.42	2.5	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14434	NMeFOSAA	2355-31-9	N.D.	0.50	1.7	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14434	Perfluorobutanesulfonic acid	375-73-5	N.D.	0.42	1.7	1
14434	Perfluorobutanoic acid	375-22-4	N.D.	1.7	4.2	1
14434	Perfluorodecanesulfonic acid	335-77-3	N.D.	0.42	1.7	1
14434	Perfluorodecanoic acid	335-76-2	N.D.	0.42	1.7	1
14434	Perfluorododecanoic acid	307-55-1	N.D.	0.42	1.7	1
14434	Perfluoroheptanesulfonic acid	375-92-8	N.D.	0.42	1.7	1
14434	Perfluoroheptanoic acid	375-85-9	N.D.	0.42	1.7	1
14434	Perfluorohexanesulfonic acid	355-46-4	N.D.	0.42	1.7	1
14434	Perfluorohexanoic acid	307-24-4	N.D.	0.42	1.7	1
14434	Perfluorononanoic acid	375-95-1	N.D.	0.42	1.7	1
14434	Perfluorooctanesulfonamide	754-91-6	N.D.	0.42	1.7	1
14434	Perfluorooctanesulfonic acid	1763-23-1	N.D.	0.42	1.7	1
14434	Perfluorooctanoic acid	335-67-1	N.D.	0.42	1.7	1
14434	Perfluoropentanesulfonic acid	2706-91-4	N.D.	0.42	1.7	1
14434	Perfluoropentanoic acid	2706-90-3	N.D.	0.42	1.7	1
14434	Perfluorotetradecanoic acid	376-06-7	N.D.	0.42	1.7	1
14434	Perfluorotridecanoic acid	72629-94-8	N.D.	0.42	1.7	1
14434	Perfluoroundecanoic acid	2058-94-8	N.D.	0.42	1.7	1

Sample Comments

CA ELAP Lab Certification No. 2792

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14434	25 PFAS in Waters - DOD	EPA 537 mod QSM 5.1 table B-15	1	20112018	04/23/2020 16:37	Marissa C Drexinger	1

*=This limit was used in the evaluation of the final result

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Analysis Report

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Sample Description: CG-TB Water
PFAS Analysis

Project Name: 2011705

Submittal Date/Time: 04/17/2020 10:25
Collection Date/Time: 04/16/2020 09:30
SDG#: BCL96-01TB

BC Laboratories, Inc.
ELLE Sample #: GW 1300785
ELLE Group #: 2096665
Matrix: Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14465	PFAS Water Prep - DoD	EPA 537 mod QSM 5.1 table B-15	1	20112018	04/21/2020 15:30	Isaac Phillips-Cary	1

*=This limit was used in the evaluation of the final result

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Analysis Report

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Sample Description: CG-EB Water
PFAS Analysis

Project Name: 2011705

Submittal Date/Time: 04/17/2020 10:25
Collection Date/Time: 04/16/2020 09:30
SDG#: BCL96-02EB

BC Laboratories, Inc.
ELLE Sample #: GW 1300786
ELLE Group #: 2096665
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous	EPA 537 mod QSM 5.1 table B-15		ng/l	ng/l	ng/l	
14434	9Cl-PF3ONS	756426-58-1	N.D.	0.39	1.6	1
	9Cl-PF3ONS is the acronym for Potassium 9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid					
14434	11Cl-PF3OUdS	763051-92-9	N.D.	0.39	1.6	1
	11Cl-PF3OUdS is the acronym for 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid					
14434	4:2-Fluorotelomersulfonic acid	757124-72-4	N.D.	0.39	1.6	1
14434	6:2-Fluorotelomersulfonic acid	27619-97-2	N.D.	1.6	3.9	1
14434	8:2-Fluorotelomersulfonic acid	39108-34-4	N.D.	0.78	2.4	1
14434	NEtFOSAA	2991-50-6	N.D.	0.39	2.4	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14434	NMeFOSAA	2355-31-9	N.D.	0.47	1.6	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14434	Perfluorobutanesulfonic acid	375-73-5	N.D.	0.39	1.6	1
14434	Perfluorobutanoic acid	375-22-4	N.D.	1.6	3.9	1
14434	Perfluorodecanesulfonic acid	335-77-3	N.D.	0.39	1.6	1
14434	Perfluorodecanoic acid	335-76-2	N.D.	0.39	1.6	1
14434	Perfluorododecanoic acid	307-55-1	N.D.	0.39	1.6	1
14434	Perfluoroheptanesulfonic acid	375-92-8	N.D.	0.39	1.6	1
14434	Perfluoroheptanoic acid	375-85-9	N.D.	0.39	1.6	1
14434	Perfluorohexanesulfonic acid	355-46-4	N.D.	0.39	1.6	1
14434	Perfluorohexanoic acid	307-24-4	N.D.	0.39	1.6	1
14434	Perfluorononanoic acid	375-95-1	N.D.	0.39	1.6	1
14434	Perfluorooctanesulfonamide	754-91-6	N.D.	0.39	1.6	1
14434	Perfluorooctanesulfonic acid	1763-23-1	N.D.	0.39	1.6	1
14434	Perfluorooctanoic acid	335-67-1	N.D.	0.39	1.6	1
14434	Perfluoropentanesulfonic acid	2706-91-4	N.D.	0.39	1.6	1
14434	Perfluoropentanoic acid	2706-90-3	N.D.	0.39	1.6	1
14434	Perfluorotetradecanoic acid	376-06-7	N.D.	0.39	1.6	1
14434	Perfluorotridecanoic acid	72629-94-8	N.D.	0.39	1.6	1
14434	Perfluoroundecanoic acid	2058-94-8	N.D.	0.39	1.6	1

Sample Comments

CA ELAP Lab Certification No. 2792

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14434	25 PFAS in Waters - DOD	EPA 537 mod QSM 5.1 table B-15	1	20115010	04/27/2020 13:31	Devon M Whooley	1

*=This limit was used in the evaluation of the final result

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Analysis Report

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Sample Description: CG-EB Water
PFAS Analysis

Project Name: 2011705

Submittal Date/Time: 04/17/2020 10:25
Collection Date/Time: 04/16/2020 09:30
SDG#: BCL96-02EB

BC Laboratories, Inc.
ELLE Sample #: GW 1300786
ELLE Group #: 2096665
Matrix: Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14465	PFAS Water Prep - DoD	EPA 537 mod QSM 5.1 table B-15	2	20115010	04/25/2020 08:00	Toby Barnhart	1

*=This limit was used in the evaluation of the final result

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Analysis Report

3425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Sample Description: CG-FB Water
PFAS Analysis

Project Name: 2011705

Submittal Date/Time: 04/17/2020 10:25
Collection Date/Time: 04/16/2020 09:30
SDG#: BCL96-03FB

BC Laboratories, Inc.
ELLE Sample #: GW 1300787
ELLE Group #: 2096665
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous	EPA 537 mod QSM 5.1 table B-15		ng/l	ng/l	ng/l	
14434	9Cl-PF3ONS	756426-58-1	N.D.	0.39	1.6	1
	9Cl-PF3ONS is the acronym for Potassium 9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid					
14434	11Cl-PF3OUdS	763051-92-9	N.D.	0.39	1.6	1
	11Cl-PF3OUdS is the acronym for 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid					
14434	4:2-Fluorotelomersulfonic acid	757124-72-4	N.D.	0.39	1.6	1
14434	6:2-Fluorotelomersulfonic acid	27619-97-2	N.D.	1.6	3.9	1
14434	8:2-Fluorotelomersulfonic acid	39108-34-4	N.D.	0.78	2.3	1
14434	NEtFOSAA	2991-50-6	N.D.	0.39	2.3	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14434	NMeFOSAA	2355-31-9	N.D.	0.47	1.6	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14434	Perfluorobutanesulfonic acid	375-73-5	N.D.	0.39	1.6	1
14434	Perfluorobutanoic acid	375-22-4	N.D.	1.6	3.9	1
14434	Perfluorodecanesulfonic acid	335-77-3	N.D.	0.39	1.6	1
14434	Perfluorodecanoic acid	335-76-2	N.D.	0.39	1.6	1
14434	Perfluorododecanoic acid	307-55-1	N.D.	0.39	1.6	1
14434	Perfluoroheptanesulfonic acid	375-92-8	N.D.	0.39	1.6	1
14434	Perfluoroheptanoic acid	375-85-9	N.D.	0.39	1.6	1
14434	Perfluorohexanesulfonic acid	355-46-4	N.D.	0.39	1.6	1
14434	Perfluorohexanoic acid	307-24-4	N.D.	0.39	1.6	1
14434	Perfluorononanoic acid	375-95-1	N.D.	0.39	1.6	1
14434	Perfluorooctanesulfonamide	754-91-6	N.D.	0.39	1.6	1
14434	Perfluorooctanesulfonic acid	1763-23-1	N.D.	0.39	1.6	1
14434	Perfluorooctanoic acid	335-67-1	N.D.	0.39	1.6	1
14434	Perfluoropentanesulfonic acid	2706-91-4	N.D.	0.39	1.6	1
14434	Perfluoropentanoic acid	2706-90-3	N.D.	0.39	1.6	1
14434	Perfluorotetradecanoic acid	376-06-7	N.D.	0.39	1.6	1
14434	Perfluorotridecanoic acid	72629-94-8	N.D.	0.39	1.6	1
14434	Perfluoroundecanoic acid	2058-94-8	N.D.	0.39	1.6	1

Sample Comments

CA ELAP Lab Certification No. 2792

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14434	25 PFAS in Waters - DOD	EPA 537 mod QSM 5.1 table B-15	1	20112018	04/23/2020 16:55	Marissa C Drexinger	1

*=This limit was used in the evaluation of the final result

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Analysis Report

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Sample Description: CG-FB Water
PFAS Analysis

Project Name: 2011705

Submittal Date/Time: 04/17/2020 10:25
Collection Date/Time: 04/16/2020 09:30
SDG#: BCL96-03FB

BC Laboratories, Inc.
ELLE Sample #: GW 1300787
ELLE Group #: 2096665
Matrix: Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14465	PFAS Water Prep - DoD	EPA 537 mod QSM 5.1 table B-15	1	20112018	04/21/2020 15:30	Isaac Phillips-Cary	1

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Analysis Report

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Sample Description: CG-02 Water
PFAS Analysis

Project Name: 2011705

Submittal Date/Time: 04/17/2020 10:25
Collection Date/Time: 04/16/2020 10:20
SDG#: BCL96-04

BC Laboratories, Inc.
ELLE Sample #: GW 1300788
ELLE Group #: 2096665
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous	EPA 537 mod QSM 5.1 table B-15		ng/l	ng/l	ng/l	
14434	9Cl-PF3ONS	756426-58-1	N.D.	0.40	1.6	1
	9Cl-PF3ONS is the acronym for Potassium 9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid					
14434	11Cl-PF3OUdS	763051-92-9	N.D.	0.40	1.6	1
	11Cl-PF3OUdS is the acronym for 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid					
14434	4:2-Fluorotelomersulfonic acid	757124-72-4	N.D.	0.40	1.6	1
14434	6:2-Fluorotelomersulfonic acid	27619-97-2	N.D.	1.6	4.0	1
14434	8:2-Fluorotelomersulfonic acid	39108-34-4	N.D.	0.79	2.4	1
14434	NEtFOSAA	2991-50-6	N.D.	0.40	2.4	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14434	NMeFOSAA	2355-31-9	N.D.	0.48	1.6	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14434	Perfluorobutanesulfonic acid	375-73-5	5.2	0.40	1.6	1
14434	Perfluorobutanoic acid	375-22-4	7.1	1.6	4.0	1
14434	Perfluorodecanesulfonic acid	335-77-3	N.D.	0.40	1.6	1
14434	Perfluorodecanoic acid	335-76-2	N.D.	0.40	1.6	1
14434	Perfluorododecanoic acid	307-55-1	N.D.	0.40	1.6	1
14434	Perfluoroheptanesulfonic acid	375-92-8	0.82 J	0.40	1.6	1
14434	Perfluoroheptanoic acid	375-85-9	5.0	0.40	1.6	1
14434	Perfluorohexanesulfonic acid	355-46-4	12	0.40	1.6	1
14434	Perfluorohexanoic acid	307-24-4	5.1	0.40	1.6	1
14434	Perfluorononanoic acid	375-95-1	N.D.	0.40	1.6	1
14434	Perfluorooctanesulfonamide	754-91-6	N.D.	0.40	1.6	1
14434	Perfluorooctanesulfonic acid	1763-23-1	35	0.40	1.6	1
14434	Perfluorooctanoic acid	335-67-1	24	0.40	1.6	1
14434	Perfluoropentanesulfonic acid	2706-91-4	3.4	0.40	1.6	1
14434	Perfluoropentanoic acid	2706-90-3	4.0	0.40	1.6	1
14434	Perfluorotetradecanoic acid	376-06-7	N.D.	0.40	1.6	1
14434	Perfluorotridecanoic acid	72629-94-8	N.D.	0.40	1.6	1
14434	Perfluoroundecanoic acid	2058-94-8	N.D.	0.40	1.6	1

Sample Comments

CA ELAP Lab Certification No. 2792

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14434	25 PFAS in Waters - DOD	EPA 537 mod QSM 5.1 table B-15	1	20112018	04/23/2020 17:04	Marissa C Drexinger	1

*=This limit was used in the evaluation of the final result

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Analysis Report

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Sample Description: CG-02 Water
PFAS Analysis

Project Name: 2011705

Submittal Date/Time: 04/17/2020 10:25
Collection Date/Time: 04/16/2020 10:20
SDG#: BCL96-04

BC Laboratories, Inc.
ELLE Sample #: GW 1300788
ELLE Group #: 2096665
Matrix: Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14465	PFAS Water Prep - DoD	EPA 537 mod QSM 5.1 table B-15	1	20112018	04/21/2020 15:30	Isaac Phillips-Cary	1

*=This limit was used in the evaluation of the final result

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Analysis Report

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Sample Description: CG-04 Water
PFAS Analysis

Project Name: 2011705

Submittal Date/Time: 04/17/2020 10:25
Collection Date/Time: 04/16/2020 12:10
SDG#: BCL96-05

BC Laboratories, Inc.
ELLE Sample #: GW 1300789
ELLE Group #: 2096665
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous	EPA 537 mod QSM 5.1 table B-15		ng/l	ng/l	ng/l	
14434	9Cl-PF3ONS	756426-58-1	N.D.	0.39	1.5	1
	9Cl-PF3ONS is the acronym for Potassium 9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid					
14434	11Cl-PF3OUdS	763051-92-9	N.D.	0.39	1.5	1
	11Cl-PF3OUdS is the acronym for 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid					
14434	4:2-Fluorotelomersulfonic acid	757124-72-4	N.D.	0.39	1.5	1
14434	6:2-Fluorotelomersulfonic acid	27619-97-2	N.D.	1.5	3.9	1
14434	8:2-Fluorotelomersulfonic acid	39108-34-4	N.D.	0.77	2.3	1
14434	NEtFOSAA	2991-50-6	N.D.	0.39	2.3	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14434	NMeFOSAA	2355-31-9	N.D.	0.46	1.5	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14434	Perfluorobutanesulfonic acid	375-73-5	13	0.39	1.5	1
14434	Perfluorobutanoic acid	375-22-4	15	1.5	3.9	1
14434	Perfluorodecanesulfonic acid	335-77-3	N.D.	0.39	1.5	1
14434	Perfluorodecanoic acid	335-76-2	8.4	0.39	1.5	1
14434	Perfluorododecanoic acid	307-55-1	N.D.	0.39	1.5	1
14434	Perfluoroheptanesulfonic acid	375-92-8	0.71 J	0.39	1.5	1
14434	Perfluoroheptanoic acid	375-85-9	9.1	0.39	1.5	1
14434	Perfluorohexanesulfonic acid	355-46-4	6.8	0.39	1.5	1
14434	Perfluorohexanoic acid	307-24-4	26	0.39	1.5	1
14434	Perfluorononanoic acid	375-95-1	4.7	0.39	1.5	1
14434	Perfluorooctanesulfonamide	754-91-6	N.D.	0.39	1.5	1
14434	Perfluorooctanesulfonic acid	1763-23-1	42	0.39	1.5	1
14434	Perfluorooctanoic acid	335-67-1	30	0.39	1.5	1
14434	Perfluoropentanesulfonic acid	2706-91-4	1.6	0.39	1.5	1
14434	Perfluoropentanoic acid	2706-90-3	22	0.39	1.5	1
14434	Perfluorotetradecanoic acid	376-06-7	N.D.	0.39	1.5	1
14434	Perfluorotridecanoic acid	72629-94-8	N.D.	0.39	1.5	1
14434	Perfluoroundecanoic acid	2058-94-8	0.97 J	0.39	1.5	1

The recovery for extraction standard 13C2-4:2-FTS is outside of the QC acceptance limits as noted on the QC Summary.

Sample Comments

CA ELAP Lab Certification No. 2792

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor

*=This limit was used in the evaluation of the final result

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Analysis Report

3425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2766 • www.EurofinsUS.com/LancLabsEnv

Sample Description: CG-04 Water
PFAS Analysis

Project Name: 2011705

Submittal Date/Time: 04/17/2020 10:25
Collection Date/Time: 04/16/2020 12:10
SDG#: BCL96-05

BC Laboratories, Inc.
ELLE Sample #: GW 1300789
ELLE Group #: 2096665
Matrix: Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14434	25 PFAS in Waters - DOD	EPA 537 mod QSM 5.1 table B-15	1	20115010	04/27/2020 13:40	Devon M Whooley	1
14465	PFAS Water Prep - DoD	EPA 537 mod QSM 5.1 table B-15	2	20115010	04/25/2020 08:00	Toby Barnhart	1

*=This limit was used in the evaluation of the final result

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Analysis Report

3425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Sample Description: CG-05 Water
PFAS Analysis

Project Name: 2011705

Submittal Date/Time: 04/17/2020 10:25
Collection Date/Time: 04/16/2020 11:30
SDG#: BCL96-06

BC Laboratories, Inc.
ELLE Sample #: GW 1300790
ELLE Group #: 2096665
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous	EPA 537 mod QSM 5.1 table B-15		ng/l	ng/l	ng/l	
14434	9Cl-PF3ONS	756426-58-1	N.D.	0.41	1.6	1
	9Cl-PF3ONS is the acronym for Potassium 9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid					
14434	11Cl-PF3OUdS	763051-92-9	N.D.	0.41	1.6	1
	11Cl-PF3OUdS is the acronym for 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid					
14434	4:2-Fluorotelomersulfonic acid	757124-72-4	N.D.	0.41	1.6	1
14434	6:2-Fluorotelomersulfonic acid	27619-97-2	N.D.	1.6	4.1	1
14434	8:2-Fluorotelomersulfonic acid	39108-34-4	N.D.	0.81	2.4	1
14434	NEtFOSAA	2991-50-6	N.D.	0.41	2.4	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14434	NMeFOSAA	2355-31-9	N.D.	0.49	1.6	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14434	Perfluorobutanesulfonic acid	375-73-5	2.3	0.41	1.6	1
14434	Perfluorobutanoic acid	375-22-4	N.D.	1.6	4.1	1
14434	Perfluorodecanesulfonic acid	335-77-3	N.D.	0.41	1.6	1
14434	Perfluorodecanoic acid	335-76-2	N.D.	0.41	1.6	1
14434	Perfluorododecanoic acid	307-55-1	N.D.	0.41	1.6	1
14434	Perfluoroheptanesulfonic acid	375-92-8	N.D.	0.41	1.6	1
14434	Perfluoroheptanoic acid	375-85-9	1.6 J	0.41	1.6	1
14434	Perfluorohexanesulfonic acid	355-46-4	2.2	0.41	1.6	1
14434	Perfluorohexanoic acid	307-24-4	1.7	0.41	1.6	1
14434	Perfluorononanoic acid	375-95-1	N.D.	0.41	1.6	1
14434	Perfluorooctanesulfonamide	754-91-6	N.D.	0.41	1.6	1
14434	Perfluorooctanesulfonic acid	1763-23-1	27	0.41	1.6	1
14434	Perfluorooctanoic acid	335-67-1	9.9	0.41	1.6	1
14434	Perfluoropentanesulfonic acid	2706-91-4	1.0 J	0.41	1.6	1
14434	Perfluoropentanoic acid	2706-90-3	0.97 J	0.41	1.6	1
14434	Perfluorotetradecanoic acid	376-06-7	N.D.	0.41	1.6	1
14434	Perfluorotridecanoic acid	72629-94-8	N.D.	0.41	1.6	1
14434	Perfluoroundecanoic acid	2058-94-8	N.D.	0.41	1.6	1

Sample Comments

CA ELAP Lab Certification No. 2792

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14434	25 PFAS in Waters - DOD	EPA 537 mod QSM 5.1 table B-15	1	20112018	04/23/2020 17:22	Marissa C Drexinger	1

*=This limit was used in the evaluation of the final result

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Analysis Report

3425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Sample Description: CG-05 Water
PFAS Analysis

Project Name: 2011705

Submittal Date/Time: 04/17/2020 10:25
Collection Date/Time: 04/16/2020 11:30
SDG#: BCL96-06

BC Laboratories, Inc.
ELLE Sample #: GW 1300790
ELLE Group #: 2096665
Matrix: Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14465	PFAS Water Prep - DoD	EPA 537 mod QSM 5.1 table B-15	1	20112018	04/21/2020 15:30	Isaac Phillips-Cary	1

*=This limit was used in the evaluation of the final result

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Analysis Report

3425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Sample Description: CG-06A Water
PFAS Analysis

Project Name: 2011705

Submittal Date/Time: 04/17/2020 10:25
Collection Date/Time: 04/16/2020 13:00
SDG#: BCL96-07

BC Laboratories, Inc.
ELLE Sample #: GW 1300791
ELLE Group #: 2096665
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous	EPA 537 mod QSM 5.1 table B-15		ng/l	ng/l	ng/l	
14434	9Cl-PF3ONS	756426-58-1	N.D.	0.39	1.6	1
	9Cl-PF3ONS is the acronym for Potassium 9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid					
14434	11Cl-PF3OUdS	763051-92-9	N.D.	0.39	1.6	1
	11Cl-PF3OUdS is the acronym for 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid					
14434	4:2-Fluorotelomersulfonic acid	757124-72-4	N.D.	0.39	1.6	1
14434	6:2-Fluorotelomersulfonic acid	27619-97-2	N.D.	1.6	3.9	1
14434	8:2-Fluorotelomersulfonic acid	39108-34-4	N.D.	0.78	2.3	1
14434	NEtFOSAA	2991-50-6	N.D.	0.39	2.3	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14434	NMeFOSAA	2355-31-9	N.D.	0.47	1.6	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14434	Perfluorobutanesulfonic acid	375-73-5	34	0.39	1.6	1
14434	Perfluorobutanoic acid	375-22-4	29	1.6	3.9	1
14434	Perfluorodecanesulfonic acid	335-77-3	N.D.	0.39	1.6	1
14434	Perfluorodecanoic acid	335-76-2	3.8	0.39	1.6	1
14434	Perfluorododecanoic acid	307-55-1	0.42 J	0.39	1.6	1
14434	Perfluoroheptanesulfonic acid	375-92-8	1.5 J	0.39	1.6	1
14434	Perfluoroheptanoic acid	375-85-9	33	0.39	1.6	1
14434	Perfluorohexanesulfonic acid	355-46-4	23	0.39	1.6	1
14434	Perfluorohexanoic acid	307-24-4	66	0.39	1.6	1
14434	Perfluorononanoic acid	375-95-1	4.9	0.39	1.6	1
14434	Perfluorooctanesulfonamide	754-91-6	N.D.	0.39	1.6	1
14434	Perfluorooctanesulfonic acid	1763-23-1	37	0.39	1.6	1
14434	Perfluorooctanoic acid	335-67-1	92	0.39	1.6	1
14434	Perfluoropentanesulfonic acid	2706-91-4	6.9	0.39	1.6	1
14434	Perfluoropentanoic acid	2706-90-3	56	0.39	1.6	1
14434	Perfluorotetradecanoic acid	376-06-7	N.D.	0.39	1.6	1
14434	Perfluorotridecanoic acid	72629-94-8	N.D.	0.39	1.6	1
14434	Perfluoroundecanoic acid	2058-94-8	0.43 J	0.39	1.6	1

Sample Comments

CA ELAP Lab Certification No. 2792

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14434	25 PFAS in Waters - DOD	EPA 537 mod QSM 5.1 table B-15	1	20112018	04/23/2020 17:31	Marissa C Drexinger	1

*=This limit was used in the evaluation of the final result

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Analysis Report

3425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Sample Description: CG-06A Water
PFAS Analysis

Project Name: 2011705

Submittal Date/Time: 04/17/2020 10:25
Collection Date/Time: 04/16/2020 13:00
SDG#: BCL96-07

BC Laboratories, Inc.
ELLE Sample #: GW 1300791
ELLE Group #: 2096665
Matrix: Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14465	PFAS Water Prep - DoD	EPA 537 mod QSM 5.1 table B-15	1	20112018	04/21/2020 15:30	Isaac Phillips-Cary	1

*=This limit was used in the evaluation of the final result

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Analysis Report

3425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Sample Description: CG-07 Water
PFAS Analysis

Project Name: 2011705

Submittal Date/Time: 04/17/2020 10:25
Collection Date/Time: 04/16/2020 09:30
SDG#: BCL96-08

BC Laboratories, Inc.
ELLE Sample #: GW 1300792
ELLE Group #: 2096665
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous	EPA 537 mod QSM 5.1 table B-15		ng/l	ng/l	ng/l	
14434	9Cl-PF3ONS	756426-58-1	N.D.	0.40	1.6	1
	9Cl-PF3ONS is the acronym for Potassium 9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid					
14434	11Cl-PF3OUdS	763051-92-9	N.D.	0.40	1.6	1
	11Cl-PF3OUdS is the acronym for 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid					
14434	4:2-Fluorotelomersulfonic acid	757124-72-4	N.D.	0.40	1.6	1
14434	6:2-Fluorotelomersulfonic acid	27619-97-2	N.D.	1.6	4.0	1
14434	8:2-Fluorotelomersulfonic acid	39108-34-4	N.D.	0.79	2.4	1
14434	NEtFOSAA	2991-50-6	N.D.	0.40	2.4	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14434	NMeFOSAA	2355-31-9	N.D.	0.48	1.6	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14434	Perfluorobutanesulfonic acid	375-73-5	10	0.40	1.6	1
14434	Perfluorobutanoic acid	375-22-4	24	1.6	4.0	1
14434	Perfluorodecanesulfonic acid	335-77-3	N.D.	0.40	1.6	1
14434	Perfluorodecanoic acid	335-76-2	2.8	0.40	1.6	1
14434	Perfluorododecanoic acid	307-55-1	N.D.	0.40	1.6	1
14434	Perfluoroheptanesulfonic acid	375-92-8	1.5 J	0.40	1.6	1
14434	Perfluoroheptanoic acid	375-85-9	1.5 J	0.40	1.6	1
14434	Perfluorohexanesulfonic acid	355-46-4	14	0.40	1.6	1
14434	Perfluorohexanoic acid	307-24-4	3.2	0.40	1.6	1
14434	Perfluorononanoic acid	375-95-1	4.5	0.40	1.6	1
14434	Perfluorooctanesulfonamide	754-91-6	1.0 J	0.40	1.6	1
14434	Perfluorooctanesulfonic acid	1763-23-1	64	0.40	1.6	1
14434	Perfluorooctanoic acid	335-67-1	40	0.40	1.6	1
14434	Perfluoropentanesulfonic acid	2706-91-4	4.3	0.40	1.6	1
14434	Perfluoropentanoic acid	2706-90-3	2.8	0.40	1.6	1
14434	Perfluorotetradecanoic acid	376-06-7	N.D.	0.40	1.6	1
14434	Perfluorotridecanoic acid	72629-94-8	N.D.	0.40	1.6	1
14434	Perfluoroundecanoic acid	2058-94-8	N.D.	0.40	1.6	1

The recovery for extraction standard 13C8-PFOSA is outside of the QC acceptance limits as noted on the QC Summary.

Sample Comments

CA ELAP Lab Certification No. 2792

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor

*=This limit was used in the evaluation of the final result

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Analysis Report

3425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Sample Description: CG-07 Water
PFAS Analysis

Project Name: 2011705

Submittal Date/Time: 04/17/2020 10:25
Collection Date/Time: 04/16/2020 09:30
SDG#: BCL96-08

BC Laboratories, Inc.
ELLE Sample #: GW 1300792
ELLE Group #: 2096665
Matrix: Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14434	25 PFAS in Waters - DOD	EPA 537 mod QSM 5.1 table B-15	1	20112018	04/23/2020 17:40	Marissa C Drexinger	1
14465	PFAS Water Prep - DoD	EPA 537 mod QSM 5.1 table B-15	1	20112018	04/21/2020 15:30	Isaac Phillips-Cary	1

*=This limit was used in the evaluation of the final result

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Analysis Report

3425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Sample Description: CG-08 Water
PFAS Analysis

Project Name: 2011705

Submittal Date/Time: 04/17/2020 10:25
Collection Date/Time: 04/16/2020 10:50
SDG#: BCL96-09

BC Laboratories, Inc.
ELLE Sample #: GW 1300793
ELLE Group #: 2096665
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous	EPA 537 mod QSM 5.1 table B-15		ng/l	ng/l	ng/l	
14434	9Cl-PF3ONS	756426-58-1	N.D.	0.38	1.5	1
	9Cl-PF3ONS is the acronym for Potassium 9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid					
14434	11Cl-PF3OUdS	763051-92-9	N.D.	0.38	1.5	1
	11Cl-PF3OUdS is the acronym for 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid					
14434	4:2-Fluorotelomersulfonic acid	757124-72-4	N.D.	0.38	1.5	1
14434	6:2-Fluorotelomersulfonic acid	27619-97-2	N.D.	1.5	3.8	1
14434	8:2-Fluorotelomersulfonic acid	39108-34-4	N.D.	0.77	2.3	1
14434	NEtFOSAA	2991-50-6	N.D.	0.38	2.3	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14434	NMeFOSAA	2355-31-9	N.D.	0.46	1.5	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14434	Perfluorobutanesulfonic acid	375-73-5	46	0.38	1.5	1
14434	Perfluorobutanoic acid	375-22-4	28	1.5	3.8	1
14434	Perfluorodecanesulfonic acid	335-77-3	N.D.	0.38	1.5	1
14434	Perfluorodecanoic acid	335-76-2	5.2	0.38	1.5	1
14434	Perfluorododecanoic acid	307-55-1	N.D.	0.38	1.5	1
14434	Perfluoroheptanesulfonic acid	375-92-8	3.7	0.38	1.5	1
14434	Perfluoroheptanoic acid	375-85-9	59	0.38	1.5	1
14434	Perfluorohexanesulfonic acid	355-46-4	44	0.38	1.5	1
14434	Perfluorohexanoic acid	307-24-4	73	0.38	1.5	1
14434	Perfluorononanoic acid	375-95-1	6.1	0.38	1.5	1
14434	Perfluorooctanesulfonamide	754-91-6	N.D.	0.38	1.5	1
14434	Perfluorooctanesulfonic acid	1763-23-1	140	0.38	1.5	1
14434	Perfluorooctanoic acid	335-67-1	180	3.8	15	10
14434	Perfluoropentanesulfonic acid	2706-91-4	19	0.38	1.5	1
14434	Perfluoropentanoic acid	2706-90-3	52	0.38	1.5	1
14434	Perfluorotetradecanoic acid	376-06-7	N.D.	0.38	1.5	1
14434	Perfluorotridecanoic acid	72629-94-8	N.D.	0.38	1.5	1
14434	Perfluoroundecanoic acid	2058-94-8	N.D.	0.38	1.5	1

Sample Comments

CA ELAP Lab Certification No. 2792

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14434	25 PFAS in Waters - DOD	EPA 537 mod QSM 5.1 table B-15	1	20112018	04/23/2020 17:49	Marissa C Drexinger	1

*=This limit was used in the evaluation of the final result

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Analysis Report

3425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Sample Description: CG-08 Water
PFAS Analysis

Project Name: 2011705

Submittal Date/Time: 04/17/2020 10:25
Collection Date/Time: 04/16/2020 10:50
SDG#: BCL96-09

BC Laboratories, Inc.
ELLE Sample #: GW 1300793
ELLE Group #: 2096665
Matrix: Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14434	25 PFAS in Waters - DOD	EPA 537 mod QSM 5.1 table B-15	1	20112018	04/24/2020 09:40	Mark Collare	10
14465	PFAS Water Prep - DoD	EPA 537 mod QSM 5.1 table B-15	1	20112018	04/21/2020 15:30	Isaac Phillips-Cary	1

*=This limit was used in the evaluation of the final result

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Analysis Report

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Quality Control Summary

Client Name: BC Laboratories, Inc. Group Number: 2096665
Reported: 04/28/2020 10:06

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ng/l	ng/l	ng/l
Batch number: 20112018	Sample number(s): 1300785,1300787-1300788,1300790-1300793		
9Cl-PF3ONS	N.D.	0.50	2.0
11Cl-PF3OUdS	N.D.	0.50	2.0
4:2-Fluorotelomersulfonic acid	N.D.	0.50	2.0
6:2-Fluorotelomersulfonic acid	N.D.	2.0	5.0
8:2-Fluorotelomersulfonic acid	N.D.	1.0	3.0
NEtFOSAA	N.D.	0.50	3.0
NMeFOSAA	N.D.	0.60	2.0
Perfluorobutanesulfonic acid	N.D.	0.50	2.0
Perfluorobutanoic acid	N.D.	2.0	5.0
Perfluorodecanesulfonic acid	N.D.	0.50	2.0
Perfluorodecanoic acid	N.D.	0.50	2.0
Perfluorododecanoic acid	N.D.	0.50	2.0
Perfluoroheptanesulfonic acid	N.D.	0.50	2.0
Perfluoroheptanoic acid	N.D.	0.50	2.0
Perfluorohexanesulfonic acid	N.D.	0.50	2.0
Perfluorohexanoic acid	N.D.	0.50	2.0
Perfluorononanoic acid	N.D.	0.50	2.0
Perfluorooctanesulfonamide	N.D.	0.50	2.0
Perfluorooctanesulfonic acid	N.D.	0.50	2.0
Perfluorooctanoic acid	N.D.	0.50	2.0
Perfluoropentanesulfonic acid	N.D.	0.50	2.0
Perfluoropentanoic acid	N.D.	0.50	2.0
Perfluorotetradecanoic acid	N.D.	0.50	2.0
Perfluorotridecanoic acid	N.D.	0.50	2.0
Perfluoroundecanoic acid	N.D.	0.50	2.0
Batch number: 20115010	Sample number(s): 1300786,1300789		
9Cl-PF3ONS	N.D.	0.50	2.0
11Cl-PF3OUdS	N.D.	0.50	2.0
4:2-Fluorotelomersulfonic acid	N.D.	0.50	2.0
6:2-Fluorotelomersulfonic acid	N.D.	2.0	5.0
8:2-Fluorotelomersulfonic acid	N.D.	1.0	3.0
NEtFOSAA	N.D.	0.50	3.0
NMeFOSAA	N.D.	0.60	2.0
Perfluorobutanesulfonic acid	N.D.	0.50	2.0
Perfluorobutanoic acid	N.D.	2.0	5.0
Perfluorodecanesulfonic acid	N.D.	0.50	2.0
Perfluorodecanoic acid	N.D.	0.50	2.0
Perfluorododecanoic acid	N.D.	0.50	2.0

*- Outside of specification
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Analysis Report

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Quality Control Summary

Client Name: BC Laboratories, Inc. Group Number: 2096665
Reported: 04/28/2020 10:06

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ng/l	ng/l	ng/l
Perfluoroheptanesulfonic acid	N.D.	0.50	2.0
Perfluoroheptanoic acid	N.D.	0.50	2.0
Perfluorohexanesulfonic acid	N.D.	0.50	2.0
Perfluorohexanoic acid	N.D.	0.50	2.0
Perfluorononanoic acid	N.D.	0.50	2.0
Perfluorooctanesulfonamide	N.D.	0.50	2.0
Perfluorooctanesulfonic acid	N.D.	0.50	2.0
Perfluorooctanoic acid	N.D.	0.50	2.0
Perfluoropentanesulfonic acid	N.D.	0.50	2.0
Perfluoropentanoic acid	N.D.	0.50	2.0
Perfluorotetradecanoic acid	N.D.	0.50	2.0
Perfluorotridecanoic acid	N.D.	0.50	2.0
Perfluoroundecanoic acid	N.D.	0.50	2.0

LCS/LCSD

Analysis Name	LCS Spike Added ng/l	LCS Conc ng/l	LCSD Spike Added ng/l	LCSD Conc ng/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 20112018	Sample number(s): 1300785,1300787-1300788,1300790-1300793								
9Cl-PF3ONS	23.84	22.53	23.84	23.64	94	99	70-130	5	30
11Cl-PF3OUdS	24.12	22.82	24.12	22.39	95	93	70-130	2	30
4:2-Fluorotelomersulfonic acid	23.92	22.03	23.92	23.45	92	98	64-134	6	30
6:2-Fluorotelomersulfonic acid	24.28	24.67	24.28	23.66	102	97	51-155	4	30
8:2-Fluorotelomersulfonic acid	24.52	22.86	24.52	23.55	93	96	62-133	3	30
NEtFOSAA	25.6	28.17	25.6	30.05	110	117	59-145	6	30
NMeFOSAA	25.6	31.86	25.6	29.89	124	117	53-136	6	30
Perfluorobutanesulfonic acid	22.64	21.75	22.64	22.83	96	101	81-133	5	30
Perfluorobutanoic acid	25.6	23.35	25.6	24.07	91	94	84-135	3	30
Perfluorodecanesulfonic acid	24.64	22.54	24.64	23.63	91	96	69-124	5	30
Perfluorodecanoic acid	25.6	26.63	25.6	27.95	104	109	78-137	5	30
Perfluorododecanoic acid	25.6	26.37	25.6	26.88	103	105	75-139	2	30
Perfluoroheptanesulfonic acid	24.36	23.39	24.36	23.61	96	97	80-129	1	30
Perfluoroheptanoic acid	25.6	27.79	25.6	26.94	109	105	80-140	3	30
Perfluorohexanesulfonic acid	24.2	24.87	24.2	24.7	103	102	71-131	1	30
Perfluorohexanoic acid	25.6	25.21	25.6	25.03	98	98	80-137	1	30
Perfluorononanoic acid	25.6	26.4	25.6	25.46	103	99	73-140	4	30
Perfluorooctanesulfonamide	25.6	25.36	25.6	26.58	99	104	73-121	5	30
Perfluorooctanesulfonic acid	24.48	22.79	24.48	23.86	93	97	54-139	5	30
Perfluorooctanoic acid	25.6	24.56	25.6	24.15	96	94	83-138	2	30
Perfluoropentanesulfonic acid	24	21.61	24	22.71	90	95	82-132	5	30
Perfluoropentanoic acid	25.6	25.84	25.6	25.55	101	100	75-138	1	30

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Analysis Report

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Quality Control Summary

Client Name: BC Laboratories, Inc. Group Number: 2096665
Reported: 04/28/2020 10:06

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ng/l	LCS Conc ng/l	LCSD Spike Added ng/l	LCSD Conc ng/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Perfluorotetradecanoic acid	25.6	26.03	25.6	26.99	102	105	79-134	4	30
Perfluorotridecanoic acid	25.6	27.87	25.6	28.63	109	112	67-144	3	30
Perfluoroundecanoic acid	25.6	25.1	25.6	26.24	98	103	70-134	4	30
Batch number: 20115010	Sample number(s): 1300786,1300789								
9Cl-PF3ONS	23.84	21.41	23.84	22.09	90	93	70-130	3	30
11Cl-PF3OUdS	24.12	21.5	24.12	22.05	89	91	70-130	3	30
4:2-Fluorotelomersulfonic acid	23.92	23.03	23.92	20.85	96	87	64-134	10	30
6:2-Fluorotelomersulfonic acid	24.28	21.31	24.28	23.57	88	97	51-155	10	30
8:2-Fluorotelomersulfonic acid	24.52	22.71	24.52	23.24	93	95	62-133	2	30
NEtFOSAA	25.6	24.6	25.6	25.09	96	98	59-145	2	30
NMeFOSAA	25.6	30	25.6	26.11	117	102	53-136	14	30
Perfluorobutanesulfonic acid	22.64	20.46	22.64	20.38	90	90	81-133	0	30
Perfluorobutanoic acid	25.6	22.25	25.6	22.69	87	89	84-135	2	30
Perfluorodecanesulfonic acid	24.64	20.81	24.64	22.2	84	90	69-124	6	30
Perfluorodecanoic acid	25.6	26.11	25.6	26.06	102	102	78-137	0	30
Perfluorododecanoic acid	25.6	25.38	25.6	24.83	99	97	75-139	2	30
Perfluoroheptanesulfonic acid	24.36	22.06	24.36	22.29	91	91	80-129	1	30
Perfluoroheptanoic acid	25.6	25.74	25.6	25.58	101	100	80-140	1	30
Perfluorohexanesulfonic acid	24.2	21.77	24.2	21.88	90	90	71-131	1	30
Perfluorohexanoic acid	25.6	23.01	25.6	23.45	90	92	80-137	2	30
Perfluorononanoic acid	25.6	24.63	25.6	25.04	96	98	73-140	2	30
Perfluorooctanesulfonamide	25.6	24.81	25.6	24.02	97	94	73-121	3	30
Perfluorooctanesulfonic acid	24.48	20.66	24.48	21.21	84	87	54-139	3	30
Perfluorooctanoic acid	25.6	22.91	25.6	23.5	89	92	83-138	3	30
Perfluoropentanesulfonic acid	24	19.69	24	19.75	82	82	82-132	0	30
Perfluoropentanoic acid	25.6	26.22	25.6	25.23	102	99	75-138	4	30
Perfluorotetradecanoic acid	25.6	23.91	25.6	23.63	93	92	79-134	1	30
Perfluorotridecanoic acid	25.6	26.65	25.6	26.02	104	102	67-144	2	30
Perfluoroundecanoic acid	25.6	22.45	25.6	24.09	88	94	70-134	7	30

Labeled Isotope Quality Control

Labeled isotope recoveries which are outside of the QC window are confirmed unless otherwise noted on the analysis report.

Analysis Name: 25 PFAS in Waters - DOD
Batch number: 20112018

	13C4-PFBA	13C5-PFPeA	13C3-PFBS	13C2-4:2-FTS	13C5-PFHxA	13C3-PFHxS
1300785	87	82	78	77	89	88
1300787	90	88	82	77	90	88
1300788	86	83	80	84	88	87

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Analysis Report

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Quality Control Summary

Client Name: BC Laboratories, Inc. Group Number: 2096665
Reported: 04/28/2020 10:06

Labeled Isotope Quality Control

Labeled isotope recoveries which are outside of the QC window are confirmed unless otherwise noted on the analysis report.

Analysis Name: 25 PFAS in Waters - DOD
Batch number: 20112018

	13C4-PFBA	13C5-PFPeA	13C3-PFBS	13C2-4:2-FTS	13C5-PFHxA	13C3-PFHxS
1300790	98	99	91	88	101	98
1300791	92	104	104	103	94	92
1300792	97	115	117	144	94	92
1300793	92	100	99	106	98	95
Blank	91	93	83	83	90	90
LCS	86	82	79	81	88	85
LCSD	93	91	86	83	94	90
Limits:	50-150	50-150	50-150	50-150	50-150	50-150

	13C4-PFHpA	13C2-6:2-FTS	13C8-PFOA	13C8-PFOS	13C9-PFNA	13C6-PFDA
1300785	87	80	89	86	88	86
1300787	83	84	87	88	88	84
1300788	84	77	86	85	81	84
1300790	98	93	99	94	93	88
1300791	93	88	90	92	90	91
1300792	107	104	96	96	101	87
1300793	96	89	93	94	90	86
Blank	87	87	92	91	93	87
LCS	83	80	86	86	86	83
LCSD	89	86	95	90	94	91
Limits:	50-150	50-150	50-150	50-150	50-150	50-150

	13C2-8:2-FTS	d3-NMeFOSAA	13C7-PFUnDA	d5-NEtFOSAA	13C2-PFDoDA	13C2-PFTeDA
1300785	86	82	89	83	86	81
1300787	74	91	93	95	91	86
1300788	82	87	88	87	81	86
1300790	92	91	92	95	93	90
1300791	90	90	97	99	99	96
1300792	97	83	92	94	85	88
1300793	88	85	94	94	93	85
Blank	87	83	89	88	89	84
LCS	81	79	84	86	87	83
LCSD	89	91	95	94	95	93
Limits:	50-150	50-150	50-150	50-150	50-150	50-150

	13C8-PFOSA
1300785	80
1300787	86
1300788	67

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Quality Control Summary

Client Name: BC Laboratories, Inc. Group Number: 2096665
Reported: 04/28/2020 10:06

Labeled Isotope Quality Control (continued)

Labeled isotope recoveries which are outside of the QC window are confirmed unless otherwise noted on the analysis report.

Analysis Name: 25 PFAS in Waters - DOD
Batch number: 20112018

	13C8-PFOSA
1300790	71
1300791	57
1300792	35*
1300793	66
Blank	86
LCS	81
LCSD	88
Limits:	50-150

Analysis Name: 25 PFAS in Waters - DOD
Batch number: 20115010

	13C4-PFBA	13C5-PFPeA	13C3-PFBS	13C2-4:2-FTS	13C5-PFHxA	13C3-PFHxS
1300786	100	94	92	92	99	94
1300789	106	123	132	173*	104	98
Blank	107	98	98	96	108	105
LCS	104	94	94	91	105	98
LCSD	102	95	92	99	107	100
Limits:	50-150	50-150	50-150	50-150	50-150	50-150

	13C4-PFHpA	13C2-6:2-FTS	13C8-PFOA	13C8-PFOS	13C9-PFNA	13C8-PFDA
1300786	96	96	103	98	109	94
1300789	112	109	108	110	116	97
Blank	105	99	108	111	114	101
LCS	97	92	101	100	99	100
LCSD	100	89	103	103	102	98
Limits:	50-150	50-150	50-150	50-150	50-150	50-150

	13C2-8:2-FTS	d3-NMeFOSAA	13C7-PFUnDA	d5-NEtFOSAA	13C2-PFDoDA	13C2-PFTeDA
1300786	91	107	110	117	112	104
1300789	104	99	104	113	109	103
Blank	100	113	114	117	113	113
LCS	98	114	119	129	109	113
LCSD	93	112	110	119	106	102
Limits:	50-150	50-150	50-150	50-150	50-150	50-150

	13C8-PFOSA
1300786	94
1300789	58

*- Outside of specification
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Analysis Report

Quality Control Summary

Client Name: BC Laboratories, Inc.
Reported: 04/28/2020 10:06

Group Number: 2096665

Labeled Isotope Quality Control (continued)

Labeled isotope recoveries which are outside of the QC window are confirmed unless otherwise noted on the analysis report.

Analysis Name: 25 PFAS in Waters - DOD
Batch number: 20115010

	13C8-PFOSA
Blank	107
LCS	98
LCSD	100
Limits:	50-150

*- Outside of specification
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BC LABORATORIES

4100 Atlas Court Bakersfield, Ca. 93308
(661) 327-4911 • FAX (661) 327-1918 • www.bclabs.com

Chain of Custody

* Required Fields

TEMP: 3.8°

Client/Company Name *:	Report Attention *:	Phone * #: 661.852.4272 FAX * #:
Subcontract - BC Labs	Tina Green	E-mail: tina@bclabs.com

ANALYSIS REQUESTED

Address *	City *	State *	Zip *
4100 Atlas Court	Bakersfield	CA	93308

Carbon Copies: CDHS ☐ Fresno Co ☐ EPA ☐ Merced Co ☐ Tulare Co ☐ Other:

Project Information: (Riverside-PFAS Sampling): Corona Landfill - gas condensate

PO #

BCL Quote #

How would you like your completed results sent? ☑ E-Mail ☐ Fax ☑ EDD ☐ Mail Only

Regulatory Compliance: Electronic Data Transfer: Y ☑ N ☐ System No. * L10005490322

Sampler Name Printed / Signature	QC Request	Result Request ** Surcharge
Mario Ramirez	☑ STD ☐ Level II	☑ STD ☐ 5 Day** ☐ 3 Day** ☐ Day**

Matrix Types: RSW = Raw Surface Water CFW = Chlorinated Finished Water CWW = Chlorinated Waste Water BW = Bottled Water RGW = Raw Ground Water FW = Finished Water WW = Waste Water SW = Storm Water DW = Drinking Water SO = Solid

Sample #	# Bottles	Sampled Date	Sampled Time	Sample Description / Location *	Matrix *	Comments / Station Code	25 PFAS Parameters	Refer to attached sheet for a list of PFAS parameters
		4/16/20		CG-TB	TB	Travel Blank - 1 bottle	✓	
		4/16/20		CG-EB	EB	Equipment Blank - 1 bottle	✓	
		4/16/20		CG-FB	FB	Field Blank - 1 bottle	✓	
						** Requesting Geotracker file and EDD **		
		4/16/20	10:20	CG-02	GW	2 bottles	✓	
		4/16/20	12:10	CG-04	GW	2 bottles	✓	
		4/16/20	11:30	CG-05	GW	2 bottles	✓	
		4/16/20	1:00	CG-06A	GW	2 bottles	✓	
		4/16/20	9:30	CG-07	GW	2 bottles	✓	
		4/16/20	10:50	CG-08	GW	2 bottles	✓	

Relinquished by: (Signature and Printed Name)	Company	Date	Time	Received by (Signature and Print Name)	Company
Mario Ramirez	RC-DWR	4/16/20	2:30		
Relinquished by: (Signature and Printed Name)	Company	Date	Time	Received by (Signature and Print Name)	Company

Received for Lab by: (Signature and Printed Name) Michelle Reitt Date 4/16/20 Time 1025

Payment Received at Delivery: Date: Amount: Check/Cash/Card: PIA #: Init.

Shipping Method: CAO UPS GSO WALK-IN SJVC FEDEX OTHER

Cooling Method: WET BLUE NONE

Packing Material:

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2096665

TABLE 2
PFAS ANALYTES SUBJECT TO ANALYSIS AND THEIR RESPECTIVE REPORTING LIMITS

Chemical Name	Abbreviation	Fluorinated Alkane Carbon Chain Length*	Chemical Abstracts Service (CAS) No.	Required Reporting Limits: Aqueous: Groundwater and Effluent (ng/L)	Required Reporting Limits: Solid: Soil (µg/kg)
Perfluoroalkylcarboxylic acids (PFCAs)					
Perfluorobutanoic acid	PFBA	C4	375-22-4	8.0	2.0
Perfluoropentanoic acid	PFPeA	C5	2706-90-3	5.0	1.0
Perfluorohexanoic acid	PFHxA	C6	307-24-4	5.0	1.0
Perfluoroheptanoic acid	PFHpA	C7	375-85-9	5.0	1.0
Perfluorooctanoic acid	PFOA	C8	335-67-1	5.0	1.0
Perfluorononanoic acid	PFNA	C9	375-95-1	5.0	1.0
Perfluorodecanoic acid	PFDA	C10	335-76-2	5.0	1.0
Perfluoroundecanoic acid	PFUnDA	C11	2058-94-8	5.0	1.0
Perfluorododecanoic acid	PFDoDA	C12	307-55-1	5.0	1.0
Perfluorotridecanoic acid	PFTrDA	C13	72629-94-8	5.0	1.0
Perfluorotetradecanoic acid	PFTeDA	C14	376-06-7	8.0	2.0
Perfluorohexadecanoic acid*	PFHxDA	C16	67905-19-5	8.0	2.0
Perfluorooctadecanoic acid*	PFODA	C18	16517-11-6	8.0	2.0
Perfluorinated sulfonic acids (PFSAs)					
Perfluorobutane sulfonic acid	PFBS	C4	375-73-5	5.0	1.0
Perfluoropentane sulfonic acid	PFPeS	C5	2706-91-4	5.0	2.0
Perfluorohexane sulfonic acid	PFHxS	C6	355-46-4	5.0	1.0
Perfluoroheptane sulfonic acid	PFHpS	C7	375-92-8	5.0	1.0
Perfluorooctane sulfonic acid	PFOS	C8	1763-23-1	5.0	1.0
Perfluorononane sulfonic acid*	PFNS	C9	474511-07-4	8.0	5.0
Perfluorodecane sulfonic acid	PFDS	C10	335-77-3	5.0	1.0
Perfluorooctane Sulfonamide and Derivatives (PFOSA, FOSEs, FOSAs, and FOSAAs)					
Perfluorooctanesulfonamide	PFOSA	C8	754-91-6	8.0	1.0
N-Ethyl perfluorooctane sulfonamide ethanol*	EtFOSE	C8 Precursor	1691-99-2	8.0	2.0
N-Methyl perfluorooctane sulfonamide ethanol*	MeFOSE	C8 Precursor	24448-09-7	8.0	2.0
N-Ethyl perfluorooctane sulfonamide*	EtFOSA	C8 Precursor	4151-50-2	8.0	2.0
N-Methyl perfluorooctane sulfonamide*	MeFOSA	C8 Precursor	31506-32-8	8.0	2.0
N-Methyl perfluorooctane sulfonamidoacetic acid	NMeFOSAA	C8 Precursor	2355-31-9	20.0	2.5
N-Ethyl perfluorooctane sulfonamidoacetic acid	NEtFOSAA	C8 Precursor	2991-50-6	20.0	2.0
Fluorotelomer sulfonates (FTS)					
4:2 Fluorotelomer sulfonic acid	4:2 FTS	C4* Precursor	757124-72-4	8.0	1.0
6:2 Fluorotelomer sulfonic acid	6:2 FTS	C6* Precursor	27619-97-2	20.0	2.5
8:2 Fluorotelomer sulfonic acid	8:2 FTS	C8* Precursor	39108-34-4	20.0	2.0
10:2 Fluorotelomer sulfonic acid*	10:2 FTS	C10* Precursor	120226-60-0	8.0	2.0
Fluorotelomer carboxylic acids (FTCA)					
2H,2H,3H,3H-Perfluorohexanoic acid*	3:3 FTCA	C4* Precursor	356-02-5	8.0	5.0
2H,2H,3H,3H-Perfluorooctanoic acid*	5:3 FTCA	C6* Precursor	914637-49-3	8.0	5.0
2H,2H,3H,3H-Perfluorodecanoic acid*	7:3 FTCA	C8* Precursor	812-70-4	8.0	5.0
Perfluoroalkyl ether carboxylic acids (PFECA)					
Hexafluoropropylene oxide dimer acid*	HFPO-DA	--	13252-13-6	20.0	5.0
4,8-Dioxa-3H-perfluorononanoic acid*	ADONA	--	919005-14-4	8.0	5.0
Chlorinated Polyfluoroalkyl Ether Sulfonic Acids (Cl-PFESAs)					
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	9-Cl-PF3ONS	--	756426-58-1	8.0	5.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	11-Cl-PF3OUdS	--	763051-92-9	8.0	5.0

Note: Only the 25 analytes without the asterisk [*] are required to be analyzed as part of this Order. The analytes with the asterisk [*] are included in some but not all lists provided by accredited laboratories and are encouraged to be analyzed as part of this effort.

ng/L = nanograms per liter
µg/kg = micrograms per kilogram
* = and shorter carbon chain length terminal degradation products

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Sample Administration Receipt Documentation Log

Doc Log ID: 282245

Group Number(s): 2096665

Client: BC Laboratories

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Date:	04/17/2020
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	CA		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	No
Custody Seal Intact:	Yes	Total Trip Blank Qty:	1
Samples Chilled:	Yes	Trip Blank Type:	See Below
Paperwork Enclosed:	Yes	Air Quality Samples Present:	No
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	Yes		

Trip Blank Type(s): 1-250 mL plastic bottle (Unpre)

Unpacked by Melvin Sanchez

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT131	3.8	DT	Wet	Y	Loose	N

Container Quantity Discrepancy Details

Sample ID on COC	Container Qty. Received	Container Qty. on COC	Comments
CG-EB	2	1	
CG-FB	2	1	

Sample Date/Time Discrepancy Details

Sample ID on COC	Date/Time on Label	Comments
CG-TB	4/16/2020 09:30	
CG-EB	4/16/2020 09:30	
CG-FB	4/16/2020 09:30	

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2425 New Holland Pike
Lancaster, PA 17605-2425
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F : 717-656-2681
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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	mL	milliliter(s)
C	degrees Celsius	MPN	Most Probable Number
cfu	colony forming units	N.D.	non-detect
CP Units	cobalt-chloroplatinate units	ng	nanogram(s)
F	degrees Fahrenheit	NTU	nephelometric turbidity units
g	gram(s)	pg/L	picogram/liter
IU	International Units	RL	Reporting Limit
kg	kilogram(s)	TNTC	Too Numerous To Count
L	liter(s)	µg	microgram(s)
lb.	pound(s)	µL	microliter(s)
m3	cubic meter(s)	umhos/cm	micromhos/cm
meq	milliequivalents	MCL	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is less than the LOQ
K2	Continuing Calibration Blank is above the QC limit and the sample result is less than the LOQ
K3	Initial Calibration Verification is above the QC limit and the sample result is less than the LOQ
K4	Continuing Calibration Verification is above the QC limit and the sample result is less than the LOQ
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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Riverside County Dept of Waste Resources	**Reported:** 04/28/2020 14:08
14310 Frederick Street	Project: Corona
Moreno Valley, CA 92553	Project Number: PFAS - Subcontract
	Project Manager: Panda Workman

Notes And Definitions

May 28, 2020

Date of Report: 06/24/2020

Panda Workman

Riverside County Dept of Waste Resources
14310 Frederick Street
Moreno Valley, CA 92553

Client Project:	PFAS
BCL Project:	Corona
BCL Work Order:	2016618
Invoice ID:	B383931

Enclosed are the results of analyses for samples received by the laboratory on 6/9/2020. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda
Client Service Rep

Stuart Buttram
Technical Director

Table of Contents

Chain of Custody and Cooler Receipt Form for 2016618 Page 1 of 1

BC LABORATORIES

4100 Atlas Court Bakersfield, Ca. 93308
(661) 327-4911 • FAX (661) 327-1918 • www.bclabs.com

Chain of Custody

* Required Fields

TEMP: _____

Client/Company Name *	Report Attention *	Phone * #	FAX * #
Subcontract - BC Labs	Natalie Serda	661.327.4911	
		E-mail: natalie.serda@bclabs.com	

Address *	City *	State *	Zip *
4100 Atlas Court	Bakersfield	CA	93308

Carbon Copies: CDHS ☐ Fresno Co ☐ EPA ☐ Merced Co ☐ Tulare Co ☐ Other:

Project Information: (Riverside-PFAS Sampling): Corona Landfill - gas condensate
PO #
BCL Quote #

How would you like your completed results sent? ☑ E-Mail ☐ Fax ☑ EDD ☐ Mail Only

Regulatory Compliance: Electronic Data Transfer: Y ☑ N ☐ System No. * L10005490322

Sampler Name Printed / Signature: Mario Ramirez

QC Request: ☑ STD ☐ Level II

Result Request ** Surcharge: ☑ STD ☐ 5 Day** ☐ 2 Day** ☐ 1 Day**

Matrix Types: RSW = Raw Surface Water CFW = Chlorinated Finished Water CWW = Chlorinated Waste Water BW = Bottled Water RGW = Raw Ground Water FW = Finished Water WW = Waste Water SW = Storm Water DW = Drinking Water SO = Solid

ANALYSIS REQUESTED

Sample #	# Bottles	Sampled Date	Sampled Time	Sample Description / Location *	Matrix *	Comments / Station Code	25 PFAS Parameters	Refer to attached sheet for a list of PFAS parameters
		5/28/20		CG-05	GW	groundwater - 2 bottles	✓	
		5/28/20		CG-08	GW	groundwater - 2 bottles	✓	
		5/28/20		CG-02	GW	groundwater - 2 bottles	✓	
		5/28/20		CG-TB	TB	Travel Blank - 2 bottles	✓	
		5/28/20		CG-FB	FB	Field Blank - 2 bottles		
		5/28/20		CG-EB	EB	Equipment Blank - 2 bottles		
						** Requesting Geotracker file and EDD **		

Relinquished by: (Signature and Printed Name)	Company	Date	Time	Received by: (Signature and Print Name)	Company
Mario Ramirez	RC-DWR	5/28/20		Natalie for Sublab	
Relinquished by: (Signature and Printed Name)	Company	Date	Time	Received by: (Signature and Print Name)	Company

Received for Lab by: (Signature and Printed Name)	Date	Time	Payment Received at Delivery: Date	Amount	Check/Cash/Card	PIA #	Init.

Shipping Method: CAO UPS GSO WALK-IN SJVC FED EX OTHER

Cooling Method: WET BLUE NONE

Packing Material:

Riverside County Dept of Waste Resources
14310 Frederick Street
Moreno Valley, CA 92553

Reported: 06/24/2020 16:16
Project: Corona
Project Number: PFAS
Project Manager: Panda Workman

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
2016618-01	**COC Number:**	---	**Receive Date:**	06/09/2020 00:00
	Project Number:	---	**Sampling Date:**	06/08/2020 00:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	CG-05	**Lab Matrix:**	Water
	Sampled By:	Mario Ramirez	**Sample Type:**	Water
2016618-02	**COC Number:**	---	**Receive Date:**	06/09/2020 00:00
	Project Number:	---	**Sampling Date:**	06/08/2020 00:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	CG-08	**Lab Matrix:**	Water
	Sampled By:	Mario Ramirez	**Sample Type:**	Water
2016618-03	**COC Number:**	---	**Receive Date:**	06/09/2020 00:00
	Project Number:	---	**Sampling Date:**	06/08/2020 00:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	CG-02	**Lab Matrix:**	Water
	Sampled By:	Mario Ramirez	**Sample Type:**	Water
2016618-04	**COC Number:**	---	**Receive Date:**	06/09/2020 00:00
	Project Number:	---	**Sampling Date:**	06/08/2020 00:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	CG-TB	**Lab Matrix:**	Water
	Sampled By:	Mario Ramirez	**Sample Type:**	Water
2016618-05	**COC Number:**	---	**Receive Date:**	06/09/2020 00:00
	Project Number:	---	**Sampling Date:**	06/08/2020 00:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	CG-FB	**Lab Matrix:**	Water
	Sampled By:	Mario Ramirez	**Sample Type:**	Water
2016618-06	**COC Number:**	---	**Receive Date:**	06/09/2020 00:00
	Project Number:	---	**Sampling Date:**	06/08/2020 00:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	CG-EB	**Lab Matrix:**	Water
	Sampled By:	Mario Ramirez	**Sample Type:**	Water

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BC Laboratories, Inc.
4100 Atlas Court
Bakersfield CA 93308

Report Date: June 10, 2020 15:43

Project: 2016618

Account #: 44261
Group Number: 2100988
SDG: BCM01
State of Sample Origin: CA

Electronic Copy To	BC Laboratories, Inc.	Attn: Molly Meyers
Electronic Copy To	BC Laboratories, Inc.	Attn: Natalie Serda

Respectfully Submitted,

Elizabeth M. Zanar

Elizabeth M. Zanar
Project Manager

(717) 556-7290

A previous version of this report was generated on 06/10/2020 13:07.

To view our laboratory's current scopes of accreditation please go to https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/ . Historical copies may be requested through your project manager.

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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
CG-05 Groundwater	05/28/2020 10:20	1322138
CG-08 Groundwater	05/28/2020 11:00	1322139
CG-02 Groundwater	05/28/2020 11:30	1322140
CG-TB Water	05/28/2020 10:00	1322141
CG-FB Water	05/28/2020 10:00	1322142
CG-EB Water	05/28/2020 10:00	1322143

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

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Case Narrative

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Project Name: 2016618
ELLE Group #: 2100988

General Comments:

See the Laboratory Sample Analysis Record section of the Analysis Report for the method references.

All QC met criteria unless otherwise noted in an Analysis Specific Comment below.
Refer to the QC Summary for specific values and acceptance criteria.

Project specific QC samples are not included in this data set.

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Surrogate recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in an Analysis Specific Comment below.

The samples were received at the appropriate temperature and in accordance with the chain of custody unless otherwise noted.

Analysis Specific Comments:

EPA 537 mod QSM 5.1 table B-15, LC/MS/MS Miscellaneous

Sample #s: 1322138

The recovery for labeled compound used as extraction standards is outside of QC acceptance limits as noted on the QC Summary.

Batch #: 20156002 (Sample number(s): 1322138-1322143)

The recovery(ies) for one or more surrogates were below the acceptance window for sample(s) 1322138

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Analysis Report

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Sample Description: CG-05 Groundwater
PFAS Analysis

Project Name: 2016618

Submittal Date/Time: 05/29/2020 10:25
Collection Date/Time: 05/28/2020 10:20
SDG#: BCM01-01

BC Laboratories, Inc.
ELLE Sample #: GW 1322138
ELLE Group #: 2100988
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous	EPA 537 mod QSM 5.1 table B-15		ng/l	ng/l	ng/l	
14434	9Cl-PF3ONS	756426-58-1	N.D.	0.40	1.6	1
	9Cl-PF3ONS is the acronym for Potassium 9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid					
14434	11Cl-PF3OUdS	763051-92-9	N.D.	0.40	1.6	1
	11Cl-PF3OUdS is the acronym for 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid					
14434	4:2-Fluorotelomersulfonic acid	757124-72-4	N.D.	0.40	1.6	1
14434	6:2-Fluorotelomersulfonic acid	27619-97-2	N.D.	1.6	4.0	1
14434	8:2-Fluorotelomersulfonic acid	39108-34-4	N.D.	0.80	2.4	1
14434	NEtFOSAA	2991-50-6	N.D.	0.40	2.4	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14434	NMeFOSAA	2355-31-9	N.D.	0.48	1.6	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14434	Perfluorobutanesulfonic acid	375-73-5	1.9	0.40	1.6	1
14434	Perfluorobutanoic acid	375-22-4	2.1 J	1.6	4.0	1
14434	Perfluorodecanesulfonic acid	335-77-3	N.D.	0.40	1.6	1
14434	Perfluorodecanoic acid	335-76-2	N.D.	0.40	1.6	1
14434	Perfluorododecanoic acid	307-55-1	N.D.	0.40	1.6	1
14434	Perfluoroheptanesulfonic acid	375-92-8	N.D.	0.40	1.6	1
14434	Perfluoroheptanoic acid	375-85-9	1.3 J	0.40	1.6	1
14434	Perfluorohexanesulfonic acid	355-46-4	1.9	0.40	1.6	1
14434	Perfluorohexanoic acid	307-24-4	2.3	0.40	1.6	1
14434	Perfluorononanoic acid	375-95-1	N.D.	0.40	1.6	1
14434	Perfluorooctanesulfonamide	754-91-6	N.D.	0.40	1.6	1
14434	Perfluorooctanesulfonic acid	1763-23-1	23	0.40	1.6	1
14434	Perfluorooctanoic acid	335-67-1	11	0.40	1.6	1
14434	Perfluoropentanesulfonic acid	2706-91-4	0.93 J	0.40	1.6	1
14434	Perfluoropentanoic acid	2706-90-3	1.9	0.40	1.6	1
14434	Perfluorotetradecanoic acid	376-06-7	N.D.	0.40	1.6	1
14434	Perfluorotridecanoic acid	72629-94-8	N.D.	0.40	1.6	1
14434	Perfluoroundecanoic acid	2058-94-8	N.D.	0.40	1.6	1

The recovery for labeled compound used as extraction standards is outside of QC acceptance limits as noted on the QC Summary.

Sample Comments

CA ELAP Lab Certification No. 2792

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor

*=This limit was used in the evaluation of the final result

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Analysis Report

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Sample Description: CG-05 Groundwater
PFAS Analysis

Project Name: 2016618

Submittal Date/Time: 05/29/2020 10:25
Collection Date/Time: 05/28/2020 10:20
SDG#: BCM01-01

BC Laboratories, Inc.
ELLE Sample #: GW 1322138
ELLE Group #: 2100988
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14434	25 PFAS in Waters - DOD	EPA 537 mod QSM 5.1 table B-15	1	20156002	06/05/2020 14:50	Devon M Whooley	1
14465	PFAS Water Prep - DoD	EPA 537 mod QSM 5.1 table B-15	2	20156002	06/04/2020 07:00	Pamela Rothhaupt	1

*=This limit was used in the evaluation of the final result

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Analysis Report

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REVISED

Sample Description: CG-08 Groundwater
PFAS Analysis

Project Name: 2016618

Submittal Date/Time: 05/29/2020 10:25
Collection Date/Time: 05/28/2020 11:00
SDG#: BCM01-02

BC Laboratories, Inc.
ELLE Sample #: GW 1322139
ELLE Group #: 2100988
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous	EPA 537 mod QSM 5.1 table B-15		ng/l	ng/l	ng/l	
14434	9Cl-PF3ONS	756426-58-1	N.D.	0.40	1.6	1
	9Cl-PF3ONS is the acronym for Potassium 9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid					
14434	11Cl-PF3OUdS	763051-92-9	N.D.	0.40	1.6	1
	11Cl-PF3OUdS is the acronym for 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid					
14434	4:2-Fluorotelomersulfonic acid	757124-72-4	N.D.	0.40	1.6	1
14434	6:2-Fluorotelomersulfonic acid	27619-97-2	N.D.	1.6	4.0	1
14434	8:2-Fluorotelomersulfonic acid	39108-34-4	N.D.	0.79	2.4	1
14434	NEtFOSAA	2991-50-6	N.D.	0.40	2.4	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14434	NMeFOSAA	2355-31-9	N.D.	0.48	1.6	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14434	Perfluorobutanesulfonic acid	375-73-5	50	0.40	1.6	1
14434	Perfluorobutanoic acid	375-22-4	27	1.6	4.0	1
14434	Perfluorodecanesulfonic acid	335-77-3	N.D.	0.40	1.6	1
14434	Perfluorodecanoic acid	335-76-2	6.0	0.40	1.6	1
14434	Perfluorododecanoic acid	307-55-1	N.D.	0.40	1.6	1
14434	Perfluoroheptanesulfonic acid	375-92-8	3.8	0.40	1.6	1
14434	Perfluoroheptanoic acid	375-85-9	52	0.40	1.6	1
14434	Perfluorohexanesulfonic acid	355-46-4	44	0.40	1.6	1
14434	Perfluorohexanoic acid	307-24-4	69	0.40	1.6	1
14434	Perfluorononanoic acid	375-95-1	6.2	0.40	1.6	1
14434	Perfluorooctanesulfonamide	754-91-6	N.D.	0.40	1.6	1
14434	Perfluorooctanesulfonic acid	1763-23-1	170	4.0	16	10
14434	Perfluorooctanoic acid	335-67-1	200	4.0	16	10
14434	Perfluoropentanesulfonic acid	2706-91-4	19	0.40	1.6	1
14434	Perfluoropentanoic acid	2706-90-3	45	0.40	1.6	1
14434	Perfluorotetradecanoic acid	376-06-7	N.D.	0.40	1.6	1
14434	Perfluorotridecanoic acid	72629-94-8	N.D.	0.40	1.6	1
14434	Perfluoroundecanoic acid	2058-94-8	N.D.	0.40	1.6	1

Sample Comments

CA ELAP Lab Certification No. 2792

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14434	25 PFAS in Waters - DOD	EPA 537 mod QSM 5.1 table B-15	1	20156002	06/05/2020 14:59	Devon M Whooley	1

*=This limit was used in the evaluation of the final result

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Analysis Report

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Sample Description: CG-08 Groundwater
PFAS Analysis

Project Name: 2016618

Submittal Date/Time: 05/29/2020 10:25
Collection Date/Time: 05/28/2020 11:00
SDG#: BCM01-02

BC Laboratories, Inc.
ELLE Sample #: GW 1322139
ELLE Group #: 2100988
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14434	25 PFAS in Waters - DOD	EPA 537 mod QSM 5.1 table B-15	1	20156002	06/07/2020 14:27	Devon M Whooley	10
14465	PFAS Water Prep - DoD	EPA 537 mod QSM 5.1 table B-15	2	20156002	06/04/2020 07:00	Pamela Rothhardt	1

*=This limit was used in the evaluation of the final result

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Analysis Report

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REVISED

Sample Description: CG-02 Groundwater
PFAS Analysis

Project Name: 2016618

Submittal Date/Time: 05/29/2020 10:25
Collection Date/Time: 05/28/2020 11:30
SDG#: BCM01-03

BC Laboratories, Inc.
ELLE Sample #: GW 1322140
ELLE Group #: 2100988
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous	EPA 537 mod QSM 5.1 table B-15		ng/l	ng/l	ng/l	
14434	9Cl-PF3ONS	756426-58-1	N.D.	0.40	1.6	1
	9Cl-PF3ONS is the acronym for Potassium 9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid					
14434	11Cl-PF3OUdS	763051-92-9	N.D.	0.40	1.6	1
	11Cl-PF3OUdS is the acronym for 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid					
14434	4:2-Fluorotelomersulfonic acid	757124-72-4	N.D.	0.40	1.6	1
14434	6:2-Fluorotelomersulfonic acid	27619-97-2	N.D.	1.6	4.0	1
14434	8:2-Fluorotelomersulfonic acid	39108-34-4	N.D.	0.79	2.4	1
14434	NEtFOSAA	2991-50-6	N.D.	0.40	2.4	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14434	NMeFOSAA	2355-31-9	N.D.	0.48	1.6	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14434	Perfluorobutanesulfonic acid	375-73-5	6.8	0.40	1.6	1
14434	Perfluorobutanoic acid	375-22-4	6.7	1.6	4.0	1
14434	Perfluorodecanesulfonic acid	335-77-3	N.D.	0.40	1.6	1
14434	Perfluorodecanoic acid	335-76-2	N.D.	0.40	1.6	1
14434	Perfluorododecanoic acid	307-55-1	N.D.	0.40	1.6	1
14434	Perfluoroheptanesulfonic acid	375-92-8	1.1 J	0.40	1.6	1
14434	Perfluoroheptanoic acid	375-85-9	5.9	0.40	1.6	1
14434	Perfluorohexanesulfonic acid	355-46-4	13	0.40	1.6	1
14434	Perfluorohexanoic acid	307-24-4	6.3	0.40	1.6	1
14434	Perfluorononanoic acid	375-95-1	N.D.	0.40	1.6	1
14434	Perfluorooctanesulfonamide	754-91-6	N.D.	0.40	1.6	1
14434	Perfluorooctanesulfonic acid	1763-23-1	49	0.40	1.6	1
14434	Perfluorooctanoic acid	335-67-1	27	0.40	1.6	1
14434	Perfluoropentanesulfonic acid	2706-91-4	4.3	0.40	1.6	1
14434	Perfluoropentanoic acid	2706-90-3	4.2	0.40	1.6	1
14434	Perfluorotetradecanoic acid	376-06-7	N.D.	0.40	1.6	1
14434	Perfluorotridecanoic acid	72629-94-8	N.D.	0.40	1.6	1
14434	Perfluoroundecanoic acid	2058-94-8	N.D.	0.40	1.6	1

Sample Comments

CA ELAP Lab Certification No. 2792

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14434	25 PFAS in Waters - DOD	EPA 537 mod QSM 5.1 table B-15	1	20156002	06/05/2020 15:08	Devon M Whooley	1

*=This limit was used in the evaluation of the final result

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Analysis Report

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REVISED

Sample Description: CG-02 Groundwater
PFAS Analysis

Project Name: 2016618

Submittal Date/Time: 05/29/2020 10:25
Collection Date/Time: 05/28/2020 11:30
SDG#: BCM01-03

BC Laboratories, Inc.
ELLE Sample #: GW 1322140
ELLE Group #: 2100988
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14465	PFAS Water Prep - DoD	EPA 537 mod QSM 5.1 table B-15	2	20156002	06/04/2020 07:00	Pamela Rothhaupt	1

*=This limit was used in the evaluation of the final result

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Analysis Report

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REVISED

Sample Description: CG-TB Water
PFAS Analysis

Project Name: 2016618

Submittal Date/Time: 05/29/2020 10:25
Collection Date/Time: 05/28/2020 10:00
SDG#: BCM01-04TB

BC Laboratories, Inc.
ELLE Sample #: GW 1322141
ELLE Group #: 2100988
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous	EPA 537 mod QSM 5.1 table B-15		ng/l	ng/l	ng/l	
14434	9Cl-PF3ONS	756426-58-1	N.D.	0.45	1.8	1
	9Cl-PF3ONS is the acronym for Potassium 9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid					
14434	11Cl-PF3OUdS	763051-92-9	N.D.	0.45	1.8	1
	11Cl-PF3OUdS is the acronym for 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid					
14434	4:2-Fluorotelomersulfonic acid	757124-72-4	N.D.	0.45	1.8	1
14434	6:2-Fluorotelomersulfonic acid	27619-97-2	N.D.	1.8	4.5	1
14434	8:2-Fluorotelomersulfonic acid	39108-34-4	N.D.	0.90	2.7	1
14434	NEtFOSAA	2991-50-6	N.D.	0.45	2.7	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14434	NMeFOSAA	2355-31-9	N.D.	0.54	1.8	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14434	Perfluorobutanesulfonic acid	375-73-5	N.D.	0.45	1.8	1
14434	Perfluorobutanoic acid	375-22-4	N.D.	1.8	4.5	1
14434	Perfluorodecanesulfonic acid	335-77-3	N.D.	0.45	1.8	1
14434	Perfluorodecanoic acid	335-76-2	N.D.	0.45	1.8	1
14434	Perfluorododecanoic acid	307-55-1	N.D.	0.45	1.8	1
14434	Perfluoroheptanesulfonic acid	375-92-8	N.D.	0.45	1.8	1
14434	Perfluoroheptanoic acid	375-85-9	N.D.	0.45	1.8	1
14434	Perfluorohexanesulfonic acid	355-46-4	N.D.	0.45	1.8	1
14434	Perfluorohexanoic acid	307-24-4	N.D.	0.45	1.8	1
14434	Perfluorononanoic acid	375-95-1	N.D.	0.45	1.8	1
14434	Perfluorooctanesulfonamide	754-91-6	N.D.	0.45	1.8	1
14434	Perfluorooctanesulfonic acid	1763-23-1	N.D.	0.45	1.8	1
14434	Perfluorooctanoic acid	335-67-1	N.D.	0.45	1.8	1
14434	Perfluoropentanesulfonic acid	2706-91-4	N.D.	0.45	1.8	1
14434	Perfluoropentanoic acid	2706-90-3	N.D.	0.45	1.8	1
14434	Perfluorotetradecanoic acid	376-06-7	N.D.	0.45	1.8	1
14434	Perfluorotridecanoic acid	72629-94-8	N.D.	0.45	1.8	1
14434	Perfluoroundecanoic acid	2058-94-8	N.D.	0.45	1.8	1

Sample Comments

CA ELAP Lab Certification No. 2792

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14434	25 PFAS in Waters - DOD	EPA 537 mod QSM 5.1 table B-15	1	20156002	06/05/2020 15:17	Devon M Whooley	1

*=This limit was used in the evaluation of the final result

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Analysis Report

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REVISED

Sample Description: CG-TB Water
PFAS Analysis

Project Name: 2016618

Submittal Date/Time: 05/29/2020 10:25
Collection Date/Time: 05/28/2020 10:00
SDG#: BCM01-04TB

BC Laboratories, Inc.
ELLE Sample #: GW 1322141
ELLE Group #: 2100988
Matrix: Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14465	PFAS Water Prep - DoD	EPA 537 mod QSM 5.1 table B-15	2	20156002	06/04/2020 07:00	Pamela Rothhaupt	1

*=This limit was used in the evaluation of the final result

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Analysis Report

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REVISED

Sample Description: CG-FB Water
PFAS Analysis

Project Name: 2016618

Submittal Date/Time: 05/29/2020 10:25
Collection Date/Time: 05/28/2020 10:00
SDG#: BCM01-05FB

BC Laboratories, Inc.
ELLE Sample #: GW 1322142
ELLE Group #: 2100988
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous	EPA 537 mod QSM 5.1 table B-15		ng/l	ng/l	ng/l	
14434	9Cl-PF3ONS	756426-58-1	N.D.	0.40	1.6	1
	9Cl-PF3ONS is the acronym for Potassium 9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid					
14434	11Cl-PF3OUdS	763051-92-9	N.D.	0.40	1.6	1
	11Cl-PF3OUdS is the acronym for 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid					
14434	4:2-Fluorotelomersulfonic acid	757124-72-4	N.D.	0.40	1.6	1
14434	6:2-Fluorotelomersulfonic acid	27619-97-2	N.D.	1.6	4.0	1
14434	8:2-Fluorotelomersulfonic acid	39108-34-4	N.D.	0.80	2.4	1
14434	NEtFOSAA	2991-50-6	N.D.	0.40	2.4	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14434	NMeFOSAA	2355-31-9	N.D.	0.48	1.6	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14434	Perfluorobutanesulfonic acid	375-73-5	N.D.	0.40	1.6	1
14434	Perfluorobutanoic acid	375-22-4	N.D.	1.6	4.0	1
14434	Perfluorodecanesulfonic acid	335-77-3	N.D.	0.40	1.6	1
14434	Perfluorodecanoic acid	335-76-2	N.D.	0.40	1.6	1
14434	Perfluorododecanoic acid	307-55-1	N.D.	0.40	1.6	1
14434	Perfluoroheptanesulfonic acid	375-92-8	N.D.	0.40	1.6	1
14434	Perfluoroheptanoic acid	375-85-9	N.D.	0.40	1.6	1
14434	Perfluorohexanesulfonic acid	355-46-4	N.D.	0.40	1.6	1
14434	Perfluorohexanoic acid	307-24-4	N.D.	0.40	1.6	1
14434	Perfluorononanoic acid	375-95-1	N.D.	0.40	1.6	1
14434	Perfluorooctanesulfonamide	754-91-6	N.D.	0.40	1.6	1
14434	Perfluorooctanesulfonic acid	1763-23-1	N.D.	0.40	1.6	1
14434	Perfluorooctanoic acid	335-67-1	N.D.	0.40	1.6	1
14434	Perfluoropentanesulfonic acid	2706-91-4	N.D.	0.40	1.6	1
14434	Perfluoropentanoic acid	2706-90-3	N.D.	0.40	1.6	1
14434	Perfluorotetradecanoic acid	376-06-7	N.D.	0.40	1.6	1
14434	Perfluorotridecanoic acid	72629-94-8	N.D.	0.40	1.6	1
14434	Perfluoroundecanoic acid	2058-94-8	N.D.	0.40	1.6	1

Sample Comments

CA ELAP Lab Certification No. 2792

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14434	25 PFAS in Waters - DOD	EPA 537 mod QSM 5.1 table B-15	1	20156002	06/05/2020 15:26	Devon M Whooley	1

*=This limit was used in the evaluation of the final result

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Analysis Report

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REVISED

Sample Description: CG-FB Water
PFAS Analysis

Project Name: 2016618

Submittal Date/Time: 05/29/2020 10:25
Collection Date/Time: 05/28/2020 10:00
SDG#: BCM01-05FB

BC Laboratories, Inc.
ELLE Sample #: GW 1322142
ELLE Group #: 2100988
Matrix: Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14465	PFAS Water Prep - DoD	EPA 537 mod QSM 5.1 table B-15	2	20156002	06/04/2020 07:00	Pamela Rothhaupt	1

*=This limit was used in the evaluation of the final result

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Analysis Report

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REVISED

Sample Description: CG-EB Water
PFAS Analysis

Project Name: 2016618

Submittal Date/Time: 05/29/2020 10:25
Collection Date/Time: 05/28/2020 10:00
SDG#: BCM01-06EB

BC Laboratories, Inc.
ELLE Sample #: GW 1322143
ELLE Group #: 2100988
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous	EPA 537 mod QSM 5.1 table B-15		ng/l	ng/l	ng/l	
14434	9Cl-PF3ONS	756426-58-1	N.D.	0.45	1.8	1
	9Cl-PF3ONS is the acronym for Potassium 9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid					
14434	11Cl-PF3OUdS	763051-92-9	N.D.	0.45	1.8	1
	11Cl-PF3OUdS is the acronym for 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid					
14434	4:2-Fluorotelomersulfonic acid	757124-72-4	N.D.	0.45	1.8	1
14434	6:2-Fluorotelomersulfonic acid	27619-97-2	N.D.	1.8	4.5	1
14434	8:2-Fluorotelomersulfonic acid	39108-34-4	N.D.	0.91	2.7	1
14434	NEtFOSAA	2991-50-6	N.D.	0.45	2.7	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14434	NMeFOSAA	2355-31-9	N.D.	0.54	1.8	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14434	Perfluorobutanesulfonic acid	375-73-5	N.D.	0.45	1.8	1
14434	Perfluorobutanoic acid	375-22-4	N.D.	1.8	4.5	1
14434	Perfluorodecanesulfonic acid	335-77-3	N.D.	0.45	1.8	1
14434	Perfluorodecanoic acid	335-76-2	N.D.	0.45	1.8	1
14434	Perfluorododecanoic acid	307-55-1	N.D.	0.45	1.8	1
14434	Perfluoroheptanesulfonic acid	375-92-8	N.D.	0.45	1.8	1
14434	Perfluoroheptanoic acid	375-85-9	N.D.	0.45	1.8	1
14434	Perfluorohexanesulfonic acid	355-46-4	N.D.	0.45	1.8	1
14434	Perfluorohexanoic acid	307-24-4	N.D.	0.45	1.8	1
14434	Perfluorononanoic acid	375-95-1	N.D.	0.45	1.8	1
14434	Perfluorooctanesulfonamide	754-91-6	N.D.	0.45	1.8	1
14434	Perfluorooctanesulfonic acid	1763-23-1	N.D.	0.45	1.8	1
14434	Perfluorooctanoic acid	335-67-1	N.D.	0.45	1.8	1
14434	Perfluoropentanesulfonic acid	2706-91-4	N.D.	0.45	1.8	1
14434	Perfluoropentanoic acid	2706-90-3	N.D.	0.45	1.8	1
14434	Perfluorotetradecanoic acid	376-06-7	N.D.	0.45	1.8	1
14434	Perfluorotridecanoic acid	72629-94-8	N.D.	0.45	1.8	1
14434	Perfluoroundecanoic acid	2058-94-8	N.D.	0.45	1.8	1

Sample Comments

CA ELAP Lab Certification No. 2792

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14434	25 PFAS in Waters - DOD	EPA 537 mod QSM 5.1 table B-15	1	20156002	06/05/2020 15:36	Devon M Whooley	1

*=This limit was used in the evaluation of the final result

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Analysis Report

3425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

REVISED

Sample Description: CG-EB Water
PFAS Analysis

Project Name: 2016618

Submittal Date/Time: 05/29/2020 10:25
Collection Date/Time: 05/28/2020 10:00
SDG#: BCM01-06EB

BC Laboratories, Inc.
ELLE Sample #: GW 1322143
ELLE Group #: 2100988
Matrix: Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14465	PFAS Water Prep - DoD	EPA 537 mod QSM 5.1 table B-15	2	20156002	06/04/2020 07:00	Pamela Rothhaupt	1

*=This limit was used in the evaluation of the final result

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Analysis Report

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REVISED

Quality Control Summary

Client Name: BC Laboratories, Inc. Group Number: 2100988
Reported: 06/10/2020 15:43

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ng/l	ng/l	ng/l
Batch number: 20156002	Sample number(s): 1322138-1322143		
9Cl-PF3ONS	N.D.	0.50	2.0
11Cl-PF3OUdS	N.D.	0.50	2.0
4:2-Fluorotelomersulfonic acid	N.D.	0.50	2.0
6:2-Fluorotelomersulfonic acid	N.D.	2.0	5.0
8:2-Fluorotelomersulfonic acid	N.D.	1.0	3.0
NEtFOSAA	N.D.	0.50	3.0
NMeFOSAA	N.D.	0.60	2.0
Perfluorobutanesulfonic acid	N.D.	0.50	2.0
Perfluorobutanoic acid	N.D.	2.0	5.0
Perfluorodecanesulfonic acid	N.D.	0.50	2.0
Perfluorodecanoic acid	N.D.	0.50	2.0
Perfluorododecanoic acid	N.D.	0.50	2.0
Perfluoroheptanesulfonic acid	N.D.	0.50	2.0
Perfluoroheptanoic acid	N.D.	0.50	2.0
Perfluorohexanesulfonic acid	N.D.	0.50	2.0
Perfluorohexanoic acid	N.D.	0.50	2.0
Perfluorononanoic acid	N.D.	0.50	2.0
Perfluorooctanesulfonamide	N.D.	0.50	2.0
Perfluorooctanesulfonic acid	N.D.	0.50	2.0
Perfluorooctanoic acid	N.D.	0.50	2.0
Perfluoropentanesulfonic acid	N.D.	0.50	2.0
Perfluoropentanoic acid	N.D.	0.50	2.0
Perfluorotetradecanoic acid	N.D.	0.50	2.0
Perfluorotridecanoic acid	N.D.	0.50	2.0
Perfluoroundecanoic acid	N.D.	0.50	2.0

LCS/LCSD

Analysis Name	LCS Spike Added ng/l	LCS Conc ng/l	LCSD Spike Added ng/l	LCSD Conc ng/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 20156002	Sample number(s): 1322138-1322143								
9Cl-PF3ONS	23.84	23.18	23.84	22.5	97	94	70-130	3	30
11Cl-PF3OUdS	24.12	22.9	24.12	22.19	95	92	70-130	3	30
4:2-Fluorotelomersulfonic acid	23.92	22.02	23.92	21.29	92	89	64-134	3	30
6:2-Fluorotelomersulfonic acid	24.28	21.82	24.28	25.54	90	105	51-155	16	30

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

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Analysis Report

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REVISED

Quality Control Summary

Client Name: BC Laboratories, Inc. Group Number: 2100988
Reported: 06/10/2020 15:43

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ng/l	LCS Conc ng/l	LCSD Spike Added ng/l	LCSD Conc ng/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
8:2-Fluorotelomersulfonic acid	24.52	23.62	24.52	26.14	96	107	62-133	10	30
NEtFOSAA	25.6	26.92	25.6	28.67	105	112	59-145	6	30
NMeFOSAA	25.6	27.25	25.6	28.17	106	110	53-136	3	30
Perfluorobutanesulfonic acid	22.64	20.84	22.64	21.24	92	94	81-133	2	30
Perfluorobutanoic acid	25.6	22.44	25.6	22.16	88	87	84-135	1	30
Perfluorodecanesulfonic acid	24.64	22.45	24.64	21.81	91	88	69-124	3	30
Perfluorodecanoic acid	25.6	25.33	25.6	27.87	99	109	78-137	10	30
Perfluorododecanoic acid	25.6	24.34	25.6	23.87	95	93	75-139	2	30
Perfluoroheptanesulfonic acid	24.36	22.43	24.36	22.81	92	94	80-129	2	30
Perfluoroheptanoic acid	25.6	25.98	25.6	26.9	101	105	80-140	3	30
Perfluorohexanesulfonic acid	24.2	24.44	24.2	24.75	101	102	71-131	1	30
Perfluorohexanoic acid	25.6	23.64	25.6	24.47	92	96	80-137	3	30
Perfluorononanoic acid	25.6	25.77	25.6	24.84	101	97	73-140	4	30
Perfluorooctanesulfonamide	25.6	27.2	25.6	26.72	106	104	73-121	2	30
Perfluorooctanesulfonic acid	24.48	21.45	24.48	20.88	88	85	54-139	3	30
Perfluorooctanoic acid	25.6	22.94	25.6	24.43	90	95	83-138	6	30
Perfluoropentanesulfonic acid	24	20.71	24	21.8	86	91	82-132	5	30
Perfluoropentanoic acid	25.6	21.89	25.6	23.09	86	90	75-138	5	30
Perfluorotetradecanoic acid	25.6	24.69	25.6	29.51	96	115	79-134	18	30
Perfluorotridecanoic acid	25.6	27.22	25.6	26.28	106	103	67-144	4	30
Perfluoroundecanoic acid	25.6	26.37	25.6	27.12	103	106	70-134	3	30

Labeled Isotope Quality Control

Labeled isotope recoveries which are outside of the QC window are confirmed unless otherwise noted on the analysis report.

Analysis Name: 25 PFAS in Waters - DOD
Batch number: 20156002

	13C4-PFBA	13C5-PFPeA	13C3-PFBS	13C2-4:2-FTS	13C5-PFHxA	13C3-PFHxS
1322138	88	89	85	109	89	86
1322139	82	96	87	101	86	82
1322140	78	82	77	89	83	81
1322141	94	96	87	106	96	97
1322142	82	84	77	92	88	88
1322143	74	74	72	88	74	77
Blank	86	87	78	95	89	86
LCS	85	85	80	96	90	83
LCSD	81	79	77	90	82	80
Limits:	50-150	50-150	50-150	50-150	50-150	50-150

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

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Analysis Report

REVISED

Quality Control Summary

Client Name: BC Laboratories, Inc. Group Number: 2100988
Reported: 06/10/2020 15:43

Labeled Isotope Quality Control (continued)

Labeled isotope recoveries which are outside of the QC window are confirmed unless otherwise noted on the analysis report.

Analysis Name: 25 PFAS in Waters - DOD
Batch number: 20156002

	13C4-PFHpA	13C2-6:2-FTS	13C8-PFOA	13C8-PFOS	13C9-PFNA	13C8-PFDA
1322138	105	91	91	86	86	83
1322139	82	77	78	87	81	80
1322140	79	83	81	82	77	79
1322141	95	94	96	98	90	95
1322142	87	86	84	83	80	82
1322143	71	78	76	76	72	72
Blank	84	86	88	87	87	86
LCS	86	86	87	87	83	86
LCSD	82	77	85	85	80	79
Limits:	50-150	50-150	50-150	50-150	50-150	50-150

	13C2-8:2-FTS	d3-NMeFOSAA	13C7-PFUnDA	d5-NEtFOSAA	13C2-PFDoDA	13C2-PFTeDA
1322138	84	85	92	101	90	73
1322139	82	90	85	94	82	72
1322140	77	83	80	92	77	80
1322141	100	103	95	107	93	95
1322142	86	90	82	89	81	71
1322143	77	93	79	134	50	66
Blank	77	91	94	101	91	89
LCS	87	95	90	97	89	89
LCSD	74	85	84	90	86	75
Limits:	50-150	50-150	50-150	50-150	50-150	50-150

	13C8-PFOSA
1322138	30*
1322139	55
1322140	63
1322141	80
1322142	68
1322143	61
Blank	81
LCS	78
LCSD	70
Limits:	50-150

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

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412611 / 2100988 / 1522138-45

BC LABORATORIES

4100 Atlas Court Bakersfield, Ca. 93308
(661) 327-4911 • FAX (661) 327-1918 • www.bclabs.com

Chain of Custody

* Required Fields

TEMP: _____

Client/Company Name *:	Report Attention *:	Phone * #: 361.327.4911 FAX * #:
Subcontract - BC Labs	Natalie Serda	E-mail: natalie.serda@bclabs.com

Address *	City *	State *	Zip *
4100 Atlas Court	Bakersfield	CA	93308

Carbon Copies: CDHS ☐ Fresno Co ☐ EPA ☐ Merced Co ☐ Tulare Co ☐ Other:

Project Information: (Riverside-PFAS Sampling): Corona Landfill - gas condensate

PO #

BCL Quote #

How would you like your completed results sent? ☑ E-Mail ☐ Fax ☑ EDD ☐ Mail Only

Regulatory Compliance Electronic Data Transfer: Y ☑ N ☐ System No. * L10005490322

Sampler Name Printed / Signature	QC Request	Result Request ** Surcharge
Mario Ramirez	☑ STD ☐ Level II	☑ STD ☐ 3 Day** ☐ 2 Day** ☐ 1 Day**

Matrix Types: RSW = Raw Surface Water CFW = Chlorinated Finished Water CWW = Chlorinated Waste Water BW = Bottled Water RGW = Raw Ground Water FW = Finished Water WW = Waste Water SW = Storm Water DW = Drinking Water SO = Solid

ANALYSIS REQUESTED

25 PFAS Parameters
Refer to attached sheet for a list of PFAS parameters

Sample #	# Bottles	Sampled Date	Sampled Time	Sample Description / Location *	Matrix *	Comments / Station Code	25 PFAS Parameters
		5/28/20	10:20	CG-05	GW	groundwater - 2 bottles	✓
		5/28/20	11:00	CG-06	GW	groundwater - 2 bottles	✓
		5/28/20	11:30	CG-02	GW	groundwater - 2 bottles	✓
		5/28/20	10:00	CG-TB	TB	Travel Blank - 2 bottles	✓
		5/28/20	10:00	CG-FB	FB	Field Blank - 2 bottles	
		5/28/20	10:00	CG-EB	EB	Equipment Blank - 2 bottles	
						** Requesting Geotracker file and EDD **	

Relinquished by: (Signature and Printed Name)	Company	Date	Time	Received by: (Signature and Print Name)	Company
Mario Ramirez	RC-DWR	5/28/20	2:30		
Relinquished by: (Signature and Printed Name)	Company	Date	Time	Received by: (Signature and Print Name)	Company
				Nicole Reiff	ELITE Staples 1025
Received for Lab by: (Signature and Printed Name)		Date	Time	Payment Received at Delivery: Date: Amount: Check/Cash/Card PO # Init.	

Shipping Method: CAO UPS GSO WALK-IN SJVC FED EX OTHER

Cooling Method: WET BLUE NONE

Packing Material:

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TABLE 2
PFAS ANALYTES SUBJECT TO ANALYSIS AND THEIR RESPECTIVE REPORTING LIMITS

Chemical Name	Abbreviation	Fluorinated Alkane Carbon Chain Length*	Chemical Abstracts Service (CAS) No.	Required Reporting Limits: Aqueous: Groundwater and Effluent (ng/L)	Required Reporting Limits: Solid: Soil (µg/kg)
Perfluoroalkylcarboxylic acids (PFCAs)					
Perfluorobutanoic acid	PFBA	C4	375-22-4	8.0	2.0
Perfluoropentanoic acid	PFPeA	C5	2706-90-3	5.0	1.0
Perfluorohexanoic acid	PFHxA	C6	307-24-4	5.0	1.0
Perfluoroheptanoic acid	PFHpA	C7	375-85-9	5.0	1.0
Perfluorooctanoic acid	PFOA	C8	335-67-1	5.0	1.0
Perfluorononanoic acid	PFNA	C9	375-95-1	5.0	1.0
Perfluorodecanoic acid	PFDA	C10	335-76-2	5.0	1.0
Perfluoroundecanoic acid	PFUnDA	C11	2058-94-8	5.0	1.0
Perfluorododecanoic acid	PFDoDA	C12	307-55-1	5.0	1.0
Perfluorotridecanoic acid	PFTrDA	C13	72629-94-8	5.0	1.0
Perfluorotetradecanoic acid	PFTeDA	C14	376-06-7	8.0	2.0
Perfluorohexadecanoic acid*	PFHxDA	C16	67905-19-5	8.0	2.0
Perfluorooctadecanoic acid*	PFODA	C18	16517-11-6	8.0	2.0
Perfluorinated sulfonic acids (PFSAs)					
Perfluorobutane sulfonic acid	PFBS	C4	375-73-5	5.0	1.0
Perfluoropentane sulfonic acid	PFPeS	C5	2706-91-4	5.0	2.0
Perfluorohexane sulfonic acid	PFHxS	C6	355-46-4	5.0	1.0
Perfluoroheptane sulfonic acid	PFHpS	C7	375-92-8	5.0	1.0
Perfluorooctane sulfonic acid	PFOS	C8	1763-23-1	5.0	1.0
Perfluorononane sulfonic acid*	PFNS	C9	474511-07-4	8.0	5.0
Perfluorodecane sulfonic acid	PFDS	C10	335-77-3	5.0	1.0
Perfluorooctane Sulfonamide and Derivatives (PFOSA, FOSEs, FOSAs, and FOSAAs)					
Perfluorooctanesulfonamide	PFOSA	C8	754-91-6	8.0	1.0
N-Ethyl perfluorooctane sulfonamide ethanol*	EtFOSE	C8 Precursor	1691-99-2	8.0	2.0
N-Methyl perfluorooctane sulfonamide ethanol*	MeFOSE	C8 Precursor	24448-09-7	8.0	2.0
N-Ethyl perfluorooctane sulfonamide*	EtFOSA	C8 Precursor	4151-50-2	8.0	2.0
N-Methyl perfluorooctane sulfonamide*	MeFOSA	C8 Precursor	31506-32-8	8.0	2.0
N-Methyl perfluorooctane sulfonamidoacetic acid	NMeFOSAA	C8 Precursor	2355-31-9	20.0	2.5
N-Ethyl perfluorooctane sulfonamidoacetic acid	NEtFOSAA	C8 Precursor	2991-50-6	20.0	2.0
Fluorotelomer sulfonates (FTS)					
4:2 Fluorotelomer sulfonic acid	4:2 FTS	C4* Precursor	757124-72-4	8.0	1.0
6:2 Fluorotelomer sulfonic acid	6:2 FTS	C6* Precursor	27619-97-2	20.0	2.5
8:2 Fluorotelomer sulfonic acid	8:2 FTS	C8* Precursor	39108-34-4	20.0	2.0
10:2 Fluorotelomer sulfonic acid*	10:2 FTS	C10* Precursor	120226-60-0	8.0	2.0
Fluorotelomer carboxylic acids (FTCA)					
2H,2H,3H,3H-Perfluorohexanoic acid*	3:3 FTCA	C4* Precursor	356-02-5	8.0	5.0
2H,2H,3H,3H-Perfluorooctanoic acid*	5:3 FTCA	C6* Precursor	914637-49-3	8.0	5.0
2H,2H,3H,3H-Perfluorodecanoic acid*	7:3 FTCA	C8* Precursor	812-70-4	8.0	5.0
Perfluoroalkyl ether carboxylic acids (PFECA)					
Hexafluoropropylene oxide dimer acid*	HFPO-DA	--	13252-13-6	20.0	5.0
4,8-Dioxa-3H-perfluorononanoic acid*	ADONA	--	919005-14-4	8.0	5.0
Chlorinated Polyfluoroalkyl Ether Sulfonic Acids (Cl-PFESAs)					
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	9-Cl-PF3ONS	--	756426-58-1	8.0	5.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	11-Cl-PF3OUdS	--	763051-92-9	8.0	5.0

Note: Only the 25 analytes without the asterisk (*) are required to be analyzed as part of this Order. The analytes with the asterisk (*) are included in some but not all lists provided by accredited laboratories and are encouraged to be analyzed as part of this effort.

ng/L = nanograms per liter
µg/kg = micrograms per kilogram
* = and shorter carbon chain length terminal degradation products

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Sample Administration Receipt Documentation Log

Doc Log ID: 285709

Group Number(s): 2100988

Client: BC Labs.

(Riverside-PFAS Sampling)

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Date:	05/29/2020
Number of Packages:	1	Number of Projects:	1

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	Total Trip Blank Qty:	2
Samples Chilled:	Yes	Trip Blank Type:	See Below
Paperwork Enclosed:	Yes	Air Quality Samples Present:	No
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	Yes		
Discrepancy in Container Qty on COC:	No		

Trip Blank Type(s): Unpreserved

Unpacked by Nicole Reiff

Samples Chilled Details: (Riverside-PFAS Sampling)

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT146	1.4	DT	Wet	Y	Bagged	N

Extra Sample Details: (Riverside-PFAS Sampling)

Sample ID on Label	Number of Extra Containers	Date on Label	Comments
PFAS Batch QC	2	-- --	

2425 New Holland Pike
Lancaster, PA 17605-2425

T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	mL	milliliter(s)
C	degrees Celsius	MPN	Most Probable Number
cfu	colony forming units	N.D.	non-detect
CP Units	cobalt-chloroplatinate units	ng	nanogram(s)
F	degrees Fahrenheit	NTU	nephelometric turbidity units
g	gram(s)	pg/L	picogram/liter
IU	International Units	RL	Reporting Limit
kg	kilogram(s)	TNTC	Too Numerous To Count
L	liter(s)	µg	microgram(s)
lb.	pound(s)	µL	microliter(s)
m3	cubic meter(s)	umhos/cm	micromhos/cm
meq	milliequivalents	MCL	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is less than the LOQ
K2	Continuing Calibration Blank is above the QC limit and the sample result is less than the LOQ
K3	Initial Calibration Verification is above the QC limit and the sample result is less than the LOQ
K4	Continuing Calibration Verification is above the QC limit and the sample result is less than the LOQ
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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Riverside County Dept of Waste Resources	**Reported:** 06/24/2020 16:16
14310 Frederick Street	Project: Corona
Moreno Valley, CA 92553	Project Number: PFAS
	Project Manager: Panda Workman

Notes And Definitions

Appendix C – Gas Condensate Laboratory Reports

April 15, 2020

Date of Report: 04/29/2020

Panda Workman

Riverside County Dept of Waste Resources
14310 Frederick Street
Moreno Valley, CA 92553

Client Project:	PFAS Sampling - Subcontract
BCL Project:	Corona
BCL Work Order:	2011704
Invoice ID:	B378593

Enclosed are the results of analyses for samples received by the laboratory on 4/16/2020. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda
Client Service Rep

Stuart Buttram
Technical Director

Table of Contents

Riverside County Dept of Waste Resources
14310 Frederick Street
Moreno Valley, CA 92553

Reported: 04/29/2020 12:05
Project: Corona
Project Number: PFAS Sampling - Subcontract
Project Manager: Panda Workman

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
2011704-01	**COC Number:**	---	**Receive Date:**	04/16/2020 10:00
	Project Number:	---	**Sampling Date:**	04/15/2020 12:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	CGGC	**Lab Matrix:**	Water
	Sampled By:	Mario Ramirez	**Sample Type:**	Water
2011704-02	**COC Number:**	---	**Receive Date:**	04/16/2020 10:00
	Project Number:	---	**Sampling Date:**	04/15/2020 12:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	CG-TB	**Lab Matrix:**	Water
	Sampled By:	Mario Ramirez	**Sample Type:**	Water
2011704-03	**COC Number:**	---	**Receive Date:**	04/16/2020 10:00
	Project Number:	---	**Sampling Date:**	04/15/2020 12:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	CG-EB	**Lab Matrix:**	Water
	Sampled By:	Mario Ramirez	**Sample Type:**	Water
2011704-04	**COC Number:**	---	**Receive Date:**	04/16/2020 10:00
	Project Number:	---	**Sampling Date:**	04/15/2020 12:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	CG-FB	**Lab Matrix:**	Water
	Sampled By:	Mario Ramirez	**Sample Type:**	Water

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BC Laboratories, Inc.
4100 Atlas Court
Bakersfield CA 93308

Report Date: April 28, 2020 00:02

Project: 2011704

Account #: 44261
Group Number: 2096463
SDG: BCL95
State of Sample Origin: CA

Electronic Copy To	BC Laboratories, Inc.	Attn: Molly Meyers
Electronic Copy To	BC Laboratories, Inc.	Attn: Tina Green

Respectfully Submitted,

Elizabeth M. Zanar

Elizabeth M. Zanar
Project Manager

(717) 556-7290

To view our laboratory's current scopes of accreditation please go to https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/ . Historical copies may be requested through your project manager.

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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
CGGC Gas Condensate	04/15/2020 12:00	1299668
CG-TB Water	04/15/2020 12:00	1299669
CG-EB Water	04/15/2020 12:00	1299670
CG-FB Water	04/15/2020 12:00	1299671

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

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Case Narrative

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Project Name: 2011704
ELLE Group #: 2096463

General Comments:

See the Laboratory Sample Analysis Record section of the Analysis Report for the method references.

All QC met criteria unless otherwise noted in an Analysis Specific Comment below.
Refer to the QC Summary for specific values and acceptance criteria.

Project specific QC samples are not included in this data set.

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Surrogate recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in an Analysis Specific Comment below.

The samples were received at the appropriate temperature and in accordance with the chain of custody unless otherwise noted.

Analysis Specific Comments:

EPA 537 mod QSM 5.1 table B-15, LC/MS/MS Miscellaneous

Sample #s: 1299669, 1299670, 1299671

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The following action was taken: The sample is reported here, as sufficient sample was not remaining to perform a reanalysis.

Sample #s: 1299668

The recovery for the labeled compound used as extraction standards is outside the QC acceptance limits as noted on the QC Summary. The following action was taken: The sample was reextracted within holding time. The data reported is from the initial trial of the sample and both sets of data are included in the data package.

Batch #: 20111001 (Sample number(s): 1299669-1299671)

The recovery(ies) for the following analyte(s) in the LCS and/or LCSD were below the acceptance window: Perfluorobutanoic acid, Perfluoropentanesulfonic acid, Perfluoroheptanesulfonic acid, Perfluorooctanoic acid

The recovery(ies) for one or more surrogates exceeded the acceptance window indicating a positive bias for sample(s) 1299670

Batch #: 20114002 (Sample number(s): 1299668)

The recovery(ies) for one or more surrogates exceeded the acceptance window indicating a positive bias for sample(s) 1299668

The recovery(ies) for one or more surrogates were below the acceptance window for sample(s) 1299668

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Analysis Report

3425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Sample Description: CGGC Gas Condensate
PFAS Analysis

Project Name: 2011704

Submittal Date/Time: 04/16/2020 10:08
Collection Date/Time: 04/15/2020 12:00
SDG#: BCL95-01

BC Laboratories, Inc.
ELLE Sample #: WW 1299668
ELLE Group #: 2096463
Matrix: Gas Condensate

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous	EPA 537 mod QSM 5.1 table B-15		ng/l	ng/l	ng/l	
14434	9Cl-PF3ONS	756426-58-1	N.D.	0.39	1.5	1
	9Cl-PF3ONS is the acronym for Potassium 9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid					
14434	11Cl-PF3OUdS	763051-92-9	N.D.	0.39	1.5	1
	11Cl-PF3OUdS is the acronym for 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid					
14434	4:2-Fluorotelomersulfonic acid	757124-72-4	N.D.	0.39	1.5	1
14434	6:2-Fluorotelomersulfonic acid	27619-97-2	N.D.	1.5	3.9	1
14434	8:2-Fluorotelomersulfonic acid	39108-34-4	4.9	0.77	2.3	1
14434	NEtFOSAA	2991-50-6	140	0.39	2.3	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14434	NMeFOSAA	2355-31-9	32	0.46	1.5	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14434	Perfluorobutanesulfonic acid	375-73-5	N.D.	0.39	1.5	1
14434	Perfluorobutanoic acid	375-22-4	N.D.	1.5	3.9	1
14434	Perfluorodecanesulfonic acid	335-77-3	N.D.	0.39	1.5	1
14434	Perfluorodecanoic acid	335-76-2	5.8	0.39	1.5	1
14434	Perfluorododecanoic acid	307-55-1	4.1	0.39	1.5	1
14434	Perfluoroheptanesulfonic acid	375-92-8	N.D.	0.39	1.5	1
14434	Perfluoroheptanoic acid	375-85-9	2.8	0.39	1.5	1
14434	Perfluorohexanesulfonic acid	355-46-4	0.77 J	0.39	1.5	1
14434	Perfluorohexanoic acid	307-24-4	7.6	0.39	1.5	1
14434	Perfluorononanoic acid	375-95-1	1.9	0.39	1.5	1
14434	Perfluorooctanesulfonamide	754-91-6	22	0.39	1.5	1
14434	Perfluorooctanesulfonic acid	1763-23-1	19	0.39	1.5	1
14434	Perfluorooctanoic acid	335-67-1	62	0.39	1.5	1
14434	Perfluoropentanesulfonic acid	2706-91-4	N.D.	0.39	1.5	1
14434	Perfluoropentanoic acid	2706-90-3	2.0	0.39	1.5	1
14434	Perfluorotetradecanoic acid	376-06-7	0.96 J	0.39	1.5	1
14434	Perfluorotridecanoic acid	72629-94-8	0.53 J	0.39	1.5	1
14434	Perfluoroundecanoic acid	2058-94-8	1.5 J	0.39	1.5	1

The recovery for the labeled compound used as extraction standards is outside the QC acceptance limits as noted on the QC Summary. The following action was taken: The sample was reextracted within holding time. The data reported is from the initial trial of the sample and both sets of data are included in the data package.

Sample Comments

CA ELAP Lab Certification No. 2792

*=This limit was used in the evaluation of the final result

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Analysis Report

3425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Sample Description: CGGC Gas Condensate
PFAS Analysis

Project Name: 2011704

Submittal Date/Time: 04/16/2020 10:08
Collection Date/Time: 04/15/2020 12:00
SDG#: BCL95-01

BC Laboratories, Inc.
ELLE Sample #: WW 1299668
ELLE Group #: 2096463
Matrix: Gas Condensate

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14434	25 PFAS in Waters - DOD	EPA 537 mod QSM 5.1 table B-15	1	20114002	04/24/2020 14:19	Devon M Whooley	1
14465	PFAS Water Prep - DoD	EPA 537 mod QSM 5.1 table B-15	2	20114002	04/23/2020 07:00	Austin Prince	1

*=This limit was used in the evaluation of the final result

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Analysis Report

3425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Sample Description: CG-TB Water
PFAS Analysis

Project Name: 2011704

Submittal Date/Time: 04/16/2020 10:08
Collection Date/Time: 04/15/2020 12:00
SDG#: BCL95-02TB

BC Laboratories, Inc.
ELLE Sample #: WW 1299669
ELLE Group #: 2096463
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous	EPA 537 mod QSM 5.1 table B-15		ng/l	ng/l	ng/l	
14434	9Cl-PF3ONS	756426-58-1	N.D.	0.41	1.6	1
	9Cl-PF3ONS is the acronym for Potassium 9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid					
14434	11Cl-PF3OUdS	763051-92-9	N.D.	0.41	1.6	1
	11Cl-PF3OUdS is the acronym for 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid					
14434	4:2-Fluorotelomersulfonic acid	757124-72-4	N.D.	0.41	1.6	1
14434	6:2-Fluorotelomersulfonic acid	27619-97-2	N.D.	1.6	4.1	1
14434	8:2-Fluorotelomersulfonic acid	39108-34-4	N.D.	0.81	2.4	1
14434	NEtFOSAA	2991-50-6	N.D.	0.41	2.4	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14434	NMeFOSAA	2355-31-9	N.D.	0.49	1.6	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14434	Perfluorobutanesulfonic acid	375-73-5	N.D.	0.41	1.6	1
14434	Perfluorobutanoic acid	375-22-4	N.D.	1.6	4.1	1
14434	Perfluorodecanesulfonic acid	335-77-3	N.D.	0.41	1.6	1
14434	Perfluorodecanoic acid	335-76-2	N.D.	0.41	1.6	1
14434	Perfluorododecanoic acid	307-55-1	N.D.	0.41	1.6	1
14434	Perfluoroheptanesulfonic acid	375-92-8	N.D.	0.41	1.6	1
14434	Perfluoroheptanoic acid	375-85-9	N.D.	0.41	1.6	1
14434	Perfluorohexanesulfonic acid	355-46-4	N.D.	0.41	1.6	1
14434	Perfluorohexanoic acid	307-24-4	N.D.	0.41	1.6	1
14434	Perfluorononanoic acid	375-95-1	N.D.	0.41	1.6	1
14434	Perfluorooctanesulfonamide	754-91-6	N.D.	0.41	1.6	1
14434	Perfluorooctanesulfonic acid	1763-23-1	N.D.	0.41	1.6	1
14434	Perfluorooctanoic acid	335-67-1	N.D.	0.41	1.6	1
14434	Perfluoropentanesulfonic acid	2706-91-4	N.D.	0.41	1.6	1
14434	Perfluoropentanoic acid	2706-90-3	N.D.	0.41	1.6	1
14434	Perfluorotetradecanoic acid	376-06-7	N.D.	0.41	1.6	1
14434	Perfluorotridecanoic acid	72629-94-8	N.D.	0.41	1.6	1
14434	Perfluoroundecanoic acid	2058-94-8	N.D.	0.41	1.6	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The following action was taken: The sample is reported here, as sufficient sample was not remaining to perform a reanalysis.

Sample Comments

CA ELAP Lab Certification No. 2792

*=This limit was used in the evaluation of the final result

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Analysis Report

3425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Sample Description: CG-TB Water
PFAS Analysis

Project Name: 2011704

Submittal Date/Time: 04/16/2020 10:08
Collection Date/Time: 04/15/2020 12:00
SDG#: BCL95-02TB

BC Laboratories, Inc.
ELLE Sample #: WW 1299669
ELLE Group #: 2096463
Matrix: Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14434	25 PFAS in Waters - DOD	EPA 537 mod QSM 5.1 table B-15	1	20111001	04/21/2020 12:59	Devon M Whooley	1
14465	PFAS Water Prep - DoD	EPA 537 mod QSM 5.1 table B-15	1	20111001	04/20/2020 07:00	Austin Prince	1

*=This limit was used in the evaluation of the final result

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Analysis Report

3425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Sample Description: CG-EB Water
PFAS Analysis

Project Name: 2011704

Submittal Date/Time: 04/16/2020 10:08
Collection Date/Time: 04/15/2020 12:00
SDG#: BCL95-03EB

BC Laboratories, Inc.
ELLE Sample #: WW 1299670
ELLE Group #: 2096463
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous	EPA 537 mod QSM 5.1 table B-15		ng/l	ng/l	ng/l	
14434	9Cl-PF3ONS	756426-58-1	N.D.	0.39	1.6	1
	9Cl-PF3ONS is the acronym for Potassium 9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid					
14434	11Cl-PF3OUdS	763051-92-9	N.D.	0.39	1.6	1
	11Cl-PF3OUdS is the acronym for 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid					
14434	4:2-Fluorotelomersulfonic acid	757124-72-4	N.D.	0.39	1.6	1
14434	6:2-Fluorotelomersulfonic acid	27619-97-2	N.D.	1.6	3.9	1
14434	8:2-Fluorotelomersulfonic acid	39108-34-4	N.D.	0.78	2.3	1
14434	NEtFOSAA	2991-50-6	0.59 J	0.39	2.3	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14434	NMeFOSAA	2355-31-9	N.D.	0.47	1.6	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14434	Perfluorobutanesulfonic acid	375-73-5	N.D.	0.39	1.6	1
14434	Perfluorobutanoic acid	375-22-4	1.6 J	1.6	3.9	1
14434	Perfluorodecanesulfonic acid	335-77-3	N.D.	0.39	1.6	1
14434	Perfluorodecanoic acid	335-76-2	0.56 J	0.39	1.6	1
14434	Perfluorododecanoic acid	307-55-1	1.8	0.39	1.6	1
14434	Perfluoroheptanesulfonic acid	375-92-8	N.D.	0.39	1.6	1
14434	Perfluoroheptanoic acid	375-85-9	0.71 J	0.39	1.6	1
14434	Perfluorohexanesulfonic acid	355-46-4	N.D.	0.39	1.6	1
14434	Perfluorohexanoic acid	307-24-4	0.65 J	0.39	1.6	1
14434	Perfluorononanoic acid	375-95-1	N.D.	0.39	1.6	1
14434	Perfluorooctanesulfonamide	754-91-6	N.D.	0.39	1.6	1
14434	Perfluorooctanesulfonic acid	1763-23-1	0.98 JB	0.39	1.6	1
14434	Perfluorooctanoic acid	335-67-1	1.7	0.39	1.6	1
14434	Perfluoropentanesulfonic acid	2706-91-4	N.D.	0.39	1.6	1
14434	Perfluoropentanoic acid	2706-90-3	1.7	0.39	1.6	1
14434	Perfluorotetradecanoic acid	376-06-7	7.0	0.39	1.6	1
14434	Perfluorotridecanoic acid	72629-94-8	5.3	0.39	1.6	1
14434	Perfluoroundecanoic acid	2058-94-8	1.2 J	0.39	1.6	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The following action was taken: The sample is reported here, as sufficient sample was not remaining to perform a reanalysis.

Sample Comments

CA ELAP Lab Certification No. 2792

*=This limit was used in the evaluation of the final result

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Analysis Report

3425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Sample Description: CG-EB Water
PFAS Analysis

Project Name: 2011704

Submittal Date/Time: 04/16/2020 10:08
Collection Date/Time: 04/15/2020 12:00
SDG#: BCL95-03EB

BC Laboratories, Inc.
ELLE Sample #: WW 1299670
ELLE Group #: 2096463
Matrix: Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14434	25 PFAS in Waters - DOD	EPA 537 mod QSM 5.1 table B-15	1	20111001	04/21/2020 13:08	Devon M Whooley	1
14465	PFAS Water Prep - DoD	EPA 537 mod QSM 5.1 table B-15	1	20111001	04/20/2020 07:00	Austin Prince	1

*=This limit was used in the evaluation of the final result

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Analysis Report

3425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Sample Description: CG-FB Water
PFAS Analysis

Project Name: 2011704

Submittal Date/Time: 04/16/2020 10:08
Collection Date/Time: 04/15/2020 12:00
SDG#: BCL95-04FB

BC Laboratories, Inc.
ELLE Sample #: WW 1299671
ELLE Group #: 2096463
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous	EPA 537 mod QSM 5.1 table B-15		ng/l	ng/l	ng/l	
14434	9Cl-PF3ONS	756426-58-1	N.D.	0.39	1.6	1
	9Cl-PF3ONS is the acronym for Potassium 9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid					
14434	11Cl-PF3OUdS	763051-92-9	N.D.	0.39	1.6	1
	11Cl-PF3OUdS is the acronym for 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid					
14434	4:2-Fluorotelomersulfonic acid	757124-72-4	N.D.	0.39	1.6	1
14434	6:2-Fluorotelomersulfonic acid	27619-97-2	N.D.	1.6	3.9	1
14434	8:2-Fluorotelomersulfonic acid	39108-34-4	N.D.	0.78	2.3	1
14434	NEtFOSAA	2991-50-6	N.D.	0.39	2.3	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14434	NMeFOSAA	2355-31-9	N.D.	0.47	1.6	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14434	Perfluorobutanesulfonic acid	375-73-5	N.D.	0.39	1.6	1
14434	Perfluorobutanoic acid	375-22-4	N.D.	1.6	3.9	1
14434	Perfluorodecanesulfonic acid	335-77-3	N.D.	0.39	1.6	1
14434	Perfluorodecanoic acid	335-76-2	N.D.	0.39	1.6	1
14434	Perfluorododecanoic acid	307-55-1	N.D.	0.39	1.6	1
14434	Perfluoroheptanesulfonic acid	375-92-8	N.D.	0.39	1.6	1
14434	Perfluoroheptanoic acid	375-85-9	N.D.	0.39	1.6	1
14434	Perfluorohexanesulfonic acid	355-46-4	0.58 J	0.39	1.6	1
14434	Perfluorohexanoic acid	307-24-4	N.D.	0.39	1.6	1
14434	Perfluorononanoic acid	375-95-1	N.D.	0.39	1.6	1
14434	Perfluorooctanesulfonamide	754-91-6	N.D.	0.39	1.6	1
14434	Perfluorooctanesulfonic acid	1763-23-1	1.2 JB	0.39	1.6	1
14434	Perfluorooctanoic acid	335-67-1	0.66 J	0.39	1.6	1
14434	Perfluoropentanesulfonic acid	2706-91-4	N.D.	0.39	1.6	1
14434	Perfluoropentanoic acid	2706-90-3	N.D.	0.39	1.6	1
14434	Perfluorotetradecanoic acid	376-06-7	N.D.	0.39	1.6	1
14434	Perfluorotridecanoic acid	72629-94-8	N.D.	0.39	1.6	1
14434	Perfluoroundecanoic acid	2058-94-8	N.D.	0.39	1.6	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The following action was taken: The sample is reported here, as sufficient sample was not remaining to perform a reanalysis.

Sample Comments

CA ELAP Lab Certification No. 2792

*=This limit was used in the evaluation of the final result

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Analysis Report

3425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Sample Description: CG-FB Water
PFAS Analysis

Project Name: 2011704

Submittal Date/Time: 04/16/2020 10:08
Collection Date/Time: 04/15/2020 12:00
SDG#: BCL95-04FB

BC Laboratories, Inc.
ELLE Sample #: WW 1299671
ELLE Group #: 2096463
Matrix: Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14434	25 PFAS in Waters - DOD	EPA 537 mod QSM 5.1 table B-15	1	20111001	04/21/2020 13:17	Devon M Whooley	1
14465	PFAS Water Prep - DoD	EPA 537 mod QSM 5.1 table B-15	1	20111001	04/20/2020 07:00	Austin Prince	1

*=This limit was used in the evaluation of the final result

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Analysis Report

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Quality Control Summary

Client Name: BC Laboratories, Inc. Group Number: 2096463
Reported: 04/28/2020 00:02

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ng/l	ng/l	ng/l
Batch number: 20111001	Sample number(s): 1299669-1299671		
9Cl-PF3ONS	N.D.	0.50	2.0
11Cl-PF3OUdS	N.D.	0.50	2.0
4:2-Fluorotelomersulfonic acid	N.D.	0.50	2.0
6:2-Fluorotelomersulfonic acid	27	2.0	5.0
8:2-Fluorotelomersulfonic acid	N.D.	1.0	3.0
NEtFOSAA	N.D.	0.50	3.0
NMeFOSAA	N.D.	0.60	2.0
Perfluorobutanesulfonic acid	N.D.	0.50	2.0
Perfluorobutanoic acid	N.D.	2.0	5.0
Perfluorodecanesulfonic acid	N.D.	0.50	2.0
Perfluorodecanoic acid	N.D.	0.50	2.0
Perfluorododecanoic acid	N.D.	0.50	2.0
Perfluoroheptanesulfonic acid	N.D.	0.50	2.0
Perfluoroheptanoic acid	N.D.	0.50	2.0
Perfluorohexanesulfonic acid	N.D.	0.50	2.0
Perfluorohexanoic acid	N.D.	0.50	2.0
Perfluorononanoic acid	N.D.	0.50	2.0
Perfluorooctanesulfonamide	N.D.	0.50	2.0
Perfluorooctanesulfonic acid	4.9	0.50	2.0
Perfluorooctanoic acid	N.D.	0.50	2.0
Perfluoropentanesulfonic acid	N.D.	0.50	2.0
Perfluoropentanoic acid	N.D.	0.50	2.0
Perfluorotetradecanoic acid	N.D.	0.50	2.0
Perfluorotridecanoic acid	N.D.	0.50	2.0
Perfluoroundecanoic acid	N.D.	0.50	2.0
Batch number: 20114002	Sample number(s): 1299668		
9Cl-PF3ONS	N.D.	0.50	2.0
11Cl-PF3OUdS	N.D.	0.50	2.0
4:2-Fluorotelomersulfonic acid	N.D.	0.50	2.0
6:2-Fluorotelomersulfonic acid	N.D.	2.0	5.0
8:2-Fluorotelomersulfonic acid	N.D.	1.0	3.0
NEtFOSAA	N.D.	0.50	3.0
NMeFOSAA	N.D.	0.60	2.0
Perfluorobutanesulfonic acid	N.D.	0.50	2.0
Perfluorobutanoic acid	N.D.	2.0	5.0
Perfluorodecanesulfonic acid	N.D.	0.50	2.0
Perfluorodecanoic acid	N.D.	0.50	2.0
Perfluorododecanoic acid	N.D.	0.50	2.0

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

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Analysis Report

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Quality Control Summary

Client Name: BC Laboratories, Inc. Group Number: 2096463
Reported: 04/28/2020 00:02

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ng/l	ng/l	ng/l
Perfluoroheptanesulfonic acid	N.D.	0.50	2.0
Perfluoroheptanoic acid	N.D.	0.50	2.0
Perfluorohexanesulfonic acid	N.D.	0.50	2.0
Perfluorohexanoic acid	N.D.	0.50	2.0
Perfluorononanoic acid	N.D.	0.50	2.0
Perfluorooctanesulfonamide	N.D.	0.50	2.0
Perfluorooctanesulfonic acid	N.D.	0.50	2.0
Perfluorooctanoic acid	N.D.	0.50	2.0
Perfluoropentanesulfonic acid	N.D.	0.50	2.0
Perfluoropentanoic acid	N.D.	0.50	2.0
Perfluorotetradecanoic acid	N.D.	0.50	2.0
Perfluorotridecanoic acid	N.D.	0.50	2.0
Perfluoroundecanoic acid	N.D.	0.50	2.0

LCS/LCSD

Analysis Name	LCS Spike Added ng/l	LCS Conc ng/l	LCSD Spike Added ng/l	LCSD Conc ng/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 20111001	Sample number(s): 1299669-1299671								
9Cl-PF3ONS	23.84	20.23	23.84	20.34	85	85	70-130	1	30
11Cl-PF3OUdS	24.12	20.47	24.12	19.91	85	83	70-130	3	30
4:2-Fluorotelomersulfonic acid	23.92	19.51	23.92	21.36	82	89	64-134	9	30
6:2-Fluorotelomersulfonic acid	24.28	22.32	24.28	20.73	92	85	51-155	7	30
8:2-Fluorotelomersulfonic acid	24.52	22.77	24.52	21.67	93	88	62-133	5	30
NEtFOSAA	25.6	24.36	25.6	24.14	95	94	59-145	1	30
NMeFOSAA	25.6	25.85	25.6	24.89	101	97	53-136	4	30
Perfluorobutanesulfonic acid	22.64	19.59	22.64	18.86	87	83	81-133	4	30
Perfluorobutanoic acid	25.6	20.5	25.6	20.62	80*	81*	84-135	1	30
Perfluorodecanesulfonic acid	24.64	19.61	24.64	19.84	80	81	69-124	1	30
Perfluorodecanoic acid	25.6	22.17	25.6	22.28	87	87	78-137	0	30
Perfluorododecanoic acid	25.6	24.42	25.6	24.45	95	95	75-139	0	30
Perfluoroheptanesulfonic acid	24.36	19.19	24.36	18.88	79*	78*	80-129	2	30
Perfluoroheptanoic acid	25.6	23.64	25.6	23.99	92	94	80-140	1	30
Perfluorohexanesulfonic acid	24.2	20.67	24.2	20.73	85	86	71-131	0	30
Perfluorohexanoic acid	25.6	21.06	25.6	21.67	82	85	80-137	3	30
Perfluorononanoic acid	25.6	21.95	25.6	22.48	86	88	73-140	2	30
Perfluorooctanesulfonamide	25.6	22.67	25.6	22.47	89	88	73-121	1	30
Perfluorooctanesulfonic acid	24.48	19.84	24.48	18.6	81	76	54-139	6	30
Perfluorooctanoic acid	25.6	21.03	25.6	21.51	82*	84	83-138	2	30
Perfluoropentanesulfonic acid	24	19.42	24	19.24	81*	80*	82-132	1	30
Perfluoropentanoic acid	25.6	20.43	25.6	23.11	80	90	75-138	12	30

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

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Analysis Report

3425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Quality Control Summary

Client Name: BC Laboratories, Inc. Group Number: 2096463
Reported: 04/28/2020 00:02

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ng/l	LCS Conc ng/l	LCSD Spike Added ng/l	LCSD Conc ng/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Perfluorotetradecanoic acid	25.6	25.1	25.6	21.9	98	86	79-134	14	30
Perfluorotridecanoic acid	25.6	22.51	25.6	23.11	88	90	67-144	3	30
Perfluoroundecanoic acid	25.6	24.34	25.6	23.05	95	90	70-134	5	30
Batch number: 20114002	Sample number(s): 1299668								
9Cl-PF3ONS	23.84	22.26	23.84	23.1	93	97	70-130	4	30
11Cl-PF3OUdS	24.12	21.17	24.12	22.71	88	94	70-130	7	30
4:2-Fluorotelomersulfonic acid	23.92	20.62	23.92	24.46	86	102	64-134	17	30
6:2-Fluorotelomersulfonic acid	24.28	23.3	24.28	24.08	96	99	51-155	3	30
8:2-Fluorotelomersulfonic acid	24.52	21.27	24.52	24.33	87	99	62-133	13	30
NEtFOSAA	25.6	24.72	25.6	28.13	97	110	59-145	13	30
NMeFOSAA	25.6	26	25.6	31.93	102	125	53-136	20	30
Perfluorobutanesulfonic acid	22.64	20.83	22.64	21.97	92	97	81-133	5	30
Perfluorobutanoic acid	25.6	21.9	25.6	23.99	86	94	84-135	9	30
Perfluorodecanesulfonic acid	24.64	21.9	24.64	22.8	89	93	69-124	4	30
Perfluorodecanoic acid	25.6	27.01	25.6	28.22	105	110	78-137	4	30
Perfluorododecanoic acid	25.6	26.73	25.6	27.1	104	106	75-139	1	30
Perfluoroheptanesulfonic acid	24.36	21.56	24.36	23.22	88	95	80-129	7	30
Perfluoroheptanoic acid	25.6	26.26	25.6	27.64	103	108	80-140	5	30
Perfluorohexanesulfonic acid	24.2	22.06	24.2	23.9	91	99	71-131	8	30
Perfluorohexanoic acid	25.6	22.75	25.6	24.72	89	97	80-137	8	30
Perfluorononanoic acid	25.6	24.9	25.6	26.03	97	102	73-140	4	30
Perfluorooctanesulfonamide	25.6	24.52	25.6	25.48	96	100	73-121	4	30
Perfluorooctanesulfonic acid	24.48	21.63	24.48	22.24	88	91	54-139	3	30
Perfluorooctanoic acid	25.6	22.44	25.6	24.82	88	97	83-138	10	30
Perfluoropentanesulfonic acid	24	20.36	24	21.26	85	89	82-132	4	30
Perfluoropentanoic acid	25.6	23.93	25.6	26.36	93	103	75-138	10	30
Perfluorotetradecanoic acid	25.6	23.87	25.6	24.98	93	98	79-134	5	30
Perfluorotridecanoic acid	25.6	24.85	25.6	26.46	97	103	67-144	6	30
Perfluoroundecanoic acid	25.6	24.15	25.6	26.93	94	105	70-134	11	30

Labeled Isotope Quality Control

Labeled isotope recoveries which are outside of the QC window are confirmed unless otherwise noted on the analysis report.

Analysis Name: 25 PFAS in Waters - DOD
Batch number: 20111001

	13C4-PFBA	13C5-PFPeA	13C3-PFBS	13C2-4:2-FTS	13C5-PFHxA	13C3-PFHxS
1299669	103	97	87	99	111	100
1299670	87	82	77	344*	103	81
1299671	93	91	80	95	95	89

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

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Analysis Report

3425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Quality Control Summary

Client Name: BC Laboratories, Inc. Group Number: 2096463
Reported: 04/28/2020 00:02

Labeled Isotope Quality Control

Labeled isotope recoveries which are outside of the QC window are confirmed unless otherwise noted on the analysis report.

Analysis Name: 25 PFAS in Waters - DOD
Batch number: 20111001

	13C4-PFBA	13C5-PFPeA	13C3-PFBS	13C2-4:2-FTS	13C5-PFHxA	13C3-PFHxS
Blank	85	82	73	80	92	86
LCS	94	93	80	91	99	89
LCSD	92	85	80	88	102	94
Limits:	50-150	50-150	50-150	50-150	50-150	50-150

	13C4-PFHpA	13C2-6:2-FTS	13C8-PFOA	13C8-PFOS	13C9-PFNA	13C8-PFDA
1299669	104	86	104	101	99	95
1299670	89	74	88	85	86	79
1299671	92	75	94	88	86	88
Blank	87	74	88	85	82	80
LCS	92	74	94	89	88	93
LCSD	97	82	96	93	91	87
Limits:	50-150	50-150	50-150	50-150	50-150	50-150

	13C2-8:2-FTS	d3-NMeFOSAA	13C7-PFUnDA	d5-NEtFOSAA	13C2-PFDoDA	13C2-PFTeDA
1299669	84	112	102	123	103	102
1299670	66	94	84	99	76	75
1299671	78	106	94	121	92	90
Blank	68	89	79	106	81	80
LCS	77	107	101	119	95	92
LCSD	75	96	90	105	85	88
Limits:	50-150	50-150	50-150	50-150	50-150	50-150

	13C8-PFOSA
1299669	92
1299670	63
1299671	82
Blank	68
LCS	84
LCSD	77
Limits:	50-150

Analysis Name: 25 PFAS in Waters - DOD
Batch number: 20114002

	13C4-PFBA	13C5-PFPeA	13C3-PFBS	13C2-4:2-FTS	13C5-PFHxA	13C3-PFHxS
1299668	86	101	104	454*	130	95
Blank	95	91	86	87	100	93
LCS	111	106	100	107	118	112

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

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Analysis Report

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Quality Control Summary

Client Name: BC Laboratories, Inc. Group Number: 2096463
Reported: 04/28/2020 00:02

Labeled Isotope Quality Control (continued)

Labeled isotope recoveries which are outside of the QC window are confirmed unless otherwise noted on the analysis report.

Analysis Name: 25 PFAS in Waters - DOD
Batch number: 20114002

	13C4-PFBA	13C5-PFPeA	13C3-PFBS	13C2-4:2-FTS	13C5-PFHxA	13C3-PFHxS
LCSD	96	92	88	83	102	96
Limits:	50-150	50-150	50-150	50-150	50-150	50-150

	13C4-PFHpA	13C2-6:2-FTS	13C8-PFOA	13C8-PFOS	13C9-PFNA	13C8-PFDA
1299668	162*	303*	84	90	137	67
Blank	94	86	98	91	94	86
LCS	111	102	116	116	115	109
LCSD	95	87	100	95	96	97
Limits:	50-150	50-150	50-150	50-150	50-150	50-150

	13C2-8:2-FTS	d3-NMeFOSAA	13C7-PFUnDA	d5-NEtFOSAA	13C2-PFDoDA	13C2-PFTeDA
1299668	76	67	69	66	70	63
Blank	78	89	98	98	102	88
LCS	103	118	119	127	121	115
LCSD	90	100	105	107	106	97
Limits:	50-150	50-150	50-150	50-150	50-150	50-150

	13C8-PFOSA
1299668	20*
Blank	83
LCS	103
LCSD	95
Limits:	50-150

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

44261/2096463/1279668-21

BC LABORATORIES

4100 Atlas Court Bakersfield, Ca. 93308
(661) 327-4911 ▸ FAX (661) 327-1918 ▸ www.bclabs.com

Chain of Custody

* Required Fields TEMP: _____

Client/Company Name *:	Report Attention *:	Phone * #: 661.852.4272 FAX * #:
Subcontract - BC Labs	Tina Green	E-mail: tina@bclabs.com

ANALYSIS REQUESTED

Address *	City *	State *	Zip *	Carbon Copies:
4100 Atlas Court	Bakersfield	CA	93308	CDHS ☐ Fresno Co ☐ EPA ☐ Merced Co ☐ Tulare Co ☐ Other:

Project Information:	PO #	
(Riverside-PFAS Sampling): Corona Landfill - gas condensate	BCL Quote #	

How would you like your completed results sent? ☑ E-Mail ☐ Fax ☑ EDD ☐ Mail Only

Regulatory Compliance Electronic Data Transfer: Y ☑ N ☐ System No. * L10005490322

Sampler Name Printed / Signature	QC Request	Result Request ** Surcharge
Mario Ramirez	☑ STD ☐ Level II	☑ STD ☐ 5 Day** ☐ 2 Day** ☐ Day**

Matrix Types: RSW = Raw Surface Water CFW = Chlorinated Finished Water CWW = Chlorinated Waste Water BW = Bottled Water RGW = Raw Ground Water FW = Finished Water WW = Waste Water SW = Storm Water DW = Drinking Water SO = Solid

25 PFAS Parameters
Refer to attached sheet
for a list of PFAS parameters

Sample #	# Bottles	Sampled Date	Sampled Time	Sample Description / Location *	Matrix *	Comments / Station Code	
		4/15/20	12:00	CGGC	GC	gas condensate - 2 bottles	✓
		4/15/20	12:00	CG-TB	TB	Travel Blank - 1 bottle	✓
		4/15/20	12:00	CG-EB	EB	Equipment Blank - 1 bottle	✓
		4/15/20	12:00	CG-FB	FB	Field Blank - 1 bottle	✓
						** Requesting Geotracker file and EDD **	

Relinquished by: (Signature and Printed Name)	Company	Date	Time	Received by (Signature and Print Name)	Company
Mario Ramirez	RC-DWR	4/15/20	2:30		
Relinquished by: (Signature and Printed Name)	Company	Date	Time	Received by (Signature and Print Name)	Company
Received for Lab by: (Signature and Printed Name) Wesley Miller		Date 4/16/2020	Time 1108	Payment Received at Delivery: Date: Amount: Check/Cash/Card PIA # Init.	

Shipping Method: CAO UPS GSO WALK-IN SJVC FED EX OTHER

Cooling Method: WET BLUE NONE

Packing Material:

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44261/2096463/1299668 -7/

TABLE 2
PFAS ANALYTES SUBJECT TO ANALYSIS AND THEIR RESPECTIVE REPORTING LIMITS

Chemical Name	Abbreviation	Fluorinated Alkane Carbon Chain Length*	Chemical Abstracts Service (CAS) No.	Required Reporting Limits: Aqueous: Groundwater and Effluent (ng/L)	Required Reporting Limits: Solid: Soil (µg/kg)
Perfluoroalkylcarboxylic acids (PFCAs)					
Perfluorobutanoic acid	PFBA	C4	375-22-4	8.0	2.0
Perfluoropentanoic acid	PFPeA	C5	2706-90-3	5.0	1.0
Perfluorohexanoic acid	PFHxA	C6	307-24-4	5.0	1.0
Perfluoroheptanoic acid	PFHpA	C7	375-85-9	5.0	1.0
Perfluorooctanoic acid	PFOA	C8	335-67-1	5.0	1.0
Perfluorononanoic acid	PFNA	C9	375-95-1	5.0	1.0
Perfluorodecanoic acid	PFDA	C10	335-76-2	5.0	1.0
Perfluoroundecanoic acid	PFUnDA	C11	2058-94-8	5.0	1.0
Perfluorododecanoic acid	PFDoDA	C12	307-55-1	5.0	1.0
Perfluorotridecanoic acid	PFTrDA	C13	72629-94-8	5.0	1.0
Perfluorotetradecanoic acid	PFTeDA	C14	376-06-7	8.0	2.0
Perfluorohexadecanoic acid*	PFHxDA	C16	67905-19-5	8.0	2.0
Perfluorooctadecanoic acid*	PFODA	C18	16517-11-6	8.0	2.0
Perfluorinated sulfonic acids (PFSAs)					
Perfluorobutane sulfonic acid	PFBS	C4	375-73-5	5.0	1.0
Perfluoropentane sulfonic acid	PFPeS	C5	2706-91-4	5.0	2.0
Perfluorohexane sulfonic acid	PFHxS	C6	355-46-4	5.0	1.0
Perfluoroheptane sulfonic acid	PFHpS	C7	375-92-8	5.0	1.0
Perfluorooctane sulfonic acid	PFOS	C8	1763-23-1	5.0	1.0
Perfluorononane sulfonic acid*	PFNS	C9	474511-07-4	8.0	5.0
Perfluorodecane sulfonic acid	PFDS	C10	335-77-3	5.0	1.0
Perfluorooctane Sulfonamide and Derivatives (PFOSA, FOSEs, FOSAs, and FOSAAs)					
Perfluorooctanesulfonamide	PFOSA	C8	754-91-6	8.0	1.0
N-Ethyl perfluorooctane sulfonamide ethanol*	EtFOSE	C8 Precursor	1691-99-2	8.0	2.0
N-Methyl perfluorooctane sulfonamide ethanol*	MeFOSE	C8 Precursor	24448-09-7	8.0	2.0
N-Ethyl perfluorooctane sulfonamide*	EtFOSA	C8 Precursor	4151-50-2	8.0	2.0
N-Methyl perfluorooctane sulfonamide*	MeFOSA	C8 Precursor	31506-32-8	8.0	2.0
N-Methyl perfluorooctane sulfonamidoacetic acid	NMeFOSAA	C8 Precursor	2355-31-9	20.0	2.5
N-Ethyl perfluorooctane sulfonamidoacetic acid	NEtFOSAA	C8 Precursor	2991-50-6	20.0	2.0
Fluorotelomer sulfonates (FTS)					
4:2 Fluorotelomer sulfonic acid	4:2 FTS	C4* Precursor	757124-72-4	8.0	1.0
6:2 Fluorotelomer sulfonic acid	6:2 FTS	C6* Precursor	27619-97-2	20.0	2.5
8:2 Fluorotelomer sulfonic acid	8:2 FTS	C8* Precursor	39108-34-4	20.0	2.0
10:2 Fluorotelomer sulfonic acid*	10:2 FTS	C10* Precursor	120226-60-0	8.0	2.0
Fluorotelomer carboxylic acids (FTCA)					
2H,2H,3H,3H-Perfluorohexanoic acid*	3:3 FTCA	C4* Precursor	356-02-5	8.0	5.0
2H,2H,3H,3H-Perfluorooctanoic acid*	5:3 FTCA	C6* Precursor	914637-49-3	8.0	5.0
2H,2H,3H,3H-Perfluorodecanoic acid*	7:3 FTCA	C8* Precursor	812-70-4	8.0	5.0
Perfluoroalkyl ether carboxylic acids (PFECA)					
Hexafluoropropylene oxide dimer acid*	HFPO-DA	--	13252-13-6	20.0	5.0
4,8-Dioxa-3H-perfluorononanoic acid*	ADONA	--	919005-14-4	8.0	5.0
Chlorinated Polyfluoroalkyl Ether Sulfonic Acids (Cl-PFESAs)					
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	9-Cl-PF3ONS	--	756426-58-1	8.0	5.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	11-Cl-PF3OUdS	--	763051-92-9	8.0	5.0

Note: Only the 25 analytes without the asterisk (*) are required to be analyzed as part of this Order. The analytes with the asterisk (*) are included in some but not all lists provided by accredited laboratories and are encouraged to be analyzed as part of this effort.

ng/L = nanograms per liter
µg/kg = micrograms per kilogram
* = and shorter carbon chain length terminal degradation products

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Sample Administration Receipt Documentation Log

Doc Log ID: 282112

Group Number(s): 2096463

Client: BC Labs

(Riverside PFAS Sampling): Corona Landfill

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Date:	04/16/2020
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	CA		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	Total Trip Blank Qty:	1
Samples Chilled:	Yes	Trip Blank Type:	See Below
Paperwork Enclosed:	Yes	Air Quality Samples Present:	No
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Trip Blank Type(s): Unpreserved

Unpacked by William Mathers

Samples Chilled Details: (Riverside PFAS Sampling): Corona Landfill

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT42-01	1.6	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	mL	milliliter(s)
C	degrees Celsius	MPN	Most Probable Number
cfu	colony forming units	N.D.	non-detect
CP Units	cobalt-chloroplatinate units	ng	nanogram(s)
F	degrees Fahrenheit	NTU	nephelometric turbidity units
g	gram(s)	pg/L	picogram/liter
IU	International Units	RL	Reporting Limit
kg	kilogram(s)	TNTC	Too Numerous To Count
L	liter(s)	µg	microgram(s)
lb.	pound(s)	µL	microliter(s)
m3	cubic meter(s)	umhos/cm	micromhos/cm
meq	milliequivalents	MCL	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

3768_0618
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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is less than the LOQ
K2	Continuing Calibration Blank is above the QC limit and the sample result is less than the LOQ
K3	Initial Calibration Verification is above the QC limit and the sample result is less than the LOQ
K4	Continuing Calibration Verification is above the QC limit and the sample result is less than the LOQ
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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Riverside County Dept of Waste Resources	**Reported:** 04/29/2020 12:05
14310 Frederick Street	Project: Corona
Moreno Valley, CA 92553	Project Number: PFAS Sampling - Subcontract
	Project Manager: Panda Workman

Notes And Definitions

May 27, 2020

Date of Report: 07/07/2020

Panda Workman

Riverside County Dept of Waste Resources
14310 Frederick Street
Moreno Valley, CA 92553

Client Project:	PFAS Sampling
BCL Project:	Corona
BCL Work Order:	2015516
Invoice ID:	B384996

Enclosed are the results of analyses for samples received by the laboratory on 5/29/2020. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Natalie Serda
Client Service Rep

Stuart Buttram
Technical Director

Table of Contents

Riverside County Dept of Waste Resources
14310 Frederick Street
Moreno Valley, CA 92553

Reported: 07/07/2020 15:27
Project: Corona
Project Number: PFAS Sampling
Project Manager: Panda Workman

Case Narrative

Sample Receipt

COC Number:

Samples received refrigerated to °C

Sample List

Lab Number	Date/Time Sampled	Sample Name
2015516-01	05/27/2020 00:00	CGGC
2015516-02	05/27/2020 00:00	CGTB
2015516-03	05/27/2020 00:00	CG-EB
2015516-04	05/27/2020 00:00	CG-FB

Requested Analysis

Sample	Analyte	Flag

Sample Qualifier Summary

There are no qualifiers for the samples.

Holding Times

All holding time requirements were met.

Discussion

Samples directly subcontracted to Eurofins.

Chain of Custody and Cooler Receipt Form for 2015516 Page 1 of 1

BC LABORATORIES

4100 Atlas Court Bakersfield, Ca. 93308
(661) 327-4911 • FAX (661) 327-1918 • www.bclabs.com

Chain of Custody

* Required Fields

TEMP: _____

Client/Company Name *	Report Attention *	Phone * #	FAX * #
Subcontract - BC Labs	Natalie Serda	661.327.4911	
		E-mail: natalie.serda@bclabs.com	

Address *	City *	State *	Zip *
4100 Atlas Court	Bakersfield	CA	93308

Carbon Copies: CDHS ☐ Fresno Co ☐ EPA ☐ Merced Co ☐ Tulare Co ☐ Other:

Project Information: (Riverside-PFAS Sampling): Corona Landfill - gas condensate
PO #
BCL Quote #

How would you like your completed results sent? ☑ E-Mail ☐ Fax ☑ EDD ☐ Mail Only

Regulatory Compliance: Electronic Data Transfer: Y ☑ N ☐ System No. * L10005490322

Sampler Name Printed / Signature	QC Request	Result Request ** Surcharge
Mario Ramirez	☑ STD ☐ Level II	☑ STD ☐ 5 Day** ☐ 2 Day** ☐ 1 Day**

Matrix Types: RSW = Raw Surface Water CFW = Chlorinated Finished Water CWW = Chlorinated Waste Water BW = Bottled Water RGW = Raw Ground Water FW = Finished Water WW = Waste Water SW = Storm Water DW = Drinking Water SO = Solid

ANALYSIS REQUESTED

Sample #	# Bottles	Sampled Date	Sampled Time	Sample Description / Location *	Matrix *	Comments / Station Code	25 PFAS Parameters	Refer to attached sheet for a list of PFAS parameters
		5/27/20		CGGC	GC	gas condensate - 2 bottles	✓	
		5/27/20		CG-TB	TB	Travel Blank - 2 bottles	✓	
		5/27/20		CG-EB	EB	Equipment Blank - 2 bottles	✓	
		5/27/20		CG-FB	FB	Field Blank - 2 bottles	✓	
						** Requesting Geotracker file and EDD **		

Relinquished by: (Signature and Printed Name)	Company	Date	Time	Received by (Signature and Print Name)	Company
Mario Ramirez	RC-DWR	5/27/20		Sublab	
Relinquished by: (Signature and Printed Name)	Company	Date	Time	Received by (Signature and Print Name)	Company
Received for Lab by: (Signature and Printed Name)		Date	Time	Payment Received at Delivery: Date Amount Check/Cash/Card PIA # Init.	

Shipping Method: CAO UPS GSO WALK-IN SJVC FED EX OTHER

Cooling Method: WET BLUE NONE

Packing Material:

Riverside County Dept of Waste Resources
14310 Frederick Street
Moreno Valley, CA 92553

Reported: 07/07/2020 15:27
Project: Corona
Project Number: PFAS Sampling
Project Manager: Panda Workman

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
2015516-01	**COC Number:**	---	**Receive Date:**	05/29/2020 00:00
	Project Number:	---	**Sampling Date:**	05/27/2020 00:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	CGGC	**Lab Matrix:**	Water
	Sampled By:	Mario Ramirez	**Sample Type:**	Water
2015516-02	**COC Number:**	---	**Receive Date:**	05/29/2020 00:00
	Project Number:	---	**Sampling Date:**	05/27/2020 00:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	CGTB	**Lab Matrix:**	Water
	Sampled By:	Mario Ramirez	**Sample Type:**	Water
2015516-03	**COC Number:**	---	**Receive Date:**	05/29/2020 00:00
	Project Number:	---	**Sampling Date:**	05/27/2020 00:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	CG-EB	**Lab Matrix:**	Water
	Sampled By:	Mario Ramirez	**Sample Type:**	Water
2015516-04	**COC Number:**	---	**Receive Date:**	05/29/2020 00:00
	Project Number:	---	**Sampling Date:**	05/27/2020 00:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	CG-FB	**Lab Matrix:**	Water
	Sampled By:	Mario Ramirez	**Sample Type:**	Water

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ANALYTICAL REPORT

Eurofins Lancaster Laboratories Env, LLC
2425 New Holland Pike
Lancaster, PA 17601
Tel: (717)656-2300

Laboratory Job ID: 410-2875-1
Client Project/Site: 2015516

For:
BC Laboratories
4100 Atlas Court
Bakersfield, California 93308

Attn: Molly Meyers

Elizabeth M. Zanar

Authorized for release by:
7/7/2020 2:01:06 PM

Elizabeth Zanar, Project Manager
(717)556-7290
elizabethmzanar@eurofinsus.com

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.

Client: BC Laboratories
Project/Site: 2015516

Laboratory Job ID: 410-2875-1

Analytical test results meet all requirements of the associated regulatory program (e.g., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis. Data qualifiers are applied to note exceptions. Noncompliant quality control (QC) is further explained in narrative comments. QC data that exceed the upper limits and are associated with non-detect samples are qualified but no further narration is needed since the bias is high and does not change a non-detect result. Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Measurement uncertainty values, as applicable, are available upon request.

Test results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" and tested in the laboratory are not performed within 15 minutes of collection.

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Elizabeth M. Zanar

Elizabeth Zanar
Project Manager
7/7/2020 2:01:06 PM

Client: BC Laboratories
Project/Site: 2015516

Laboratory Job ID: 410-2875-1

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Eurofins Lancaster Laboratories Env, LLC
7/7/2020

Definitions/Glossary

Client: BC Laboratories
Project/Site: 2015516

Job ID: 410-2875-1

Qualifiers

LCMS

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
*5	Isotope dilution analyte is outside acceptance limits.
E	Result exceeded calibration range.
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
1C	Result is from the primary column on a dual-column method.
2C	Result is from the confirmation column on a dual-column method.
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

Eurofins Lancaster Laboratories Env, LLC

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Case Narrative

Client: BC Laboratories
Project/Site: 2015516

Job ID: 410-2875-1

Job ID: 410-2875-1

Laboratory: Eurofins Lancaster Laboratories Env, LLC

Narrative

Job Narrative
410-2875-1

Receipt
The samples were received on 6/1/2020 9:37 AM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 20.7° C.

Receipt Exceptions
The following sample(s) was received at the laboratory without a sample collection time documented on the chain of custody: CGGC (410-2875-1), CG-TB (410-2875-2) and CG-FB (410-2875-3).

CG-TB has 2 bottles listed on the COC. We received one bottle for CG-TB.

The following samples were received at the laboratory outside the required temperature criteria: CGGC (410-2875-1), CG-TB (410-2875-2) and CG-FB (410-2875-3). The laboratory was instructed to proceed with analysis.

LCMS
Method EPA 537 (Mod): Target analyte(s) in the laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 410-10134 and analytical batch 410-10632 recovered below the QC acceptance limits as noted on the QC Summary for the following analyte(s): Perfluorobutanoic acid and Perfluoropentanoic acid. Sufficient sample was not available to repeat the analysis.

Method EPA 537 (Mod): The labeled isotope recovery for the following sample was outside of the QC acceptance limits as noted on the QC Summary: CGGC (410-2875-1). The following action was taken:
The sample was re-extracted within the method holding time and the labeled isotope recovery was again outside of the QC acceptance limits.

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

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

Detection Summary

Client: BC Laboratories
Project/Site: 2015516

Job ID: 410-2875-1

Client Sample ID: CGGC — Lab Sample ID: 410-2875-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanoic acid	8.7		1.6	0.39	ng/L	1		EPA 537 (Mod)	Total/NA
Perfluoroheptanoic acid	5.5		1.6	0.39	ng/L	1		EPA 537 (Mod)	Total/NA
Perfluorooctanoic acid	66		1.6	0.39	ng/L	1		EPA 537 (Mod)	Total/NA
Perfluorononanoic acid	4.1		1.6	0.39	ng/L	1		EPA 537 (Mod)	Total/NA
Perfluorodecanoic acid	14		1.6	0.39	ng/L	1		EPA 537 (Mod)	Total/NA
Perfluorotridecanoic acid	1.8		1.6	0.39	ng/L	1		EPA 537 (Mod)	Total/NA
Perfluorotetradecanoic acid	9.8		1.6	0.39	ng/L	1		EPA 537 (Mod)	Total/NA
Perfluorobutanesulfonic acid	16		1.6	0.39	ng/L	1		EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid	0.89	J	1.6	0.39	ng/L	1		EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid	34		1.6	0.39	ng/L	1		EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonamide	68		1.6	0.39	ng/L	1		EPA 537 (Mod)	Total/NA
Perfluorobutanoic acid	2.8	J	3.9	1.6	ng/L	1		EPA 537 (Mod)	Total/NA
Perfluoropentanoic acid	2.9		1.6	0.39	ng/L	1		EPA 537 (Mod)	Total/NA
Perfluoroundecanoic acid	6.2		1.6	0.39	ng/L	1		EPA 537 (Mod)	Total/NA
Perfluorododecanoic acid	21		1.6	0.39	ng/L	1		EPA 537 (Mod)	Total/NA
8:2 Fluorotelomer sulfonic acid	10		2.3	0.78	ng/L	1		EPA 537 (Mod)	Total/NA
NEtFOSAA - DL	1500		23	3.9	ng/L	10		EPA 537 (Mod)	Total/NA
NMeFOSAA - DL	300		16	4.7	ng/L	10		EPA 537 (Mod)	Total/NA
Perfluorohexanoic acid - RE	7.3		1.5	0.39	ng/L	1		EPA 537 (Mod)	Total/NA
Perfluoroheptanoic acid - RE	2.9		1.5	0.39	ng/L	1		EPA 537 (Mod)	Total/NA
Perfluorooctanoic acid - RE	74		1.5	0.39	ng/L	1		EPA 537 (Mod)	Total/NA
Perfluorononanoic acid - RE	2.4		1.5	0.39	ng/L	1		EPA 537 (Mod)	Total/NA
Perfluorodecanoic acid - RE	12		1.5	0.39	ng/L	1		EPA 537 (Mod)	Total/NA
Perfluorobutanesulfonic acid - RE	7.6		1.5	0.39	ng/L	1		EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid - RE	17		1.5	0.39	ng/L	1		EPA 537 (Mod)	Total/NA
NEtFOSAA - RE	1500	E	2.3	0.39	ng/L	1		EPA 537 (Mod)	Total/NA
NMeFOSAA - RE	250	E	1.5	0.46	ng/L	1		EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonamide - RE	46		1.5	0.39	ng/L	1		EPA 537 (Mod)	Total/NA
Perfluorobutanoic acid - RE	3.2	J *	3.9	1.5	ng/L	1		EPA 537 (Mod)	Total/NA
Perfluoropentanoic acid - RE	1.5	*	1.5	0.39	ng/L	1		EPA 537 (Mod)	Total/NA
Perfluoroundecanoic acid - RE	4.0		1.5	0.39	ng/L	1		EPA 537 (Mod)	Total/NA
Perfluorododecanoic acid - RE	16		1.5	0.39	ng/L	1		EPA 537 (Mod)	Total/NA
8:2 Fluorotelomer sulfonic acid - RE	9.0		2.3	0.77	ng/L	1		EPA 537 (Mod)	Total/NA

Client Sample ID: CG-TB — Lab Sample ID: 410-2875-2

No Detections.

Client Sample ID: CG-FB — Lab Sample ID: 410-2875-3

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: BC Laboratories
Project/Site: 2015516

Job ID: 410-2875-1

Client Sample ID: CGGC
Date Collected: 05/27/20 00:00
Date Received: 06/01/20 09:37

Lab Sample ID: 410-2875-1
Matrix: Water

Method: EPA 537 (Mod) - EPA 537 mod QSM 5.1, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid	8.7		1.6	0.39	ng/L		06/10/20 07:29	06/16/20 12:38	1
11Cl-PF3OUdS	ND		1.6	0.39	ng/L		06/10/20 07:29	06/16/20 12:38	1
Perfluoroheptanoic acid	5.5		1.6	0.39	ng/L		06/10/20 07:29	06/16/20 12:38	1
Perfluorooctanoic acid	66		1.6	0.39	ng/L		06/10/20 07:29	06/16/20 12:38	1
Perfluorononanoic acid	4.1		1.6	0.39	ng/L		06/10/20 07:29	06/16/20 12:38	1
Perfluorodecanoic acid	14		1.6	0.39	ng/L		06/10/20 07:29	06/16/20 12:38	1
9Cl-PF3ONS	ND		1.6	0.39	ng/L		06/10/20 07:29	06/16/20 12:38	1
Perfluorotridecanoic acid	1.8		1.6	0.39	ng/L		06/10/20 07:29	06/16/20 12:38	1
Perfluorotetradecanoic acid	9.8		1.6	0.39	ng/L		06/10/20 07:29	06/16/20 12:38	1
Perfluorobutanesulfonic acid	16		1.6	0.39	ng/L		06/10/20 07:29	06/16/20 12:38	1
Perfluorohexanesulfonic acid	0.89	J	1.6	0.39	ng/L		06/10/20 07:29	06/16/20 12:38	1
Perfluorooctanesulfonic acid	34		1.6	0.39	ng/L		06/10/20 07:29	06/16/20 12:38	1
Perfluoropentanesulfonic acid	ND		1.6	0.39	ng/L		06/10/20 07:29	06/16/20 12:38	1
Perfluoroheptanesulfonic acid	ND		1.6	0.39	ng/L		06/10/20 07:29	06/16/20 12:38	1
Perfluorodecanesulfonic acid	ND		1.6	0.39	ng/L		06/10/20 07:29	06/16/20 12:38	1
Perfluorooctanesulfonamide	68		1.6	0.39	ng/L		06/10/20 07:29	06/16/20 12:38	1
Perfluorobutanoic acid	2.8	J	3.9	1.6	ng/L		06/10/20 07:29	06/16/20 12:38	1
Perfluoropentanoic acid	2.9		1.6	0.39	ng/L		06/10/20 07:29	06/16/20 12:38	1
Perfluoroundecanoic acid	6.2		1.6	0.39	ng/L		06/10/20 07:29	06/16/20 12:38	1
Perfluorododecanoic acid	21		1.6	0.39	ng/L		06/10/20 07:29	06/16/20 12:38	1
6:2 Fluorotelomer sulfonic acid	ND		3.9	1.6	ng/L		06/10/20 07:29	06/16/20 12:38	1
8:2 Fluorotelomer sulfonic acid	10		2.3	0.78	ng/L		06/10/20 07:29	06/16/20 12:38	1
4:2 Fluorotelomer sulfonic acid	ND		1.6	0.39	ng/L		06/10/20 07:29	06/16/20 12:38	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
M2-4:2 FTS	*322*	*5	*50 - 150*	*06/10/20 07:29*	*06/16/20 12:38*	*1*
M2-8:2 FTS	*106*		*50 - 150*	*06/10/20 07:29*	*06/16/20 12:38*	*1*
M2-6:2 FTS	*145*		*50 - 150*	*06/10/20 07:29*	*06/16/20 12:38*	*1*
13C4 PFHpA	*56*		*50 - 150*	*06/10/20 07:29*	*06/16/20 12:38*	*1*
13C8 PFOA	*67*		*50 - 150*	*06/10/20 07:29*	*06/16/20 12:38*	*1*
13C6 PFDA	*64*		*50 - 150*	*06/10/20 07:29*	*06/16/20 12:38*	*1*
13C7 PFUnA	*58*		*50 - 150*	*06/10/20 07:29*	*06/16/20 12:38*	*1*
13C2-PFDoDA	*59*		*50 - 150*	*06/10/20 07:29*	*06/16/20 12:38*	*1*
13C2 PFTeDA	*27*	*5	*50 - 150*	*06/10/20 07:29*	*06/16/20 12:38*	*1*
13C3 PFBS	*90*		*50 - 150*	*06/10/20 07:29*	*06/16/20 12:38*	*1*
13C3 PFHxS	*63*		*50 - 150*	*06/10/20 07:29*	*06/16/20 12:38*	*1*
13C8 PFOS	*70*		*50 - 150*	*06/10/20 07:29*	*06/16/20 12:38*	*1*
d3-NMeFOSAA	*68*		*50 - 150*	*06/10/20 07:29*	*06/16/20 12:38*	*1*
d5-NEtFOSAA	*67*		*50 - 150*	*06/10/20 07:29*	*06/16/20 12:38*	*1*
13C8 FOSA	*34*	*5	*50 - 150*	*06/10/20 07:29*	*06/16/20 12:38*	*1*
13C4 PFBA	*38*	*5	*50 - 150*	*06/10/20 07:29*	*06/16/20 12:38*	*1*
13C5 PFPeA	*77*		*50 - 150*	*06/10/20 07:29*	*06/16/20 12:38*	*1*
13C5 PFHxA	*59*		*50 - 150*	*06/10/20 07:29*	*06/16/20 12:38*	*1*
13C9 PFNA	*69*		*50 - 150*	*06/10/20 07:29*	*06/16/20 12:38*	*1*

Method: EPA 537 (Mod) - EPA 537 mod QSM 5.1, Table B-15 - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
NEtFOSAA	1500		23	3.9	ng/L		06/10/20 07:29	06/16/20 12:47	10
NMeFOSAA	300		16	4.7	ng/L		06/10/20 07:29	06/16/20 12:47	10

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: BC Laboratories
Project/Site: 2015516

Job ID: 410-2875-1

Client Sample ID: CGGC

Date Collected: 05/27/20 00:00
Date Received: 06/01/20 09:37

Lab Sample ID: 410-2875-1
Matrix: Water

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d3-NMeFOSAA	71		50 - 150	06/10/20 07:29	06/16/20 12:47	10
d5-NEtFOSAA	77		50 - 150	06/10/20 07:29	06/16/20 12:47	10

Method: EPA 537 (Mod) - EPA 537 mod QSM 5.1, Table B-15 - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid	**7.3**		1.5	0.39	ng/L		06/03/20 07:08	06/05/20 01:01	1
11Cl-PF3OUdS	ND		1.5	0.39	ng/L		06/03/20 07:08	06/05/20 01:01	1
Perfluoroheptanoic acid	**2.9**		1.5	0.39	ng/L		06/03/20 07:08	06/05/20 01:01	1
Perfluorooctanoic acid	**74**		1.5	0.39	ng/L		06/03/20 07:08	06/05/20 01:01	1
Perfluorononanoic acid	**2.4**		1.5	0.39	ng/L		06/03/20 07:08	06/05/20 01:01	1
Perfluorodecanoic acid	**12**		1.5	0.39	ng/L		06/03/20 07:08	06/05/20 01:01	1
9Cl-PF3ONS	ND		1.5	0.39	ng/L		06/03/20 07:08	06/05/20 01:01	1
Perfluorotridecanoic acid	ND		1.5	0.39	ng/L		06/03/20 07:08	06/05/20 01:01	1
Perfluorotetradecanoic acid	ND		1.5	0.39	ng/L		06/03/20 07:08	06/05/20 01:01	1
Perfluorobutanesulfonic acid	**7.6**		1.5	0.39	ng/L		06/03/20 07:08	06/05/20 01:01	1
Perfluorohexanesulfonic acid	ND		1.5	0.39	ng/L		06/03/20 07:08	06/05/20 01:01	1
Perfluorooctanesulfonic acid	**17**		1.5	0.39	ng/L		06/03/20 07:08	06/05/20 01:01	1
NEtFOSAA	**1500**	E	2.3	0.39	ng/L		06/03/20 07:08	06/05/20 01:01	1
NMeFOSAA	**250**	E	1.5	0.46	ng/L		06/03/20 07:08	06/05/20 01:01	1
Perfluoropentanesulfonic acid	ND		1.5	0.39	ng/L		06/03/20 07:08	06/05/20 01:01	1
Perfluoroheptanesulfonic acid	ND		1.5	0.39	ng/L		06/03/20 07:08	06/05/20 01:01	1
Perfluorodecanesulfonic acid	ND		1.5	0.39	ng/L		06/03/20 07:08	06/05/20 01:01	1
Perfluorooctanesulfonamide	**46**		1.5	0.39	ng/L		06/03/20 07:08	06/05/20 01:01	1
Perfluorobutanoic acid	**3.2**	J *	3.9	1.5	ng/L		06/03/20 07:08	06/05/20 01:01	1
Perfluoropentanoic acid	**1.5**	*	1.5	0.39	ng/L		06/03/20 07:08	06/05/20 01:01	1
Perfluoroundecanoic acid	**4.0**		1.5	0.39	ng/L		06/03/20 07:08	06/05/20 01:01	1
Perfluorododecanoic acid	**16**		1.5	0.39	ng/L		06/03/20 07:08	06/05/20 01:01	1
6:2 Fluorotelomer sulfonic acid	ND		3.9	1.5	ng/L		06/03/20 07:08	06/05/20 01:01	1
8:2 Fluorotelomer sulfonic acid	**9.0**		2.3	0.77	ng/L		06/03/20 07:08	06/05/20 01:01	1
4:2 Fluorotelomer sulfonic acid	ND		1.5	0.39	ng/L		06/03/20 07:08	06/05/20 01:01	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
M2-4:2 FTS	363	*5	50 - 150	06/03/20 07:08	06/05/20 01:01	1
M2-8:2 FTS	124		50 - 150	06/03/20 07:08	06/05/20 01:01	1
M2-6:2 FTS	272	*5	50 - 150	06/03/20 07:08	06/05/20 01:01	1
13C4 PFHpA	118		50 - 150	06/03/20 07:08	06/05/20 01:01	1
13C8 PFOA	86		50 - 150	06/03/20 07:08	06/05/20 01:01	1
13C6 PFDA	79		50 - 150	06/03/20 07:08	06/05/20 01:01	1
13C7 PFUnA	57		50 - 150	06/03/20 07:08	06/05/20 01:01	1
13C2-PFDoDA	40	*5	50 - 150	06/03/20 07:08	06/05/20 01:01	1
13C2 PFTeDA	10	*5	50 - 150	06/03/20 07:08	06/05/20 01:01	1
13C3 PFBS	115		50 - 150	06/03/20 07:08	06/05/20 01:01	1
13C3 PFHxS	76		50 - 150	06/03/20 07:08	06/05/20 01:01	1
13C8 PFOS	93		50 - 150	06/03/20 07:08	06/05/20 01:01	1
d3-NMeFOSAA	69		50 - 150	06/03/20 07:08	06/05/20 01:01	1
d5-NEtFOSAA	52		50 - 150	06/03/20 07:08	06/05/20 01:01	1
13C8 FOSA	36	*5	50 - 150	06/03/20 07:08	06/05/20 01:01	1
13C4 PFBA	53		50 - 150	06/03/20 07:08	06/05/20 01:01	1
13C5 PFPeA	124		50 - 150	06/03/20 07:08	06/05/20 01:01	1
13C5 PFHxA	90		50 - 150	06/03/20 07:08	06/05/20 01:01	1
13C9 PFNA	158	*5	50 - 150	06/03/20 07:08	06/05/20 01:01	1

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: BC Laboratories
Project/Site: 2015516

Job ID: 410-2875-1

Client Sample ID: CG-TB
Date Collected: 05/27/20 00:00
Date Received: 06/01/20 09:37

Lab Sample ID: 410-2875-2
Matrix: Water

Method: EPA 537 (Mod) - EPA 537 mod QSM 5.1, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid	ND		1.8	0.45	ng/L		06/03/20 07:08	06/05/20 01:10	1
11Cl-PF3OUdS	ND		1.8	0.45	ng/L		06/03/20 07:08	06/05/20 01:10	1
Perfluoroheptanoic acid	ND		1.8	0.45	ng/L		06/03/20 07:08	06/05/20 01:10	1
Perfluorooctanoic acid	ND		1.8	0.45	ng/L		06/03/20 07:08	06/05/20 01:10	1
Perfluorononanoic acid	ND		1.8	0.45	ng/L		06/03/20 07:08	06/05/20 01:10	1
Perfluorodecanoic acid	ND		1.8	0.45	ng/L		06/03/20 07:08	06/05/20 01:10	1
9Cl-PF3ONS	ND		1.8	0.45	ng/L		06/03/20 07:08	06/05/20 01:10	1
Perfluorotridecanoic acid	ND		1.8	0.45	ng/L		06/03/20 07:08	06/05/20 01:10	1
Perfluorotetradecanoic acid	ND		1.8	0.45	ng/L		06/03/20 07:08	06/05/20 01:10	1
Perfluorobutanesulfonic acid	ND		1.8	0.45	ng/L		06/03/20 07:08	06/05/20 01:10	1
Perfluorohexanesulfonic acid	ND		1.8	0.45	ng/L		06/03/20 07:08	06/05/20 01:10	1
Perfluorooctanesulfonic acid	ND		1.8	0.45	ng/L		06/03/20 07:08	06/05/20 01:10	1
NEtFOSAA	ND		2.7	0.45	ng/L		06/03/20 07:08	06/05/20 01:10	1
NMeFOSAA	ND		1.8	0.55	ng/L		06/03/20 07:08	06/05/20 01:10	1
Perfluoropentanesulfonic acid	ND		1.8	0.45	ng/L		06/03/20 07:08	06/05/20 01:10	1
Perfluoroheptanesulfonic acid	ND		1.8	0.45	ng/L		06/03/20 07:08	06/05/20 01:10	1
Perfluorodecanesulfonic acid	ND		1.8	0.45	ng/L		06/03/20 07:08	06/05/20 01:10	1
Perfluorooctanesulfonamide	ND		1.8	0.45	ng/L		06/03/20 07:08	06/05/20 01:10	1
Perfluorobutanoic acid	ND	*	4.5	1.8	ng/L		06/03/20 07:08	06/05/20 01:10	1
Perfluoropentanoic acid	ND	*	1.8	0.45	ng/L		06/03/20 07:08	06/05/20 01:10	1
Perfluoroundecanoic acid	ND		1.8	0.45	ng/L		06/03/20 07:08	06/05/20 01:10	1
Perfluorododecanoic acid	ND		1.8	0.45	ng/L		06/03/20 07:08	06/05/20 01:10	1
6:2 Fluorotelomer sulfonic acid	ND		4.5	1.8	ng/L		06/03/20 07:08	06/05/20 01:10	1
8:2 Fluorotelomer sulfonic acid	ND		2.7	0.91	ng/L		06/03/20 07:08	06/05/20 01:10	1
4:2 Fluorotelomer sulfonic acid	ND		1.8	0.45	ng/L		06/03/20 07:08	06/05/20 01:10	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
M2-4:2 FTS	*113*		*50 - 150*	*06/03/20 07:08*	*06/05/20 01:10*	*1*
M2-8:2 FTS	*92*		*50 - 150*	*06/03/20 07:08*	*06/05/20 01:10*	*1*
M2-6:2 FTS	*107*		*50 - 150*	*06/03/20 07:08*	*06/05/20 01:10*	*1*
13C4 PFHpA	*102*		*50 - 150*	*06/03/20 07:08*	*06/05/20 01:10*	*1*
13C8 PFOA	*109*		*50 - 150*	*06/03/20 07:08*	*06/05/20 01:10*	*1*
13C6 PFDA	*97*		*50 - 150*	*06/03/20 07:08*	*06/05/20 01:10*	*1*
13C7 PFUnA	*97*		*50 - 150*	*06/03/20 07:08*	*06/05/20 01:10*	*1*
13C2-PFDoDA	*98*		*50 - 150*	*06/03/20 07:08*	*06/05/20 01:10*	*1*
13C2 PFTeDA	*90*		*50 - 150*	*06/03/20 07:08*	*06/05/20 01:10*	*1*
13C3 PFBS	*94*		*50 - 150*	*06/03/20 07:08*	*06/05/20 01:10*	*1*
13C3 PFHxS	*109*		*50 - 150*	*06/03/20 07:08*	*06/05/20 01:10*	*1*
13C8 PFOS	*103*		*50 - 150*	*06/03/20 07:08*	*06/05/20 01:10*	*1*
d3-NMeFOSAA	*105*		*50 - 150*	*06/03/20 07:08*	*06/05/20 01:10*	*1*
d5-NEtFOSAA	*110*		*50 - 150*	*06/03/20 07:08*	*06/05/20 01:10*	*1*
13C8 FOSA	*89*		*50 - 150*	*06/03/20 07:08*	*06/05/20 01:10*	*1*
13C4 PFBA	*98*		*50 - 150*	*06/03/20 07:08*	*06/05/20 01:10*	*1*
13C5 PFPeA	*109*		*50 - 150*	*06/03/20 07:08*	*06/05/20 01:10*	*1*
13C5 PFHxA	*105*		*50 - 150*	*06/03/20 07:08*	*06/05/20 01:10*	*1*
13C9 PFNA	*93*		*50 - 150*	*06/03/20 07:08*	*06/05/20 01:10*	*1*

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: BC Laboratories
Project/Site: 2015516

Job ID: 410-2875-1

Client Sample ID: CG-FB
Date Collected: 05/27/20 00:00
Date Received: 06/01/20 09:37

Lab Sample ID: 410-2875-3
Matrix: Water

Method: EPA 537 (Mod) - EPA 537 mod QSM 5.1, Table B-15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid	ND		1.6	0.40	ng/L		06/10/20 07:29	06/16/20 12:56	1
11Cl-PF3OUdS	ND		1.6	0.40	ng/L		06/10/20 07:29	06/16/20 12:56	1
Perfluoroheptanoic acid	ND		1.6	0.40	ng/L		06/10/20 07:29	06/16/20 12:56	1
Perfluorooctanoic acid	ND		1.6	0.40	ng/L		06/10/20 07:29	06/16/20 12:56	1
Perfluorononanoic acid	ND		1.6	0.40	ng/L		06/10/20 07:29	06/16/20 12:56	1
Perfluorodecanoic acid	ND		1.6	0.40	ng/L		06/10/20 07:29	06/16/20 12:56	1
9Cl-PF3ONS	ND		1.6	0.40	ng/L		06/10/20 07:29	06/16/20 12:56	1
Perfluorotridecanoic acid	ND		1.6	0.40	ng/L		06/10/20 07:29	06/16/20 12:56	1
Perfluorotetradecanoic acid	ND		1.6	0.40	ng/L		06/10/20 07:29	06/16/20 12:56	1
Perfluorobutanesulfonic acid	ND		1.6	0.40	ng/L		06/10/20 07:29	06/16/20 12:56	1
Perfluorohexanesulfonic acid	ND		1.6	0.40	ng/L		06/10/20 07:29	06/16/20 12:56	1
Perfluorooctanesulfonic acid	ND		1.6	0.40	ng/L		06/10/20 07:29	06/16/20 12:56	1
NEtFOSAA	ND		2.4	0.40	ng/L		06/10/20 07:29	06/16/20 12:56	1
NMeFOSAA	ND		1.6	0.48	ng/L		06/10/20 07:29	06/16/20 12:56	1
Perfluoropentanesulfonic acid	ND		1.6	0.40	ng/L		06/10/20 07:29	06/16/20 12:56	1
Perfluoroheptanesulfonic acid	ND		1.6	0.40	ng/L		06/10/20 07:29	06/16/20 12:56	1
Perfluorodecanesulfonic acid	ND		1.6	0.40	ng/L		06/10/20 07:29	06/16/20 12:56	1
Perfluorooctanesulfonamide	ND		1.6	0.40	ng/L		06/10/20 07:29	06/16/20 12:56	1
Perfluorobutanoic acid	ND		4.0	1.6	ng/L		06/10/20 07:29	06/16/20 12:56	1
Perfluoropentanoic acid	ND		1.6	0.40	ng/L		06/10/20 07:29	06/16/20 12:56	1
Perfluoroundecanoic acid	ND		1.6	0.40	ng/L		06/10/20 07:29	06/16/20 12:56	1
Perfluorododecanoic acid	ND		1.6	0.40	ng/L		06/10/20 07:29	06/16/20 12:56	1
6:2 Fluorotelomer sulfonic acid	ND		4.0	1.6	ng/L		06/10/20 07:29	06/16/20 12:56	1
8:2 Fluorotelomer sulfonic acid	ND		2.4	0.80	ng/L		06/10/20 07:29	06/16/20 12:56	1
4:2 Fluorotelomer sulfonic acid	ND		1.6	0.40	ng/L		06/10/20 07:29	06/16/20 12:56	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
M2-4:2 FTS	*74*		*50 - 150*	*06/10/20 07:29*	*06/16/20 12:56*	*1*
M2-8:2 FTS	*78*		*50 - 150*	*06/10/20 07:29*	*06/16/20 12:56*	*1*
M2-6:2 FTS	*76*		*50 - 150*	*06/10/20 07:29*	*06/16/20 12:56*	*1*
13C4 PFHpA	*72*		*50 - 150*	*06/10/20 07:29*	*06/16/20 12:56*	*1*
13C8 PFOA	*71*		*50 - 150*	*06/10/20 07:29*	*06/16/20 12:56*	*1*
13C6 PFDA	*74*		*50 - 150*	*06/10/20 07:29*	*06/16/20 12:56*	*1*
13C7 PFUnA	*74*		*50 - 150*	*06/10/20 07:29*	*06/16/20 12:56*	*1*
13C2-PFDoDA	*69*		*50 - 150*	*06/10/20 07:29*	*06/16/20 12:56*	*1*
13C2 PFTeDA	*68*		*50 - 150*	*06/10/20 07:29*	*06/16/20 12:56*	*1*
13C3 PFBS	*72*		*50 - 150*	*06/10/20 07:29*	*06/16/20 12:56*	*1*
13C3 PFHxS	*73*		*50 - 150*	*06/10/20 07:29*	*06/16/20 12:56*	*1*
13C8 PFOS	*74*		*50 - 150*	*06/10/20 07:29*	*06/16/20 12:56*	*1*
d3-NMeFOSAA	*71*		*50 - 150*	*06/10/20 07:29*	*06/16/20 12:56*	*1*
d5-NEtFOSAA	*76*		*50 - 150*	*06/10/20 07:29*	*06/16/20 12:56*	*1*
13C8 FOSA	*73*		*50 - 150*	*06/10/20 07:29*	*06/16/20 12:56*	*1*
13C4 PFBA	*73*		*50 - 150*	*06/10/20 07:29*	*06/16/20 12:56*	*1*
13C5 PFPeA	*74*		*50 - 150*	*06/10/20 07:29*	*06/16/20 12:56*	*1*
13C5 PFHxA	*77*		*50 - 150*	*06/10/20 07:29*	*06/16/20 12:56*	*1*
13C9 PFNA	*74*		*50 - 150*	*06/10/20 07:29*	*06/16/20 12:56*	*1*

Eurofins Lancaster Laboratories Env, LLC

Isotope Dilution Summary

Client: BC Laboratories
Project/Site: 2015516

Job ID: 410-2875-1

Method: EPA 537 (Mod) - EPA 537 mod QSM 5.1, Table B-15

Matrix: Water

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	M242FTS (50-150)	M282FTS (50-150)	M262FTS (50-150)	C4PFHA (50-150)	C8PFOA (50-150)	C6PFDA (50-150)	13C7PUA (50-150)	PFDoDA (50-150)
410-2875-1 - RE	CGGC	363 *5	124	272 *5	118	86	79	57	40 *5
410-2875-1	CGGC	322 *5	106	145	56	67	64	58	59
410-2875-1 - DL	CGGC								
410-2875-2	CG-TB	113	92	107	102	109	97	97	98
410-2875-3	CG-FB	74	78	76	72	71	74	74	69
LCS 410-10134/2-A	Lab Control Sample	115	91	101	102	102	95	100	92
LCS 410-11733/2-A	Lab Control Sample	78	80	80	76	74	77	78	74
LCSD 410-10134/3-A	Lab Control Sample Dup	113	101	110	105	106	106	105	105
LCSD 410-11733/3-A	Lab Control Sample Dup	80	86	80	77	76	83	82	78
MB 410-10134/1-A	Method Blank	106	96	95	99	99	93	104	98
MB 410-11733/1-A	Method Blank	83	84	82	81	79	82	80	77

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFTDA (50-150)	C3PFBS (50-150)	C3PFHS (50-150)	C8PFOS (50-150)	d3NMFOS (50-150)	d5NEFOS (50-150)	PFOSA (50-150)	PFBA (50-150)
410-2875-1 - RE	CGGC	10 *5	115	76	93	69	52	36 *5	53
410-2875-1	CGGC	27 *5	90	63	70	68	67	34 *5	38 *5
410-2875-1 - DL	CGGC					71	77		
410-2875-2	CG-TB	90	94	109	103	105	110	89	98
410-2875-3	CG-FB	68	72	73	74	71	76	73	73
LCS 410-10134/2-A	Lab Control Sample	98	93	102	103	110	113	92	97
LCS 410-11733/2-A	Lab Control Sample	75	75	72	76	78	84	74	76
LCSD 410-10134/3-A	Lab Control Sample Dup	100	94	106	104	112	120	103	101
LCSD 410-11733/3-A	Lab Control Sample Dup	77	78	76	80	80	83	75	80
MB 410-10134/1-A	Method Blank	94	94	100	102	113	121	93	95
MB 410-11733/1-A	Method Blank	76	80	77	82	82	85	76	82

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFPeA (50-150)	13C5PHA (50-150)	C9PFNA (50-150)
410-2875-1 - RE	CGGC	124	90	158 *5
410-2875-1	CGGC	77	59	69
410-2875-1 - DL	CGGC			
410-2875-2	CG-TB	109	105	93
410-2875-3	CG-FB	74	77	74
LCS 410-10134/2-A	Lab Control Sample	120	106	94
LCS 410-11733/2-A	Lab Control Sample	76	77	75
LCSD 410-10134/3-A	Lab Control Sample Dup	107	105	93
LCSD 410-11733/3-A	Lab Control Sample Dup	78	79	80
MB 410-10134/1-A	Method Blank	104	101	96
MB 410-11733/1-A	Method Blank	82	81	84

Surrogate Legend

M242FTS = M2-4:2 FTS
M282FTS = M2-8:2 FTS
M262FTS = M2-6:2 FTS
C4PFHA = 13C4 PFHpA
C8PFOA = 13C8 PFOA
C6PFDA = 13C6 PFDA
13C7PUA = 13C7 PFUnA
PFDoDA = 13C2-PFDoDA

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Isotope Dilution Summary

Client: BC Laboratories
Project/Site: 2015516

Job ID: 410-2875-1

PFTDA = 13C2 PFTeDA
C3PFBS = 13C3 PFBS
C3PFHS = 13C3 PFHxS
C8PFOS = 13C8 PFOS
d3NMFOS = d3-NMeFOSAA
d5NEFOS = d5-NEtFOSAA
PFOSA = 13C8 FOSA
PFBA = 13C4 PFBA
PFPeA = 13C5 PFPeA
13C5PHA = 13C5 PFHxA
C9PFNA = 13C9 PFNA

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QC Sample Results

Client: BC Laboratories
Project/Site: 2015516

Job ID: 410-2875-1

Method: EPA 537 (Mod) - EPA 537 mod QSM 5.1, Table B-15

Lab Sample ID: MB 410-10134/1-A
Matrix: Water
Analysis Batch: 10632

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 10134

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid	ND		2.0	0.50	ng/L		06/03/20 07:08	06/05/20 00:24	1
11Cl-PF3OUdS	ND		2.0	0.50	ng/L		06/03/20 07:08	06/05/20 00:24	1
Perfluoroheptanoic acid	ND		2.0	0.50	ng/L		06/03/20 07:08	06/05/20 00:24	1
Perfluorooctanoic acid	ND		2.0	0.50	ng/L		06/03/20 07:08	06/05/20 00:24	1
Perfluorononanoic acid	ND		2.0	0.50	ng/L		06/03/20 07:08	06/05/20 00:24	1
Perfluorodecanoic acid	ND		2.0	0.50	ng/L		06/03/20 07:08	06/05/20 00:24	1
9Cl-PF3ONS	ND		2.0	0.50	ng/L		06/03/20 07:08	06/05/20 00:24	1
Perfluorotridecanoic acid	ND		2.0	0.50	ng/L		06/03/20 07:08	06/05/20 00:24	1
Perfluorotetradecanoic acid	ND		2.0	0.50	ng/L		06/03/20 07:08	06/05/20 00:24	1
Perfluorobutanesulfonic acid	ND		2.0	0.50	ng/L		06/03/20 07:08	06/05/20 00:24	1
Perfluorohexanesulfonic acid	ND		2.0	0.50	ng/L		06/03/20 07:08	06/05/20 00:24	1
Perfluorooctanesulfonic acid	ND		2.0	0.50	ng/L		06/03/20 07:08	06/05/20 00:24	1
NEtFOSAA	ND		3.0	0.50	ng/L		06/03/20 07:08	06/05/20 00:24	1
NMeFOSAA	ND		2.0	0.60	ng/L		06/03/20 07:08	06/05/20 00:24	1
Perfluoropentanesulfonic acid	ND		2.0	0.50	ng/L		06/03/20 07:08	06/05/20 00:24	1
Perfluoroheptanesulfonic acid	ND		2.0	0.50	ng/L		06/03/20 07:08	06/05/20 00:24	1
Perfluorodecanesulfonic acid	ND		2.0	0.50	ng/L		06/03/20 07:08	06/05/20 00:24	1
Perfluorooctanesulfonamide	ND		2.0	0.50	ng/L		06/03/20 07:08	06/05/20 00:24	1
Perfluorobutanoic acid	ND		5.0	2.0	ng/L		06/03/20 07:08	06/05/20 00:24	1
Perfluoropentanoic acid	ND		2.0	0.50	ng/L		06/03/20 07:08	06/05/20 00:24	1
Perfluoroundecanoic acid	ND		2.0	0.50	ng/L		06/03/20 07:08	06/05/20 00:24	1
Perfluorododecanoic acid	ND		2.0	0.50	ng/L		06/03/20 07:08	06/05/20 00:24	1
6:2 Fluorotelomer sulfonic acid	ND		5.0	2.0	ng/L		06/03/20 07:08	06/05/20 00:24	1
8:2 Fluorotelomer sulfonic acid	ND		3.0	1.0	ng/L		06/03/20 07:08	06/05/20 00:24	1
4:2 Fluorotelomer sulfonic acid	ND		2.0	0.50	ng/L		06/03/20 07:08	06/05/20 00:24	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
M2-4:2 FTS	*106*		*50 - 150*	*06/03/20 07:08*	*06/05/20 00:24*	*1*
M2-8:2 FTS	*96*		*50 - 150*	*06/03/20 07:08*	*06/05/20 00:24*	*1*
M2-6:2 FTS	*95*		*50 - 150*	*06/03/20 07:08*	*06/05/20 00:24*	*1*
13C4 PFHpA	*99*		*50 - 150*	*06/03/20 07:08*	*06/05/20 00:24*	*1*
13C8 PFOA	*99*		*50 - 150*	*06/03/20 07:08*	*06/05/20 00:24*	*1*
13C6 PFDA	*93*		*50 - 150*	*06/03/20 07:08*	*06/05/20 00:24*	*1*
13C7 PFUnA	*104*		*50 - 150*	*06/03/20 07:08*	*06/05/20 00:24*	*1*
13C2-PFDoDA	*98*		*50 - 150*	*06/03/20 07:08*	*06/05/20 00:24*	*1*
13C2 PFTeDA	*94*		*50 - 150*	*06/03/20 07:08*	*06/05/20 00:24*	*1*
13C3 PFBS	*94*		*50 - 150*	*06/03/20 07:08*	*06/05/20 00:24*	*1*
13C3 PFHxS	*100*		*50 - 150*	*06/03/20 07:08*	*06/05/20 00:24*	*1*
13C8 PFOS	*102*		*50 - 150*	*06/03/20 07:08*	*06/05/20 00:24*	*1*
d3-NMeFOSAA	*113*		*50 - 150*	*06/03/20 07:08*	*06/05/20 00:24*	*1*
d5-NEtFOSAA	*121*		*50 - 150*	*06/03/20 07:08*	*06/05/20 00:24*	*1*
13C8 FOSA	*93*		*50 - 150*	*06/03/20 07:08*	*06/05/20 00:24*	*1*
13C4 PFBA	*95*		*50 - 150*	*06/03/20 07:08*	*06/05/20 00:24*	*1*
13C5 PFPeA	*104*		*50 - 150*	*06/03/20 07:08*	*06/05/20 00:24*	*1*
13C5 PFHxA	*101*		*50 - 150*	*06/03/20 07:08*	*06/05/20 00:24*	*1*
13C9 PFNA	*96*		*50 - 150*	*06/03/20 07:08*	*06/05/20 00:24*	*1*

Eurofins Lancaster Laboratories Env, LLC

QC Sample Results

Client: BC Laboratories
Project/Site: 2015516

Job ID: 410-2875-1

Method: EPA 537 (Mod) - EPA 537 mod QSM 5.1, Table B-15 (Continued)

Lab Sample ID: LCS 410-10134/2-A
Matrix: Water
Analysis Batch: 10632

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 10134

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorohexanoic acid	25.6	22.0		ng/L		86	80 - 137
11Cl-PF3OUdS	24.1	19.5		ng/L		81	70 - 130
Perfluoroheptanoic acid	25.6	24.5		ng/L		96	80 - 140
Perfluorooctanoic acid	25.6	22.8		ng/L		89	83 - 138
Perfluorononanoic acid	25.6	23.0		ng/L		90	73 - 140
Perfluorodecanoic acid	25.6	24.5		ng/L		96	78 - 137
9Cl-PF3ONS	23.9	21.0		ng/L		88	70 - 130
Perfluorotridecanoic acid	25.6	25.7		ng/L		100	67 - 144
Perfluorotetradecanoic acid	25.6	23.7		ng/L		93	79 - 134
Perfluorobutanesulfonic acid	22.6	19.9		ng/L		88	81 - 133
Perfluorohexanesulfonic acid	24.2	22.7		ng/L		94	71 - 131
Perfluorooctanesulfonic acid	24.5	19.5		ng/L		80	54 - 139
NEtFOSAA	25.6	25.2		ng/L		98	59 - 145
NMeFOSAA	25.6	24.7		ng/L		96	53 - 136
Perfluoropentanesulfonic acid	24.0	20.2		ng/L		84	82 - 132
Perfluoroheptanesulfonic acid	24.4	20.4		ng/L		84	80 - 129
Perfluorodecanesulfonic acid	24.7	19.8		ng/L		80	69 - 124
Perfluorooctanesulfonamide	25.6	23.9		ng/L		93	73 - 121
Perfluorobutanoic acid	25.6	21.5		ng/L		84	84 - 135
Perfluoropentanoic acid	25.6	18.9	*	ng/L		74	75 - 138
Perfluoroundecanoic acid	25.6	22.7		ng/L		88	70 - 134
Perfluorododecanoic acid	25.6	25.2		ng/L		99	75 - 139
6:2 Fluorotelomer sulfonic acid	24.3	22.1		ng/L		91	51 - 155
8:2 Fluorotelomer sulfonic acid	24.5	23.7		ng/L		97	62 - 133
4:2 Fluorotelomer sulfonic acid	23.9	19.7		ng/L		82	64 - 134

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
M2-4:2 FTS	*115*		*50 - 150*
M2-8:2 FTS	*91*		*50 - 150*
M2-6:2 FTS	*101*		*50 - 150*
13C4 PFHpA	*102*		*50 - 150*
13C8 PFOA	*102*		*50 - 150*
13C6 PFDA	*95*		*50 - 150*
13C7 PFUnA	*100*		*50 - 150*
13C2-PFDoDA	*92*		*50 - 150*
13C2 PFTeDA	*98*		*50 - 150*
13C3 PFBS	*93*		*50 - 150*
13C3 PFHxS	*102*		*50 - 150*
13C8 PFOS	*103*		*50 - 150*
d3-NMeFOSAA	*110*		*50 - 150*
d5-NEtFOSAA	*113*		*50 - 150*
13C8 FOSA	*92*		*50 - 150*
13C4 PFBA	*97*		*50 - 150*
13C5 PFPeA	*120*		*50 - 150*
13C5 PFHxA	*106*		*50 - 150*
13C9 PFNA	*94*		*50 - 150*

Eurofins Lancaster Laboratories Env, LLC

QC Sample Results

Client: BC Laboratories
Project/Site: 2015516

Job ID: 410-2875-1

Method: EPA 537 (Mod) - EPA 537 mod QSM 5.1, Table B-15 (Continued)

Lab Sample ID: LCSD 410-10134/3-A
Matrix: Water
Analysis Batch: 10632

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 10134

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perfluorohexanoic acid	25.6	23.2		ng/L		91	80 - 137	5	30
11Cl-PF3OUdS	24.1	20.1		ng/L		84	70 - 130	3	30
Perfluoroheptanoic acid	25.6	24.3		ng/L		95	80 - 140	1	30
Perfluorooctanoic acid	25.6	22.6		ng/L		88	83 - 138	1	30
Perfluorononanoic acid	25.6	24.3		ng/L		95	73 - 140	5	30
Perfluorodecanoic acid	25.6	23.9		ng/L		93	78 - 137	3	30
9Cl-PF3ONS	23.9	20.1		ng/L		84	70 - 130	4	30
Perfluorotridecanoic acid	25.6	23.7		ng/L		93	67 - 144	8	30
Perfluorotetradecanoic acid	25.6	24.5		ng/L		96	79 - 134	3	30
Perfluorobutanesulfonic acid	22.6	20.4		ng/L		90	81 - 133	3	30
Perfluorohexanesulfonic acid	24.2	21.8		ng/L		90	71 - 131	4	30
Perfluorooctanesulfonic acid	24.5	18.3		ng/L		75	54 - 139	6	30
NEtFOSAA	25.6	25.9		ng/L		101	59 - 145	3	30
NMeFOSAA	25.6	28.1		ng/L		110	53 - 136	13	30
Perfluoropentanesulfonic acid	24.0	21.0		ng/L		88	82 - 132	4	30
Perfluoroheptanesulfonic acid	24.4	20.5		ng/L		84	80 - 129	0	30
Perfluorodecanesulfonic acid	24.7	19.6		ng/L		80	69 - 124	1	30
Perfluorooctanesulfonamide	25.6	22.7		ng/L		89	73 - 121	5	30
Perfluorobutanoic acid	25.6	21.3	*	ng/L		83	84 - 135	1	30
Perfluoropentanoic acid	25.6	21.6		ng/L		84	75 - 138	13	30
Perfluoroundecanoic acid	25.6	24.4		ng/L		95	70 - 134	7	30
Perfluorododecanoic acid	25.6	23.7		ng/L		93	75 - 139	6	30
6:2 Fluorotelomer sulfonic acid	24.3	21.8		ng/L		90	51 - 155	1	30
8:2 Fluorotelomer sulfonic acid	24.5	22.1		ng/L		90	62 - 133	7	30
4:2 Fluorotelomer sulfonic acid	23.9	19.7		ng/L		83	64 - 134	0	30

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
M2-4:2 FTS	*113*		*50 - 150*
M2-8:2 FTS	*101*		*50 - 150*
M2-6:2 FTS	*110*		*50 - 150*
13C4 PFHpA	*105*		*50 - 150*
13C8 PFOA	*106*		*50 - 150*
13C6 PFDA	*106*		*50 - 150*
13C7 PFUnA	*105*		*50 - 150*
13C2-PFDoDA	*105*		*50 - 150*
13C2 PFTeDA	*100*		*50 - 150*
13C3 PFBS	*94*		*50 - 150*
13C3 PFHxS	*106*		*50 - 150*
13C8 PFOS	*104*		*50 - 150*
d3-NMeFOSAA	*112*		*50 - 150*
d5-NEtFOSAA	*120*		*50 - 150*
13C8 FOSA	*103*		*50 - 150*
13C4 PFBA	*101*		*50 - 150*
13C5 PFPeA	*107*		*50 - 150*
13C5 PFHxA	*105*		*50 - 150*
13C9 PFNA	*93*		*50 - 150*

Eurofins Lancaster Laboratories Env, LLC

QC Sample Results

Client: BC Laboratories
Project/Site: 2015516

Job ID: 410-2875-1

Method: EPA 537 (Mod) - EPA 537 mod QSM 5.1, Table B-15 (Continued)

Lab Sample ID: MB 410-11733/1-A
Matrix: Water
Analysis Batch: 13503

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 11733

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid	ND		2.0	0.50	ng/L		06/10/20 07:29	06/16/20 12:11	1
11Cl-PF3OUdS	ND		2.0	0.50	ng/L		06/10/20 07:29	06/16/20 12:11	1
Perfluoroheptanoic acid	ND		2.0	0.50	ng/L		06/10/20 07:29	06/16/20 12:11	1
Perfluorooctanoic acid	ND		2.0	0.50	ng/L		06/10/20 07:29	06/16/20 12:11	1
Perfluorononanoic acid	ND		2.0	0.50	ng/L		06/10/20 07:29	06/16/20 12:11	1
Perfluorodecanoic acid	ND		2.0	0.50	ng/L		06/10/20 07:29	06/16/20 12:11	1
9Cl-PF3ONS	ND		2.0	0.50	ng/L		06/10/20 07:29	06/16/20 12:11	1
Perfluorotridecanoic acid	ND		2.0	0.50	ng/L		06/10/20 07:29	06/16/20 12:11	1
Perfluorotetradecanoic acid	ND		2.0	0.50	ng/L		06/10/20 07:29	06/16/20 12:11	1
Perfluorobutanesulfonic acid	ND		2.0	0.50	ng/L		06/10/20 07:29	06/16/20 12:11	1
Perfluorohexanesulfonic acid	ND		2.0	0.50	ng/L		06/10/20 07:29	06/16/20 12:11	1
Perfluorooctanesulfonic acid	ND		2.0	0.50	ng/L		06/10/20 07:29	06/16/20 12:11	1
NEtFOSAA	ND		3.0	0.50	ng/L		06/10/20 07:29	06/16/20 12:11	1
NMeFOSAA	ND		2.0	0.60	ng/L		06/10/20 07:29	06/16/20 12:11	1
Perfluoropentanesulfonic acid	ND		2.0	0.50	ng/L		06/10/20 07:29	06/16/20 12:11	1
Perfluoroheptanesulfonic acid	ND		2.0	0.50	ng/L		06/10/20 07:29	06/16/20 12:11	1
Perfluorodecanesulfonic acid	ND		2.0	0.50	ng/L		06/10/20 07:29	06/16/20 12:11	1
Perfluorooctanesulfonamide	ND		2.0	0.50	ng/L		06/10/20 07:29	06/16/20 12:11	1
Perfluorobutanoic acid	ND		5.0	2.0	ng/L		06/10/20 07:29	06/16/20 12:11	1
Perfluoropentanoic acid	ND		2.0	0.50	ng/L		06/10/20 07:29	06/16/20 12:11	1
Perfluoroundecanoic acid	ND		2.0	0.50	ng/L		06/10/20 07:29	06/16/20 12:11	1
Perfluorododecanoic acid	ND		2.0	0.50	ng/L		06/10/20 07:29	06/16/20 12:11	1
6:2 Fluorotelomer sulfonic acid	ND		5.0	2.0	ng/L		06/10/20 07:29	06/16/20 12:11	1
8:2 Fluorotelomer sulfonic acid	ND		3.0	1.0	ng/L		06/10/20 07:29	06/16/20 12:11	1
4:2 Fluorotelomer sulfonic acid	ND		2.0	0.50	ng/L		06/10/20 07:29	06/16/20 12:11	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
M2-4:2 FTS	*83*		*50 - 150*	*06/10/20 07:29*	*06/16/20 12:11*	*1*
M2-8:2 FTS	*84*		*50 - 150*	*06/10/20 07:29*	*06/16/20 12:11*	*1*
M2-6:2 FTS	*82*		*50 - 150*	*06/10/20 07:29*	*06/16/20 12:11*	*1*
13C4 PFHpA	*81*		*50 - 150*	*06/10/20 07:29*	*06/16/20 12:11*	*1*
13C8 PFOA	*79*		*50 - 150*	*06/10/20 07:29*	*06/16/20 12:11*	*1*
13C6 PFDA	*82*		*50 - 150*	*06/10/20 07:29*	*06/16/20 12:11*	*1*
13C7 PFUnA	*80*		*50 - 150*	*06/10/20 07:29*	*06/16/20 12:11*	*1*
13C2-PFDoDA	*77*		*50 - 150*	*06/10/20 07:29*	*06/16/20 12:11*	*1*
13C2 PFTeDA	*76*		*50 - 150*	*06/10/20 07:29*	*06/16/20 12:11*	*1*
13C3 PFBS	*80*		*50 - 150*	*06/10/20 07:29*	*06/16/20 12:11*	*1*
13C3 PFHxS	*77*		*50 - 150*	*06/10/20 07:29*	*06/16/20 12:11*	*1*
13C8 PFOS	*82*		*50 - 150*	*06/10/20 07:29*	*06/16/20 12:11*	*1*
d3-NMeFOSAA	*82*		*50 - 150*	*06/10/20 07:29*	*06/16/20 12:11*	*1*
d5-NEtFOSAA	*85*		*50 - 150*	*06/10/20 07:29*	*06/16/20 12:11*	*1*
13C8 FOSA	*76*		*50 - 150*	*06/10/20 07:29*	*06/16/20 12:11*	*1*
13C4 PFBA	*82*		*50 - 150*	*06/10/20 07:29*	*06/16/20 12:11*	*1*
13C5 PFPeA	*82*		*50 - 150*	*06/10/20 07:29*	*06/16/20 12:11*	*1*
13C5 PFHxA	*81*		*50 - 150*	*06/10/20 07:29*	*06/16/20 12:11*	*1*
13C9 PFNA	*84*		*50 - 150*	*06/10/20 07:29*	*06/16/20 12:11*	*1*

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QC Sample Results

Client: BC Laboratories
Project/Site: 2015516

Job ID: 410-2875-1

Method: EPA 537 (Mod) - EPA 537 mod QSM 5.1, Table B-15 (Continued)

Lab Sample ID: LCS 410-11733/2-A
Matrix: Water
Analysis Batch: 13503

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 11733

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorohexanoic acid	25.6	26.4		ng/L		103	80 - 137
11Cl-PF3OUdS	24.1	24.9		ng/L		103	70 - 130
Perfluoroheptanoic acid	25.6	27.0		ng/L		105	80 - 140
Perfluorooctanoic acid	25.6	27.4		ng/L		107	83 - 138
Perfluorononanoic acid	25.6	29.7		ng/L		116	73 - 140
Perfluorodecanoic acid	25.6	26.2		ng/L		102	78 - 137
9Cl-PF3ONS	23.9	23.9		ng/L		100	70 - 130
Perfluorotridecanoic acid	25.6	28.3		ng/L		111	67 - 144
Perfluorotetradecanoic acid	25.6	26.9		ng/L		105	79 - 134
Perfluorobutanesulfonic acid	22.6	23.0		ng/L		102	81 - 133
Perfluorohexanesulfonic acid	24.2	25.9		ng/L		107	71 - 131
Perfluorooctanesulfonic acid	24.5	22.8		ng/L		93	54 - 139
NEtFOSAA	25.6	24.7		ng/L		97	59 - 145
NMeFOSAA	25.6	28.9		ng/L		113	53 - 136
Perfluoropentanesulfonic acid	24.0	25.7		ng/L		107	82 - 132
Perfluoroheptanesulfonic acid	24.4	27.3		ng/L		112	80 - 129
Perfluorodecanesulfonic acid	24.7	27.4		ng/L		111	69 - 124
Perfluorooctanesulfonamide	25.6	25.1		ng/L		98	73 - 121
Perfluorobutanoic acid	25.6	28.0		ng/L		110	84 - 135
Perfluoropentanoic acid	25.6	27.5		ng/L		108	75 - 138
Perfluoroundecanoic acid	25.6	26.3		ng/L		103	70 - 134
Perfluorododecanoic acid	25.6	28.4		ng/L		111	75 - 139
6:2 Fluorotelomer sulfonic acid	24.3	24.4		ng/L		101	51 - 155
8:2 Fluorotelomer sulfonic acid	24.5	24.2		ng/L		99	62 - 133
4:2 Fluorotelomer sulfonic acid	23.9	23.9		ng/L		100	64 - 134

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
M2-4:2 FTS	*78*		*50 - 150*
M2-8:2 FTS	*80*		*50 - 150*
M2-6:2 FTS	*80*		*50 - 150*
13C4 PFHpA	*76*		*50 - 150*
13C8 PFOA	*74*		*50 - 150*
13C6 PFDA	*77*		*50 - 150*
13C7 PFUnA	*78*		*50 - 150*
13C2-PFDoDA	*74*		*50 - 150*
13C2 PFTeDA	*75*		*50 - 150*
13C3 PFBS	*75*		*50 - 150*
13C3 PFHxS	*72*		*50 - 150*
13C8 PFOS	*76*		*50 - 150*
d3-NMeFOSAA	*78*		*50 - 150*
d5-NEtFOSAA	*84*		*50 - 150*
13C8 FOSA	*74*		*50 - 150*
13C4 PFBA	*76*		*50 - 150*
13C5 PFPeA	*76*		*50 - 150*
13C5 PFHxA	*77*		*50 - 150*
13C9 PFNA	*75*		*50 - 150*

Eurofins Lancaster Laboratories Env, LLC

QC Sample Results

Client: BC Laboratories
Project/Site: 2015516

Job ID: 410-2875-1

Method: EPA 537 (Mod) - EPA 537 mod QSM 5.1, Table B-15 (Continued)

Lab Sample ID: LCSD 410-11733/3-A
Matrix: Water
Analysis Batch: 13503

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 11733

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perfluorohexanoic acid			25.6	27.0		ng/L		105	80 - 137	2	30
11Cl-PF3OUdS			24.1	25.0		ng/L		104	70 - 130	1	30
Perfluoroheptanoic acid			25.6	27.7		ng/L		108	80 - 140	3	30
Perfluorooctanoic acid			25.6	27.4		ng/L		107	83 - 138	0	30
Perfluorononanoic acid			25.6	28.6		ng/L		112	73 - 140	4	30
Perfluorodecanoic acid			25.6	27.4		ng/L		107	78 - 137	4	30
9Cl-PF3ONS			23.9	25.0		ng/L		105	70 - 130	4	30
Perfluorotridecanoic acid			25.6	28.7		ng/L		112	67 - 144	1	30
Perfluorotetradecanoic acid			25.6	28.2		ng/L		110	79 - 134	5	30
Perfluorobutanesulfonic acid			22.6	23.5		ng/L		104	81 - 133	2	30
Perfluorohexanesulfonic acid			24.2	25.9		ng/L		107	71 - 131	0	30
Perfluorooctanesulfonic acid			24.5	23.5		ng/L		96	54 - 139	3	30
NEtFOSAA			25.6	27.8		ng/L		109	59 - 145	12	30
NMeFOSAA			25.6	29.7		ng/L		116	53 - 136	3	30
Perfluoropentanesulfonic acid			24.0	26.9		ng/L		112	82 - 132	4	30
Perfluoroheptanesulfonic acid			24.4	27.1		ng/L		111	80 - 129	1	30
Perfluorodecanesulfonic acid			24.7	28.3		ng/L		115	69 - 124	3	30
Perfluorooctanesulfonamide			25.6	26.4		ng/L		103	73 - 121	5	30
Perfluorobutanoic acid			25.6	28.3		ng/L		111	84 - 135	1	30
Perfluoropentanoic acid			25.6	28.9		ng/L		113	75 - 138	5	30
Perfluoroundecanoic acid			25.6	26.8		ng/L		105	70 - 134	2	30
Perfluorododecanoic acid			25.6	28.7		ng/L		112	75 - 139	1	30
6:2 Fluorotelomer sulfonic acid			24.3	25.4		ng/L		105	51 - 155	4	30
8:2 Fluorotelomer sulfonic acid			24.5	25.5		ng/L		104	62 - 133	5	30
4:2 Fluorotelomer sulfonic acid			23.9	24.6		ng/L		103	64 - 134	3	30

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
M2-4:2 FTS	*80*		*50 - 150*
M2-8:2 FTS	*86*		*50 - 150*
M2-6:2 FTS	*80*		*50 - 150*
13C4 PFHpA	*77*		*50 - 150*
13C8 PFOA	*76*		*50 - 150*
13C6 PFDA	*83*		*50 - 150*
13C7 PFUnA	*82*		*50 - 150*
13C2-PFDoDA	*78*		*50 - 150*
13C2 PFTeDA	*77*		*50 - 150*
13C3 PFBS	*78*		*50 - 150*
13C3 PFHxS	*76*		*50 - 150*
13C8 PFOS	*80*		*50 - 150*
d3-NMeFOSAA	*80*		*50 - 150*
d5-NEtFOSAA	*83*		*50 - 150*
13C8 FOSA	*75*		*50 - 150*
13C4 PFBA	*80*		*50 - 150*
13C5 PFPeA	*78*		*50 - 150*
13C5 PFHxA	*79*		*50 - 150*
13C9 PFNA	*80*		*50 - 150*

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QC Association Summary

Client: BC Laboratories
Project/Site: 2015516

Job ID: 410-2875-1

LCMS

Prep Batch: 10134

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-2875-1 - RE	CGGC	Total/NA	Water	537 (Mod)	
410-2875-2	CG-TB	Total/NA	Water	537 (Mod)	
MB 410-10134/1-A	Method Blank	Total/NA	Water	537 (Mod)	
LCS 410-10134/2-A	Lab Control Sample	Total/NA	Water	537 (Mod)	
LCSD 410-10134/3-A	Lab Control Sample Dup	Total/NA	Water	537 (Mod)	

Analysis Batch: 10632

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-2875-1 - RE	CGGC	Total/NA	Water	EPA 537 (Mod)	10134
410-2875-2	CG-TB	Total/NA	Water	EPA 537 (Mod)	10134
MB 410-10134/1-A	Method Blank	Total/NA	Water	EPA 537 (Mod)	10134
LCS 410-10134/2-A	Lab Control Sample	Total/NA	Water	EPA 537 (Mod)	10134
LCSD 410-10134/3-A	Lab Control Sample Dup	Total/NA	Water	EPA 537 (Mod)	10134

Prep Batch: 11733

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-2875-1 - DL	CGGC	Total/NA	Water	537 (Mod)	
410-2875-1	CGGC	Total/NA	Water	537 (Mod)	
410-2875-3	CG-FB	Total/NA	Water	537 (Mod)	
MB 410-11733/1-A	Method Blank	Total/NA	Water	537 (Mod)	
LCS 410-11733/2-A	Lab Control Sample	Total/NA	Water	537 (Mod)	
LCSD 410-11733/3-A	Lab Control Sample Dup	Total/NA	Water	537 (Mod)	

Analysis Batch: 13503

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-2875-1	CGGC	Total/NA	Water	EPA 537 (Mod)	11733
410-2875-1 - DL	CGGC	Total/NA	Water	EPA 537 (Mod)	11733
410-2875-3	CG-FB	Total/NA	Water	EPA 537 (Mod)	11733
MB 410-11733/1-A	Method Blank	Total/NA	Water	EPA 537 (Mod)	11733
LCS 410-11733/2-A	Lab Control Sample	Total/NA	Water	EPA 537 (Mod)	11733
LCSD 410-11733/3-A	Lab Control Sample Dup	Total/NA	Water	EPA 537 (Mod)	11733

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Lab Chronicle

Client: BC Laboratories
Project/Site: 2015516

Job ID: 410-2875-1

Client Sample ID: CGGC

Date Collected: 05/27/20 00:00
Date Received: 06/01/20 09:37

Lab Sample ID: 410-2875-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537 (Mod)	RE		10134	06/03/20 07:08	EDT9	ELLE
Total/NA	Analysis	EPA 537 (Mod)	RE	1	10632	06/05/20 01:01	PY4D	ELLE
Total/NA	Prep	537 (Mod)			11733	06/10/20 07:29	EDT9	ELLE
Total/NA	Analysis	EPA 537 (Mod)		1	13503	06/16/20 12:38	UCD3	ELLE
Total/NA	Prep	537 (Mod)	DL		11733	06/10/20 07:29	EDT9	ELLE
Total/NA	Analysis	EPA 537 (Mod)	DL	10	13503	06/16/20 12:47	UCD3	ELLE

Client Sample ID: CG-TB

Date Collected: 05/27/20 00:00
Date Received: 06/01/20 09:37

Lab Sample ID: 410-2875-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537 (Mod)			10134	06/03/20 07:08	EDT9	ELLE
Total/NA	Analysis	EPA 537 (Mod)		1	10632	06/05/20 01:10	PY4D	ELLE

Client Sample ID: CG-FB

Date Collected: 05/27/20 00:00
Date Received: 06/01/20 09:37

Lab Sample ID: 410-2875-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537 (Mod)			11733	06/10/20 07:29	EDT9	ELLE
Total/NA	Analysis	EPA 537 (Mod)		1	13503	06/16/20 12:56	UCD3	ELLE

Laboratory References:
ELLE = Eurofins Lancaster Laboratories Env, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Eurofins Lancaster Laboratories Env, LLC

Accreditation/Certification Summary

Client: BC Laboratories
Project/Site: 2015516

Job ID: 410-2875-1

Laboratory: Eurofins Lancaster Laboratories Env, LLC

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
California	State	2792	01-31-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
EPA 537 (Mod)	537 (Mod)	Water	11Cl-PF3OUdS
EPA 537 (Mod)	537 (Mod)	Water	9Cl-PF3ONS

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Method Summary

Client: BC Laboratories
Project/Site: 2015516

Job ID: 410-2875-1

Method	Method Description	Protocol	Laboratory
EPA 537 (Mod)	EPA 537 mod QSM 5.1, Table B-15	EPA	ELLE
537 (Mod)	EPA 537 mod QSM 5.1 Table B-15	EPA	ELLE

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Env, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

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Sample Summary

Client: BC Laboratories
Project/Site: 2015516

Job ID: 410-2875-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
410-2875-1	CGGC	Water	05/27/20 00:00	06/01/20 09:37	
410-2875-2	CG-TB	Water	05/27/20 00:00	06/01/20 09:37	
410-2875-3	CG-FB	Water	05/27/20 00:00	06/01/20 09:37	

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BC LABORATORIES

410-2875 Chain of Custody

Chain of Custody

* Required Fields TEMP: ____

Client/Company Name *:	Report Attention *:	Phone * #	FAX * #:
Subcontract - BC Labs	Natalie Serda	661.327.4911	
		E-mail: natalie.serda@bclabs.com	

ANALYSIS REQUESTED

Address *	City *	State *	Zip *
4100 Atlas Court	Bakersfield	CA	93308

Carbon Copies: CDHS ☐ Fresno Co ☐ EPA ☐ Merced Co ☐ Tulare Co ☐ Other:

Project Information	PO #
(Riverside-PFAS Sampling): Corona Landfil - gas condensate	BCL Quote #

How would you like your completed results sent? ☑ E-Mail ☐ Fax ☑ EDD ☐ Mail Only

Regulatory Compliance Electronic Data Transfer: Y ☑ N ☐ System No. * L10005490322

Sampler Name Printed / Signature	QC Request	Result Request ** Surcharge
Mario Ramirez	☑ STD ☐ Level II	☑ STD ☐ 3 Day** ☐ 2 Day** ☐ 1day**

Matrix Types: RSW = Raw Surface Water CFW = Chlorinated Finished Water CWW = Chlorinated Waste Water BW = Bottled Water RGW = Raw Ground Water FW = Finished Water WW = Waste Water SW = Storm Water DW = Drinking Water SO = Solid

Sample #	# Bottles	Sampled Date	Sampled Time	Sample Description / Location *	Matrix *	Comments / Station Code	25 PFAS Parameters	Refer to attached sheet for a list of PFAS parameters
		5/27/20		CGGC	GC	gas condensate - 2 bottles	✓	
		5/27/20		CG-TB	TB	Travel Blank - 2 bottles	✓	
		5/27/20		CG FB	EB	Equipment Blank - 2 bottles	✓	
						** Requesting Geotracker file and EDD **		

Relinquished by: (Signature and Printed Name)	Company	Date	Time	Received by (Signature and Print Name)	Company
Mario Ramirez	RC-DWR	5/27/20			
Relinquished by: (Signature and Printed Name)	Company	Date	Time	Received by (Signature and Print Name)	Company
Received for Lab by: (Signature and Printed Name) Kristin Zeigler		Date 6/1/20	Time 0937	Payment Received at Delivery: Date: Amount: Check/Cash/Card PIA # Init:	

Shipping Method: CAO UPS GSO WALK-IN SJVC FED EX OTHER

Cooling Method: WET BLUE NONE

Packing Material:

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Login Sample Receipt Checklist

Client: BC Laboratories

Job Number: 410-2875-1

Login Number: 2875
List Number: 1
Creator: Foreman, Leah M

List Source: Eurofins Lancaster Laboratories Env

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal is intact.	True	
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 (</=6C, not frozen).	False	Refer to Job Narrative for details.
Cooler Temperature is recorded.	True	
WV: Container Temperature is acceptable (</=6C, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	False	Refer to Job Narrative for details.
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	
There is sufficient vol. for all requested analyses.	True	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	True	
Is the Field Sampler's name present on COC?	True	
Sample Preservation Verified.	N/A	
Residual Chlorine Checked.	N/A	
Sample custody seals are intact.	True	

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Riverside County Dept of Waste Resources	**Reported:** 07/07/2020 15:27
14310 Frederick Street	Project: Corona
Moreno Valley, CA 92553	Project Number: PFAS Sampling
	Project Manager: Panda Workman

Notes And Definitions