07-Jun-2021

Penni Mahler
Fishbeck, Inc.
1515 Arboretum Dr SE
Grand Rapids, MI 49546

Re: **St. Clair/IPP Development (210245)** Work Order: **21060057**

Dear Penni,

ALS Environmental received 4 samples on 28-May-2021 03:00 PM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental - Holland and for only the analyses requested.

Sample results are compliant with industry accepted practices and Quality Control results achieved laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 37.

If you have any questions regarding this report, please feel free to contact me:

ADDRESS: 3352 128th Avenue, Holland, MI, USA
PHONE: +1 (616) 399-6070 FAX: +1 (616) 399-6185

Sincerely,

Ehrland Bosworth

Electronically approved by: Ehrland Bosworth

Ehrland Bosworth
Project Manager

Report of Laboratory Analysis

Certificate No: MN 026-999-449

ALS Group, USA

Date: 07-Jun-21

Client: Fishbeck, Inc.
Project: St. Clair/IPP Development (210245)
Work Order: **21060057**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
21060057-01	STC-21-05-WW-INF(I)	Water		5/28/2021 10:50	5/28/2021 15:00	☐
21060057-02	STC-21-05-WW-EFF(I)	Water		5/28/2021 11:40	5/28/2021 15:00	☐
21060057-03	STC-21-05-Sludge/Biosolids(I)	Solid		5/28/2021 11:05	5/28/2021 15:00	☐
21060057-04	STC-21-05-QCFB	Water		5/28/2021 11:17	5/28/2021 15:00	☐

ALS Group, USA

Date: 07-Jun-21

Client: Fishbeck, Inc.
Project: St. Clair/IPP Development (210245)
WorkOrder: **21060057**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
**	Estimated Value
a	Analyte is non-accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
Hr	BOD/CBOD - Sample was reset outside Hold Time, value should be considered estimated.
J	Analyte is present at an estimated concentration between the MDL and Report Limit
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL
X	Analyte was detected in the Method Blank between the MDL and Reporting Limit, sample results may exhibit background or reagent contamination at the observed level.

Acronym	Description
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOD	Limit of Detection (see MDL)
LOQ	Limit of Quantitation (see PQL)
MBLK	Method Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
TDL	Target Detection Limit
TNTC	Too Numerous To Count
A	APHA Standard Methods
D	ASTM
E	EPA
SW	SW-846 Update III

Units Reported	Description
% of sample	Percent of Sample
ng/L	Nanograms per Liter

Client: Fishbeck, Inc.
Project: St. Clair/IPP Development (210245)
Work Order: 21060057

Case Narrative

Samples for the above noted Work Order were received on 05/28/2021. The attached "Sample Receipt Checklist" documents the status of custody seals, container integrity, preservation, and temperature compliance.

Samples were analyzed according to the analytical methodology previously transmitted in the "Work Order Acknowledgement". Methodologies are also documented in the "Analytical Result" section for each sample. Quality control results are listed in the "QC Report" section. Sample association for the reported quality control is located at the end of each batch summary. If applicable, results are appropriately qualified in the Analytical Result and QC Report sections. The "Qualifiers" section documents the various qualifiers, units, and acronyms utilized in reporting. A copy of the laboratory's scope of accreditation is available upon request.

With the following exceptions, all sample analyses achieved analytical criteria.

Extractable Organics:
Batch 178026, Method D7968-17a, Sample STC-21-05-Sludge/Biosolids(I) (21060057-03A): The concentration in the Method Blank was greater than the quantitation limit. All samples in the batch were non-detect; therefore, no qualification is needed for this analyte: 6:2 FTS

Batch 178026, Method D7968-17a, Sample MBLK1-178026: The concentration in the Method Blank was greater than the quantitation limit. All samples in the batch were non-detect; therefore, no qualification is needed for this analyte: 6:2 FTS

Batch 178026, Method D7968-17a, Sample LCS3-178026: The concentration in the Method Blank was greater than the quantitation limit. All samples in the batch were non-detect; therefore, no qualification is needed for this analyte: 6:2 FTS. LCS3 passes.

Batch 178026, Method D7968-17a, Sample LCS2-178026: The concentration in the Method Blank was greater than the quantitation limit. All samples in the batch were non-detect; therefore, no qualification is needed for this analyte: 6:2 FTS. LCS2 passes.

Batch 178026, Method D7968-17a, Sample 21060057-03A MS: The concentration in the Method Blank was greater than the quantitation limit. All samples in the batch were non-detect; therefore, no qualification is needed for this analyte: 6:2 FTS

Batch 178026, Method D7968-17a, Sample 21060057-03A MSD: The concentration in the Method Blank was greater than the quantitation limit. All samples in the batch were non-detect; therefore, no qualification is needed for this analyte: 6:2 FTS

Batch 177904, Method E537 Mod, Sample STC-21-05-WW-INF(I) (21060057-01A): Surrogate high due to matrix interference. 13C2-PFHxA, 13C4-PFOA, 13C5-PFPeA

Batch 177904, Method E537 Mod, Sample STC-21-05-WW-INF(I) (21060057-01A): One or more surrogate recoveries were above the upper control limits. The sample was non-detect, therefore, no qualification is needed. 13C2-FtS 4:2, 13C2-FtS 6:2 13C2-FtS 8:2, 13C2-PFDA, 13C3-PFBS, 13C3-HFPO-DA, 18O2-PFHxS

Batch 177904, Method E537 Mod, Sample STC-21-05-WW-EFF(I) (21060057-02A): One or more surrogate recoveries were below the lower control limits. The sample results may be biased low, 13C2-PFTeA

Batch 177904, Method E537 Mod, Sample STC-21-05-WW-EFF(I) (21060057-02A): One or more surrogate recoveries were above the upper control limits. The sample was non-detect, therefore, no qualification is needed. 13C2-FtS 4:2, 13C2-FtS 6:2 13C2-FtS 8:2

Batch 177904, Method E537 Mod, Sample STC-21-05-QCFB (21060057-04A): One or more surrogate recoveries were above the upper control limits. The sample was non-detect, therefore, no qualification is needed. 13C2-FtS 8:2

Batch 178026, Method D7968-17a, Sample STC-21-05-Sludge/Biosolids(I) (21060057-03A): One or more surrogate recoveries were below the lower control limits. The sample results may be biased low, 13C2-PFDoA, 13C2-PFTeA, 13C2-PFUnA, 13C8-FOSA

Batch 178026, Method D7968-17a, Sample STC-21-05-Sludge/Biosolids(I) (21060057-03A): One or more surrogate recoveries were above the upper control limits. The sample was non-detect, therefore, no qualification is needed. 13C2-FtS 4:2, 13C2-FtS 6:2, 13C2-FtS 8:2

Batch 177904, Method E537 Mod, Sample LCS-177904: The LCS recovery was above the upper control limit. All the sample results in the batch were non-detect. No qualification is necessary for this analyte: PFNS

Batch 178026, Method D7968-17a, Sample 21060057-03A MS: The MS recovery was below the lower control limit. The corresponding result in the parent sample may be biased low for this analyte: See attached QC report.

Batch 178026, Method D7968-17a, Sample 21060057-03A MS: The MS recovery was above the upper control limit. The corresponding result in the parent sample may be biased high for this analyte: See attached QC report.

Batch 178026, Method D7968-17a, Sample 21060057-03A MS: The MS recovery was above

the upper control limit. The corresponding result in the parent sample was non-detect, therefore no qualification is necessary: See attached QC report.

Batch 178026, Method D7968-17a, Sample 21060057-03A MSD: The MSD recovery was below the lower control limit. The corresponding result in the parent sample may be biased low for this analyte: See attached QC report.

Batch 178026, Method D7968-17a, Sample 21060057-03A MSD: The MSD recovery was above the upper control limit. The corresponding result in the parent sample may be biased high for this analyte: See attached QC report.

Batch 178026, Method D7968-17a, Sample 21060057-03A MSD: The MSD recovery was above the upper control limit. The corresponding result in the parent sample was non-detect, therefore no qualification is necessary. See attached QC report.

Batch 178026, Method D7968-17a, Sample 21060057-03A MSD: The RPD between the MS and MSD was outside of the control limit. The corresponding result should be considered estimated for this compound: PFDS

Batch 178026, Method D7968-17a, Sample LCS1-178026: The LCS recovery was above the upper control limit. All sample results in the batch were non-detect. No qualification is necessary for this analyte: PFDS

Batch 178026, Method D7968-17a, Sample LCS2-178026: The LCS recovery was above the upper control limit. All sample results in the batch were non-detect. No qualification is necessary for this analyte: PFTeA

No other deviations or anomalies were noted.

Wet Chemistry:
No deviations or anomalies were noted.

ALS Group, USA

Date: *07-Jun-21*

Client: Fishbeck, Inc.
Project: St. Clair/IPP Development (210245)
Sample ID: STC-21-05-WW-INF(I)
Collection Date: 5/28/2021 10:50 AM

Work Order: 21060057
Lab ID: 21060057-01
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
PFAS BY EPA 537 MODIFIED		Method: **E537 MOD**			Prep: E537 Mod / 6/3/21		Analyst: **SK**
Fluorotelomer Sulphonic Acid 4:2 (FtS 4:2)	U		0.98	5.2	ng/L	1	6/3/2021 22:58
Fluorotelomer Sulphonic Acid 6:2 (FtS 6:2)	U		0.69	5.2	ng/L	1	6/3/2021 22:58
Fluorotelomer Sulphonic Acid 8:2 (FtS 8:2)	U		1.2	5.2	ng/L	1	6/3/2021 22:58
Perfluorobutanesulfonic Acid (PFBS)	**3.9**	J	**0.37**	**5.2**	**ng/L**	1	6/3/2021 22:58
Perfluorobutanoic Acid (PFBA)	**10**		**2.7**	**5.2**	**ng/L**	1	6/3/2021 22:58
Perfluorodecanesulfonic Acid (PFDS)	U		1.4	5.2	ng/L	1	6/3/2021 22:58
Perfluorodecanoic Acid (PFDA)	**1.9**	J	**1.3**	**5.2**	**ng/L**	1	6/3/2021 22:58
Perfluorododecanoic Acid (PFDoA)	U		1.5	5.2	ng/L	1	6/3/2021 22:58
Perfluoroheptanesulfonic Acid (PFHpS)	U		0.59	5.2	ng/L	1	6/3/2021 22:58
Perfluoroheptanoic Acid (PFHpA)	**7.4**		**0.46**	**5.2**	**ng/L**	1	6/3/2021 22:58
Perfluorohexanesulfonic Acid (PFHxS)	U		0.39	5.2	ng/L	1	6/3/2021 22:58
Perfluorohexanoic Acid (PFHxA)	**16**		**1.3**	**5.2**	**ng/L**	1	6/3/2021 22:58
Perfluorononanesulfonic Acid (PFNS)	U		0.52	5.2	ng/L	1	6/3/2021 22:58
Perfluorononanoic Acid (PFNA)	**1.8**	J	**0.91**	**5.2**	**ng/L**	1	6/3/2021 22:58
Perfluorooctanesulfonamide (PFOSA)	U		0.74	5.2	ng/L	1	6/3/2021 22:58
Perfluorooctanesulfonic Acid (PFOS)	**6.7**		**0.93**	**2.1**	**ng/L**	1	6/3/2021 22:58
Perfluorooctanoic Acid (PFOA)	**10**		**0.66**	**2.1**	**ng/L**	1	6/3/2021 22:58
Perfluoropentanesulfonic Acid (PFPeS)	U		0.58	5.2	ng/L	1	6/3/2021 22:58
Perfluoropentanoic Acid (PFPeA)	**60**		**1.3**	**5.2**	**ng/L**	1	6/3/2021 22:58
Perfluorotetradecanoic Acid (PFTeA)	U		2.8	5.2	ng/L	1	6/3/2021 22:58
Perfluorotridecanoic Acid (PFTriA)	U		0.81	5.2	ng/L	1	6/3/2021 22:58
Perfluoroundecanoic Acid (PFUnA)	U		1.0	5.2	ng/L	1	6/3/2021 22:58
N-Ethylperfluorooctanesulfonamidoacetic Acid	U		0.66	5.2	ng/L	1	6/3/2021 22:58
N-Methylperfluorooctanesulfonamidoacetic Acid	**0.70**	J	**0.67**	**5.2**	**ng/L**	1	6/3/2021 22:58
Hexafluoropropylene oxide dimer acid (HFPO-DA)	U		1.2	5.2	ng/L	1	6/3/2021 22:58
4,8-Dioxa-3H-perfluorononanoic Acid (DONA)	U		0.59	5.2	ng/L	1	6/3/2021 22:58
11Cl-Pf3OUdS	U		0.49	5.2	ng/L	1	6/3/2021 22:58
9Cl-PF3ONS	U		0.47	5.2	ng/L	1	6/3/2021 22:58
Surr: 13C2-FtS 4:2	*547*	S		*50-150*	*%REC*	1	6/3/2021 22:58
Surr: 13C2-FtS 6:2	*678*	S		*50-150*	*%REC*	1	6/3/2021 22:58
Surr: 13C2-FtS 8:2	*507*	S		*50-150*	*%REC*	1	6/3/2021 22:58
Surr: 13C2-PFDA	*166*	S		*50-150*	*%REC*	1	6/3/2021 22:58

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *07-Jun-21*

Client: Fishbeck, Inc.
Project: St. Clair/IPP Development (210245)
Sample ID: STC-21-05-WW-INF(I)
Collection Date: 5/28/2021 10:50 AM

Work Order: 21060057
Lab ID: 21060057-01
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: 13C2-PFDoA	*106*			*50-150*	*%REC*	1	6/3/2021 22:58
Surr: 13C2-PFHxA	*168*	S		*50-150*	*%REC*	1	6/3/2021 22:58
Surr: 13C2-PFTeA	*101*			*50-150*	*%REC*	1	6/3/2021 22:58
Surr: 13C2-PFUnA	*71.4*			*50-150*	*%REC*	1	6/3/2021 22:58
Surr: 13C3-HFPO-DA	*163*	S		*50-150*	*%REC*	1	6/3/2021 22:58
Surr: 13C3-PFBS	*152*	S		*50-150*	*%REC*	1	6/3/2021 22:58
Surr: 13C4-PFBA	*147*			*50-150*	*%REC*	1	6/3/2021 22:58
Surr: 13C4-PFHpA	*146*			*50-150*	*%REC*	1	6/3/2021 22:58
Surr: 13C4-PFOA	*176*	S		*50-150*	*%REC*	1	6/3/2021 22:58
Surr: 13C4-PFOS	*132*			*50-150*	*%REC*	1	6/3/2021 22:58
Surr: 13C5-PFNA	*141*			*50-150*	*%REC*	1	6/3/2021 22:58
Surr: 13C5-PFPeA	*154*	S		*50-150*	*%REC*	1	6/3/2021 22:58
Surr: 13C8-FOSA	*65.4*			*50-150*	*%REC*	1	6/3/2021 22:58
Surr: 18O2-PFHxS	*151*	S		*50-150*	*%REC*	1	6/3/2021 22:58
Surr: d5-N-EtFOSAA	*80.0*			*50-150*	*%REC*	1	6/3/2021 22:58
Surr: d3-N-MeFOSAA	*125*			*50-150*	*%REC*	1	6/3/2021 22:58

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *07-Jun-21*

Client: Fishbeck, Inc.
Project: St. Clair/IPP Development (210245)
Sample ID: STC-21-05-WW-EFF(I)
Collection Date: 5/28/2021 11:40 AM

Work Order: 21060057
Lab ID: 21060057-02
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
PFAS BY EPA 537 MODIFIED		Method: **E537 MOD**			Prep: E537 Mod / 6/3/21		Analyst: **SK**
Fluorotelomer Sulphonic Acid 4:2 (FtS 4:2)	U		0.88	4.7	ng/L	1	6/3/2021 22:48
Fluorotelomer Sulphonic Acid 6:2 (FtS 6:2)	U		0.63	4.7	ng/L	1	6/3/2021 22:48
Fluorotelomer Sulphonic Acid 8:2 (FtS 8:2)	U		1.1	4.7	ng/L	1	6/3/2021 22:48
Perfluorobutanesulfonic Acid (PFBS)	**4.1**	J	**0.33**	**4.7**	**ng/L**	1	6/3/2021 22:48
Perfluorobutanoic Acid (PFBA)	**11**		**2.5**	**4.7**	**ng/L**	1	6/3/2021 22:48
Perfluorodecanesulfonic Acid (PFDS)	U		1.3	4.7	ng/L	1	6/3/2021 22:48
Perfluorodecanoic Acid (PFDA)	U		1.2	4.7	ng/L	1	6/3/2021 22:48
Perfluorododecanoic Acid (PFDoA)	U		1.3	4.7	ng/L	1	6/3/2021 22:48
Perfluoroheptanesulfonic Acid (PFHpS)	U		0.53	4.7	ng/L	1	6/3/2021 22:48
Perfluoroheptanoic Acid (PFHpA)	**8.4**		**0.42**	**4.7**	**ng/L**	1	6/3/2021 22:48
Perfluorohexanesulfonic Acid (PFHxS)	**1.0**	J	**0.35**	**4.7**	**ng/L**	1	6/3/2021 22:48
Perfluorohexanoic Acid (PFHxA)	**23**		**1.1**	**4.7**	**ng/L**	1	6/3/2021 22:48
Perfluorononanesulfonic Acid (PFNS)	U		0.47	4.7	ng/L	1	6/3/2021 22:48
Perfluorononanoic Acid (PFNA)	**0.95**	J	**0.82**	**4.7**	**ng/L**	1	6/3/2021 22:48
Perfluorooctanesulfonamide (PFOSA)	U		0.67	4.7	ng/L	1	6/3/2021 22:48
Perfluorooctanesulfonic Acid (PFOS)	**4.9**		**0.84**	**1.9**	**ng/L**	1	6/3/2021 22:48
Perfluorooctanoic Acid (PFOA)	**12**		**0.59**	**1.9**	**ng/L**	1	6/3/2021 22:48
Perfluoropentanesulfonic Acid (PFPeS)	U		0.52	4.7	ng/L	1	6/3/2021 22:48
Perfluoropentanoic Acid (PFPeA)	**23**		**1.2**	**4.7**	**ng/L**	1	6/3/2021 22:48
Perfluorotetradecanoic Acid (PFTeA)	U		2.5	4.7	ng/L	1	6/3/2021 22:48
Perfluorotridecanoic Acid (PFTriA)	U		0.73	4.7	ng/L	1	6/3/2021 22:48
Perfluoroundecanoic Acid (PFUnA)	U		0.92	4.7	ng/L	1	6/3/2021 22:48
N-Ethylperfluorooctanesulfonamidoacetic Acid	U		0.59	4.7	ng/L	1	6/3/2021 22:48
N-Methylperfluorooctanesulfonamidoacetic Acid	**1.2**	J	**0.61**	**4.7**	**ng/L**	1	6/3/2021 22:48
Hexafluoropropylene oxide dimer acid (HFPO-DA)	U		1.1	4.7	ng/L	1	6/3/2021 22:48
4,8-Dioxa-3H-perfluorononanoic Acid (DONA)	U		0.53	4.7	ng/L	1	6/3/2021 22:48
11Cl-Pf3OUdS	U		0.44	4.7	ng/L	1	6/3/2021 22:48
9Cl-PF3ONS	U		0.42	4.7	ng/L	1	6/3/2021 22:48
Surr: 13C2-FtS 4:2	*372*	S		*50-150*	*%REC*	1	6/3/2021 22:48
Surr: 13C2-FtS 6:2	*308*	S		*50-150*	*%REC*	1	6/3/2021 22:48
Surr: 13C2-FtS 8:2	*325*	S		*50-150*	*%REC*	1	6/3/2021 22:48

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *07-Jun-21*

Client: Fishbeck, Inc.
Project: St. Clair/IPP Development (210245)
Sample ID: STC-21-05-WW-EFF(I)
Collection Date: 5/28/2021 11:40 AM

Work Order: 21060057
Lab ID: 21060057-02
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: 13C2-PFDA	*94.9*			*50-150*	*%REC*	1	6/3/2021 22:48
Surr: 13C2-PFDoA	*56.1*			*50-150*	*%REC*	1	6/3/2021 22:48
Surr: 13C2-PFHxA	*95.4*			*50-150*	*%REC*	1	6/3/2021 22:48
Surr: 13C2-PFTeA	*27.8*	S		*50-150*	*%REC*	1	6/3/2021 22:48
Surr: 13C2-PFUnA	*70.7*			*50-150*	*%REC*	1	6/3/2021 22:48
Surr: 13C3-HFPO-DA	*93.1*			*50-150*	*%REC*	1	6/3/2021 22:48
Surr: 13C3-PFBS	*86.4*			*50-150*	*%REC*	1	6/3/2021 22:48
Surr: 13C4-PFBA	*82.5*			*50-150*	*%REC*	1	6/3/2021 22:48
Surr: 13C4-PFHpA	*103*			*50-150*	*%REC*	1	6/3/2021 22:48
Surr: 13C4-PFOA	*92.2*			*50-150*	*%REC*	1	6/3/2021 22:48
Surr: 13C4-PFOS	*83.6*			*50-150*	*%REC*	1	6/3/2021 22:48
Surr: 13C5-PFNA	*100*			*50-150*	*%REC*	1	6/3/2021 22:48
Surr: 13C5-PFPeA	*91.6*			*50-150*	*%REC*	1	6/3/2021 22:48
Surr: 13C8-FOSA	*113*			*50-150*	*%REC*	1	6/3/2021 22:48
Surr: 18O2-PFHxS	*104*			*50-150*	*%REC*	1	6/3/2021 22:48
Surr: d5-N-EtFOSAA	*132*			*50-150*	*%REC*	1	6/3/2021 22:48
Surr: d3-N-MeFOSAA	*121*			*50-150*	*%REC*	1	6/3/2021 22:48

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Fishbeck, Inc.
Project: St. Clair/IPP Development (210245)
Sample ID: STC-21-05-Sludge/Biosolids(I)
Collection Date: 5/28/2021 11:05 AM

Work Order: 21060057
Lab ID: 21060057-03
Matrix: SOLID

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
PFAS BY LC-MS-MS		Method: **D7968-17A**			Prep: D7968-17a / 6/4/21		Analyst: **SK**
Perfluorobutanoic Acid (PFBA)	**1,200**	J	**610**	**1,800**	**ng/Kg-dry**	1	6/5/2021 02:52
Perfluoropentanoic Acid (PFPeA)	**470**	J	**240**	**1,800**	**ng/Kg-dry**	1	6/5/2021 02:52
Perfluorohexanoic Acid (PFHxA)	**1,300**	J	**220**	**1,800**	**ng/Kg-dry**	1	6/5/2021 02:52
Perfluoroheptanoic Acid (PFHpA)	U		240	1,800	ng/Kg-dry	1	6/5/2021 02:52
Perfluorooctanoic Acid (PFOA)	**1,200**		**160**	**360**	**ng/Kg-dry**	1	6/5/2021 02:52
Perfluorononanoic Acid (PFNA)	**420**		**180**	**360**	**ng/Kg-dry**	1	6/5/2021 02:52
Perfluorodecanoic Acid (PFDA)	**1,800**		**280**	**1,800**	**ng/Kg-dry**	1	6/5/2021 02:52
Perfluoroundecanoic Acid (PFUnA)	**370**	J	**310**	**1,800**	**ng/Kg-dry**	1	6/5/2021 02:52
Perfluorododecanoic Acid (PFDoA)	**670**	J	**380**	**1,800**	**ng/Kg-dry**	1	6/5/2021 02:52
Perfluorotridecanoic Acid (PFTriA)	U		410	1,800	ng/Kg-dry	1	6/5/2021 02:52
Perfluorotetradecanoic Acid (PFTeA)	U		580	1,800	ng/Kg-dry	1	6/5/2021 02:52
Perfluorobutanesulfonic Acid (PFBS)	U		240	360	ng/Kg-dry	1	6/5/2021 02:52
Perfluoropentanesulfonic Acid (PFPeS)	U		200	360	ng/Kg-dry	1	6/5/2021 02:52
Perfluorohexanesulfonic Acid (PFHxS)	U		340	1,800	ng/Kg-dry	1	6/5/2021 02:52
Perfluoroheptanesulfonic Acid (PFHpS)	U		310	1,800	ng/Kg-dry	1	6/5/2021 02:52
Perfluorooctanesulfonic Acid (PFOS)	**3,600**		**150**	**360**	**ng/Kg-dry**	1	6/5/2021 02:52
Perfluorononanesulfonic Acid (PFNS)	U		310	1,800	ng/Kg-dry	1	6/5/2021 02:52
Perfluorodecanesulfonic Acid (PFDS)	U		190	360	ng/Kg-dry	1	6/5/2021 02:52
Fluorotelomer Sulphonic Acid 4:2 (FtS 4:2)	U		410	1,800	ng/Kg-dry	1	6/5/2021 02:52
Fluorotelomer Sulphonic Acid 6:2 (FtS 6:2)	U		690	1,800	ng/Kg-dry	1	6/5/2021 02:52
Fluorotelomer Sulphonic Acid 8:2 (FtS 8:2)	**1,600**	J	**860**	**1,800**	**ng/Kg-dry**	1	6/5/2021 02:52
Perfluorooctanesulfonamide (PFOSA)	**200**	J	**120**	**360**	**ng/Kg-dry**	1	6/5/2021 02:52
N-Ethylperfluorooctanesulfonamidoacetic Acid	**3,500**		**720**	**1,800**	**ng/Kg-dry**	1	6/5/2021 02:52
N-Methylperfluorooctanesulfonamidoacetic Acid	**4,400**		**440**	**1,800**	**ng/Kg-dry**	1	6/5/2021 02:52
11Cl-Pf3OUdS	U		150	360	ng/Kg-dry	1	6/5/2021 02:52
4,8-Dioxa-3H-perfluorononanoic Acid (DONA)	U		88	360	ng/Kg-dry	1	6/5/2021 02:52
9Cl-PF3ONS	U		69	360	ng/Kg-dry	1	6/5/2021 02:52
Hexafluoropropylene oxide dimer acid (HFPO-DA)	U		1,500	1,800	ng/Kg-dry	1	6/5/2021 02:52
Surr: 13C4-PFBA	*78.6*			*50-130*	*%REC*	1	6/5/2021 02:52
Surr: 13C5-PFPeA	*74.6*			*50-130*	*%REC*	1	6/5/2021 02:52
Surr: 13C2-PFHxA	*87.7*			*50-130*	*%REC*	1	6/5/2021 02:52

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Fishbeck, Inc.
Project: St. Clair/IPP Development (210245)
Sample ID: STC-21-05-Sludge/Biosolids(I)
Collection Date: 5/28/2021 11:05 AM

Work Order: 21060057
Lab ID: 21060057-03
Matrix: SOLID

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: 13C4-PFHpA	*83.8*			*50-130*	*%REC*	1	6/5/2021 02:52
Surr: 13C4-PFOA	*86.1*			*70-130*	*%REC*	1	6/5/2021 02:52
Surr: 13C5-PFNA	*83.9*			*70-130*	*%REC*	1	6/5/2021 02:52
Surr: 13C2-PFDA	*79.8*			*70-130*	*%REC*	1	6/5/2021 02:52
Surr: 13C2-PFUnA	*64.9*	S		*70-130*	*%REC*	1	6/5/2021 02:52
Surr: 13C2-PFDoA	*49.0*	S		*70-130*	*%REC*	1	6/5/2021 02:52
Surr: 13C2-PFTeA	*6.32*	S		*50-130*	*%REC*	1	6/5/2021 02:52
Surr: 13C3-PFBS	*70.9*			*50-130*	*%REC*	1	6/5/2021 02:52
Surr: 18O2-PFHxS	*85.4*			*70-130*	*%REC*	1	6/5/2021 02:52
Surr: 13C4-PFOS	*83.7*			*70-130*	*%REC*	1	6/5/2021 02:52
Surr: 13C2-FtS 4:2	*242*	S		*50-130*	*%REC*	1	6/5/2021 02:52
Surr: 13C2-FtS 6:2	*307*	S		*50-130*	*%REC*	1	6/5/2021 02:52
Surr: 13C2-FtS 8:2	*370*	S		*50-130*	*%REC*	1	6/5/2021 02:52
Surr: 13C8-FOSA	*26.4*	S		*50-130*	*%REC*	1	6/5/2021 02:52
Surr: d3-N-MeFOSAA	*94.1*			*50-130*	*%REC*	1	6/5/2021 02:52
Surr: d5-N-EtFOSAA	*110*			*50-130*	*%REC*	1	6/5/2021 02:52
Surr: 13C3-HFPO-DA	*87.7*			*50-130*	*%REC*	1	6/5/2021 02:52
MOISTURE		Method: **SW3550C**					Analyst: **KTP**
Moisture	**93**		**0.10**	**0.10**	**% of sample**	1	6/3/2021 15:37

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *07-Jun-21*

Client: Fishbeck, Inc.
Project: St. Clair/IPP Development (210245)
Sample ID: STC-21-05-QCFB
Collection Date: 5/28/2021 11:17 AM

Work Order: 21060057
Lab ID: 21060057-04
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
PFAS BY EPA 537 MODIFIED		Method: **E537 MOD**			Prep: E537 Mod / 6/3/21		Analyst: **SK**
Fluorotelomer Sulphonic Acid 4:2 (FtS 4:2)	U		0.89	4.8	ng/L	1	6/3/2021 23:09
Fluorotelomer Sulphonic Acid 6:2 (FtS 6:2)	U		0.63	4.8	ng/L	1	6/3/2021 23:09
Fluorotelomer Sulphonic Acid 8:2 (FtS 8:2)	U		1.1	4.8	ng/L	1	6/3/2021 23:09
Perfluorobutanesulfonic Acid (PFBS)	U		0.33	4.8	ng/L	1	6/3/2021 23:09
Perfluorobutanoic Acid (PFBA)	U		2.5	4.8	ng/L	1	6/3/2021 23:09
Perfluorodecanesulfonic Acid (PFDS)	U		1.3	4.8	ng/L	1	6/3/2021 23:09
Perfluorodecanoic Acid (PFDA)	U		1.2	4.8	ng/L	1	6/3/2021 23:09
Perfluorododecanoic Acid (PFDoA)	U		1.4	4.8	ng/L	1	6/3/2021 23:09
Perfluoroheptanesulfonic Acid (PFHpS)	U		0.54	4.8	ng/L	1	6/3/2021 23:09
Perfluoroheptanoic Acid (PFHpA)	U		0.42	4.8	ng/L	1	6/3/2021 23:09
Perfluorohexanesulfonic Acid (PFHxS)	U		0.35	4.8	ng/L	1	6/3/2021 23:09
Perfluorohexanoic Acid (PFHxA)	U		1.1	4.8	ng/L	1	6/3/2021 23:09
Perfluorononanesulfonic Acid (PFNS)	U		0.47	4.8	ng/L	1	6/3/2021 23:09
Perfluorononanoic Acid (PFNA)	U		0.83	4.8	ng/L	1	6/3/2021 23:09
Perfluorooctanesulfonamide (PFOSA)	U		0.68	4.8	ng/L	1	6/3/2021 23:09
Perfluorooctanesulfonic Acid (PFOS)	U		0.85	1.9	ng/L	1	6/3/2021 23:09
Perfluorooctanoic Acid (PFOA)	U		0.60	1.9	ng/L	1	6/3/2021 23:09
Perfluoropentanesulfonic Acid (PFPeS)	U		0.53	4.8	ng/L	1	6/3/2021 23:09
Perfluoropentanoic Acid (PFPeA)	U		1.2	4.8	ng/L	1	6/3/2021 23:09
Perfluorotetradecanoic Acid (PFTeA)	U		2.5	4.8	ng/L	1	6/3/2021 23:09
Perfluorotridecanoic Acid (PFTriA)	U		0.73	4.8	ng/L	1	6/3/2021 23:09
Perfluoroundecanoic Acid (PFUnA)	U		0.93	4.8	ng/L	1	6/3/2021 23:09
N-Ethylperfluorooctanesulfonamidoacetic Acid	U		0.60	4.8	ng/L	1	6/3/2021 23:09
N-Methylperfluorooctanesulfonamidoacetic Acid	U		0.61	4.8	ng/L	1	6/3/2021 23:09
Hexafluoropropylene oxide dimer acid (HFPO-DA)	U		1.1	4.8	ng/L	1	6/3/2021 23:09
4,8-Dioxa-3H-perfluorononanoic Acid (DONA)	U		0.53	4.8	ng/L	1	6/3/2021 23:09
11Cl-Pf3OUdS	U		0.44	4.8	ng/L	1	6/3/2021 23:09
9Cl-PF3ONS	U		0.43	4.8	ng/L	1	6/3/2021 23:09
Surr: 13C2-FtS 4:2	*101*			*50-150*	*%REC*	1	6/3/2021 23:09
Surr: 13C2-FtS 6:2	*118*			*50-150*	*%REC*	1	6/3/2021 23:09
Surr: 13C2-FtS 8:2	*155*	S		*50-150*	*%REC*	1	6/3/2021 23:09
Surr: 13C2-PFDA	*110*			*50-150*	*%REC*	1	6/3/2021 23:09

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *07-Jun-21*

Client: Fishbeck, Inc.
Project: St. Clair/IPP Development (210245)
Sample ID: STC-21-05-QCFB
Collection Date: 5/28/2021 11:17 AM

Work Order: 21060057
Lab ID: 21060057-04
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: 13C2-PFDoA	*102*			*50-150*	*%REC*	1	6/3/2021 23:09
Surr: 13C2-PFHxA	*96.8*			*50-150*	*%REC*	1	6/3/2021 23:09
Surr: 13C2-PFTeA	*97.7*			*50-150*	*%REC*	1	6/3/2021 23:09
Surr: 13C2-PFUnA	*85.9*			*50-150*	*%REC*	1	6/3/2021 23:09
Surr: 13C3-HFPO-DA	*93.2*			*50-150*	*%REC*	1	6/3/2021 23:09
Surr: 13C3-PFBS	*84.7*			*50-150*	*%REC*	1	6/3/2021 23:09
Surr: 13C4-PFBA	*87.2*			*50-150*	*%REC*	1	6/3/2021 23:09
Surr: 13C4-PFHpA	*93.1*			*50-150*	*%REC*	1	6/3/2021 23:09
Surr: 13C4-PFOA	*104*			*50-150*	*%REC*	1	6/3/2021 23:09
Surr: 13C4-PFOS	*93.6*			*50-150*	*%REC*	1	6/3/2021 23:09
Surr: 13C5-PFNA	*100*			*50-150*	*%REC*	1	6/3/2021 23:09
Surr: 13C5-PFPeA	*89.2*			*50-150*	*%REC*	1	6/3/2021 23:09
Surr: 13C8-FOSA	*84.4*			*50-150*	*%REC*	1	6/3/2021 23:09
Surr: 18O2-PFHxS	*101*			*50-150*	*%REC*	1	6/3/2021 23:09
Surr: d5-N-EtFOSAA	*118*			*50-150*	*%REC*	1	6/3/2021 23:09
Surr: d3-N-MeFOSAA	*113*			*50-150*	*%REC*	1	6/3/2021 23:09

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: 07-Jun-21

Client: Fishbeck, Inc.

QC BATCH REPORT

Work Order: 21060057

Project: St. Clair/IPP Development (210245)

Batch ID: **177904** Instrument ID **LCMS1** Method: **E537 Mod**

MBLK Sample ID: **MBLK-177904-177904** Units: **ng/L** Analysis Date: **6/3/2021 10:16 PM**

Client ID: Run ID: **LCMS1_210603B** SeqNo: **7461996** Prep Date: **6/3/2021** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Fluorotelomer Sulphonic Acid	U	0.94	5.0								
Fluorotelomer Sulphonic Acid	U	0.66	5.0								
Fluorotelomer Sulphonic Acid	U	1.1	5.0								
Perfluorobutanesulfonic Acid (	U	0.35	5.0								
Perfluorobutanoic Acid (PFBA)	U	2.6	5.0								
Perfluorodecanesulfonic Acid	U	1.4	5.0								
Perfluorodecanoic Acid (PFDA	U	1.2	5.0								
Perfluorododecanoic Acid (PFI	U	1.4	5.0								
Perfluoroheptanesulfonic Acid	U	0.57	5.0								
Perfluoroheptanoic Acid (PFHp	U	0.44	5.0								
Perfluorohexanesulfonic Acid	U	0.37	5.0								
Perfluorohexanoic Acid (PFHx	U	1.2	5.0								
Perfluorononanesulfonic Acid	U	0.5	5.0								
Perfluorononanoic Acid (PFNA	U	0.87	5.0								
Perfluorooctanesulfonamide (F	U	0.71	5.0								
Perfluorooctanesulfonic Acid (	U	0.89	2.0								
Perfluorooctanoic Acid (PFOA	U	0.63	2.0								
Perfluoropentanesulfonic Acid	U	0.56	5.0								
Perfluoropentanoic Acid (PFPe	U	1.3	5.0								
Perfluorotetradecanoic Acid (F	U	2.6	5.0								
Perfluorotridecanoic Acid (PFT	U	0.77	5.0								
Perfluoroundecanoic Acid (PFI	U	0.97	5.0								
N-Ethylperfluorooctanesulfona	U	0.63	5.0								
N-Methylperfluorooctanesulfor	U	0.64	5.0								
Hexafluoropropylene oxide din	UI	1.2	5.0								
4,8-Dioxa-3H-perfluorononano	U	0.56	5.0								
11Cl-Pf3OUdS	U	0.47	5.0								
9Cl-PF3ONS	U	0.45	5.0								
Surr: 13C2-FtS 4:2	*148.8*	0	0	*149.4*	0	*99.5*	*50-150*	0			
Surr: 13C2-FtS 6:2	*143.9*	0	0	*152*	0	*94.7*	*50-150*	0			
Surr: 13C2-FtS 8:2	*169.7*	0	0	*153.3*	0	*111*	*50-150*	0			
Surr: 13C2-PFDA	*149.1*	0	0	*160*	0	*93.2*	*50-150*	0			
Surr: 13C2-PFDoA	*138.7*	0	0	*160*	0	*86.7*	*50-150*	0			
Surr: 13C2-PFHxA	*163.3*	0	0	*160*	0	*102*	*50-150*	0			
Surr: 13C2-PFTeA	*150.3*	0	0	*160*	0	*94*	*50-150*	0			
Surr: 13C2-PFUnA	*134.7*	0	0	*160*	0	*84.2*	*50-150*	0			
Surr: 13C3-HFPO-DA	*162.3*	0	0	*160*	0	*101*	*50-150*	0			
Surr: 13C3-PFBS	*145.2*	0	0	*148.8*	0	*97.6*	*50-150*	0			
Surr: 13C4-PFBA	*151*	0	0	*160*	0	*94.4*	*50-150*	0			
Surr: 13C4-PFHpA	*152.3*	0	0	*160*	0	*95.2*	*50-150*	0			
Surr: 13C4-PFOA	*155*	0	0	*160*	0	*96.9*	*50-150*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **177904** Instrument ID **LCMS1** Method: **E537 Mod**

Surr: 13C4-PFOS	*147.7*	0	0	*152.8*	0	*96.6*	*50-150*	0
Surr: 13C5-PFNA	*141*	0	0	*160*	0	*88.1*	*50-150*	0
Surr: 13C5-PFPeA	*157*	0	0	*160*	0	*98.1*	*50-150*	0
Surr: 13C8-FOSA	*177.2*	0	0	*160*	0	*111*	*50-150*	0
Surr: 18O2-PFHxS	*163.8*	0	0	*151.2*	0	*108*	*50-150*	0
Surr: d5-N-EtFOSAA	*179.7*	0	0	*160*	0	*112*	*50-150*	0
Surr: d3-N-MeFOSAA	*176.6*	0	0	*160*	0	*110*	*50-150*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Fishbeck, Inc.
Work Order: 21060057
Project: St. Clair/IPP Development (210245)

QC BATCH REPORT

Batch ID: **177904** Instrument ID **LCMS1** Method: **E537 Mod**

LCS Sample ID: **LCS-177904-177904** Units: **ng/L** Analysis Date: **6/3/2021 10:27 PM**
Client ID: Run ID: **LCMS1_210603B** SeqNo: **7461997** Prep Date: **6/3/2021** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Fluorotelomer Sulphonic Acid	33.62	0.94	5.0	29.9	0	112	63-143	0			
Fluorotelomer Sulphonic Acid	36.03	0.66	5.0	30.3	0	119	64-140	0			
Fluorotelomer Sulphonic Acid	31.21	1.1	5.0	30.7	0	102	67-138	0			
Perfluorobutanesulfonic Acid (	30.75	0.35	5.0	28.3	0	109	72-130	0			
Perfluorobutanoic Acid (PFBA)	34.05	2.6	5.0	32	0	106	73-129	0			
Perfluorodecanesulfonic Acid	41.46	1.4	5.0	30.8	0	135	53-142	0			
Perfluorodecanoic Acid (PFDA	31.74	1.2	5.0	32	0	99.2	71-129	0			
Perfluorododecanoic Acid (PFI	30.45	1.4	5.0	32	0	95.2	72-134	0			
Perfluoroheptanesulfonic Acid	29.85	0.57	5.0	30.5	0	97.9	69-134	0			
Perfluoroheptanoic Acid (PFH	28.61	0.44	5.0	32	0	89.4	72-130	0			
Perfluorohexanesulfonic Acid	30.05	0.37	5.0	29.1	0	103	68-131	0			
Perfluorohexanoic Acid (PFHx	30.51	1.2	5.0	32	0	95.3	72-129	0			
Perfluorononanesulfonic Acid	39	0.5	5.0	30.7	0	127	69-127	0			S
Perfluorononanoic Acid (PFNA	32.05	0.87	5.0	32	0	100	69-130	0			
Perfluorooctanesulfonamide (F	34.73	0.71	5.0	32	0	109	67-137	0			
Perfluorooctanesulfonic Acid (	31.55	0.89	2.0	29.7	0	106	65-140	0			
Perfluorooctanoic Acid (PFOA	28.6	0.63	2.0	32	0	89.4	71-133	0			
Perfluoropentanesulfonic Acid	36.41	0.56	5.0	30	0	121	71-127	0			
Perfluoropentanoic Acid (PFPe	28.94	1.3	5.0	32	0	90.4	72-129	0			
Perfluorotetradecanoic Acid (F	31.3	2.6	5.0	32	0	97.8	71-132	0			
Perfluorotridecanoic Acid (PFT	37.28	0.77	5.0	32	0	116	65-144	0			
Perfluoroundecanoic Acid (PFI	31.27	0.97	5.0	32	0	97.7	69-133	0			
N-Ethylperfluorooctanesulfona	30.77	0.63	5.0	32	0	96.2	61-135	0			
Hexafluoropropylene oxide din	31.65	1.2	5.0	32	0	98.9	70-130	0			
4,8-Dioxa-3H-perfluorononano	24.62	0.56	5.0	30.1	0	81.8	70-130	0			
11Cl-Pf3OUdS	30.12	0.47	5.0	30.1	0	100	70-130	0			
9Cl-PF3ONS	37.14	0.45	5.0	29.8	0	125	70-130	0			
Surr: 13C2-FtS 4:2	*130*	0	0	*149.4*	0	*87*	*50-150*	0			
Surr: 13C2-FtS 6:2	*159.9*	0	0	*152*	0	*105*	*50-150*	0			
Surr: 13C2-FtS 8:2	*178*	0	0	*153.3*	0	*116*	*50-150*	0			
Surr: 13C2-PFDA	*148.9*	0	0	*160*	0	*93.1*	*50-150*	0			
Surr: 13C2-PFDoA	*136.4*	0	0	*160*	0	*85.2*	*50-150*	0			
Surr: 13C2-PFHxA	*144.6*	0	0	*160*	0	*90.4*	*50-150*	0			
Surr: 13C2-PFTeA	*126.1*	0	0	*160*	0	*78.8*	*50-150*	0			
Surr: 13C2-PFUnA	*149.8*	0	0	*160*	0	*93.6*	*50-150*	0			
Surr: 13C3-HFPO-DA	*151.7*	0	0	*160*	0	*94.8*	*50-150*	0			
Surr: 13C3-PFBS	*132.2*	0	0	*148.8*	0	*88.9*	*50-150*	0			
Surr: 13C4-PFBA	*140.9*	0	0	*160*	0	*88.1*	*50-150*	0			
Surr: 13C4-PFHpA	*191.7*	0	0	*160*	0	*120*	*50-150*	0			
Surr: 13C4-PFOA	*162.4*	0	0	*160*	0	*102*	*50-150*	0			
Surr: 13C4-PFOS	*119.1*	0	0	*152.8*	0	*77.9*	*50-150*	0			
Surr: 13C5-PFNA	*166.4*	0	0	*160*	0	*104*	*50-150*	0			
Surr: 13C5-PFPeA	*145*	0	0	*160*	0	*90.6*	*50-150*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **177904**	Instrument ID **LCMS1**			Method: **E537 Mod**				
Surr: 13C8-FOSA	*139.6*	0	0	*160*	0	*87.2*	*50-150*	0
Surr: 18O2-PFHxS	*127.2*	0	0	*151.2*	0	*84.1*	*50-150*	0
Surr: d5-N-EtFOSAA	*172*	0	0	*160*	0	*107*	*50-150*	0
Surr: d3-N-MeFOSAA	*180.9*	0	0	*160*	0	*113*	*50-150*	0

LCS Sample ID: **LCS-177904-177904** Units: **ng/L** Analysis Date: **6/4/2021 10:13 AM**
Client ID: Run ID: **LCMS1_210604A** SeqNo: **7462498** Prep Date: **6/3/2021** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
N-Methylperfluorooctanesulfor	40.78	0.64	5.0	32	0	127	65-136	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Fishbeck, Inc.
Work Order: 21060057
Project: St. Clair/IPP Development (210245)

QC BATCH REPORT

Batch ID: **177904** Instrument ID **LCMS1** Method: **E537 Mod**

MS Sample ID: **21060057-02A MS** Units: **ng/L** Analysis Date: **6/3/2021 10:37 PM**

Client ID: **STC-21-05-WW-EFF(I)** Run ID: **LCMS1_210603B** SeqNo: **7461998** Prep Date: **6/3/2021** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Fluorotelomer Sulphonic Acid	30.19	0.89	4.7	28.31	0	107	63-143	0			
Fluorotelomer Sulphonic Acid	33.65	0.63	4.7	28.69	0.477	116	64-140	0			
Fluorotelomer Sulphonic Acid	30.25	1.1	4.7	29.07	0.154	104	67-138	0			
Perfluorobutanesulfonic Acid (	32.69	0.33	4.7	26.8	4.094	107	72-130	0			
Perfluorobutanoic Acid (PFBA)	41.17	2.5	4.7	30.3	11.17	99	73-129	0			
Perfluorodecanesulfonic Acid	19.77	1.3	4.7	29.17	0	67.8	53-142	0			
Perfluorodecanoic Acid (PFDA	29.4	1.2	4.7	30.3	0.8664	94.2	71-129	0			
Perfluorododecanoic Acid (PFI	30.3	1.4	4.7	30.3	0.2777	99.1	72-134	0			
Perfluoroheptanesulfonic Acid	20.96	0.54	4.7	28.88	0	72.6	69-134	0			
Perfluoroheptanoic Acid (PFHp	39.79	0.42	4.7	30.3	8.377	104	72-130	0			
Perfluorohexanesulfonic Acid	24.63	0.35	4.7	27.56	1.014	85.7	68-131	0			
Perfluorohexanoic Acid (PFHx	52.51	1.1	4.7	30.3	22.51	99	72-129	0			
Perfluorononanesulfonic Acid	26.39	0.47	4.7	29.07	0	90.8	69-127	0			
Perfluorononanoic Acid (PFNA	28.47	0.82	4.7	30.3	0.954	90.8	69-130	0			
Perfluorooctanesulfonamide (F	34.47	0.67	4.7	30.3	0.2898	113	67-137	0			
Perfluorooctanesulfonic Acid (	32.26	0.84	1.9	28.12	4.851	97.4	65-140	0			
Perfluorooctanoic Acid (PFOA	38.06	0.6	1.9	30.3	12.02	85.9	71-133	0			
Perfluoropentanesulfonic Acid	25.76	0.53	4.7	28.41	0	90.7	71-127	0			
Perfluoropentanoic Acid (PFPe	51.48	1.2	4.7	30.3	22.85	94.5	72-129	0			
Perfluorotetradecanoic Acid (F	28.14	2.5	4.7	30.3	0.3864	91.6	71-132	0			
Perfluorotridecanoic Acid (PFT	42.7	0.73	4.7	30.3	0	141	65-144	0			
Perfluoroundecanoic Acid (PFI	29.92	0.92	4.7	30.3	0.2596	97.9	69-133	0			
N-Ethylperfluorooctanesulfona	28.67	0.59	4.7	30.3	0	94.6	61-135	0			
N-Methylperfluorooctanesulfor	26.03	0.61	4.7	30.3	1.183	82	65-136	0			
Hexafluoropropylene oxide din	27.67	1.1	4.7	30.3	0	91.3	70-130	0			
4,8-Dioxa-3H-perfluorononano	21.98	0.53	4.7	28.5	0	77.1	70-130	0			
11Cl-Pf3OUdS	21.47	0.44	4.7	28.5	0	75.3	70-130	0			
9Cl-PF3ONS	29.09	0.42	4.7	28.22	0.02415	103	70-130	0			
Surr: 13C2-FtS 4:2	*454.5*	0	0	*141.5*	0	*321*	*50-150*	0			*S*
Surr: 13C2-FtS 6:2	*415.6*	0	0	*143.9*	0	*289*	*50-150*	0			*S*
Surr: 13C2-FtS 8:2	*410.2*	0	0	*145.2*	0	*283*	*50-150*	0			*S*
Surr: 13C2-PFDA	*129.6*	0	0	*151.5*	0	*85.5*	*50-150*	0			
Surr: 13C2-PFDoA	*78.99*	0	0	*151.5*	0	*52.1*	*50-150*	0			
Surr: 13C2-PFHxA	*129.7*	0	0	*151.5*	0	*85.6*	*50-150*	0			
Surr: 13C2-PFTeA	*42.62*	0	0	*151.5*	0	*28.1*	*50-150*	0			*S*
Surr: 13C2-PFUnA	*109.7*	0	0	*151.5*	0	*72.4*	*50-150*	0			
Surr: 13C3-HFPO-DA	*117.4*	0	0	*151.5*	0	*77.5*	*50-150*	0			
Surr: 13C3-PFBS	*108.4*	0	0	*140.9*	0	*76.9*	*50-150*	0			
Surr: 13C4-PFBA	*118.6*	0	0	*151.5*	0	*78.3*	*50-150*	0			
Surr: 13C4-PFHpA	*144.8*	0	0	*151.5*	0	*95.6*	*50-150*	0			
Surr: 13C4-PFOA	*130*	0	0	*151.5*	0	*85.8*	*50-150*	0			
Surr: 13C4-PFOS	*110.5*	0	0	*144.7*	0	*76.3*	*50-150*	0			
Surr: 13C5-PFNA	*151.5*	0	0	*151.5*	0	*100*	*50-150*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **177904**	Instrument ID **LCMS1**			Method: **E537 Mod**				
Surr: 13C5-PFPeA	*123.8*	0	0	*151.5*	0	*81.7*	*50-150*	0
Surr: 13C8-FOSA	*150.3*	0	0	*151.5*	0	*99.2*	*50-150*	0
Surr: 18O2-PFHxS	*134.8*	0	0	*143.2*	0	*94.2*	*50-150*	0
Surr: d5-N-EtFOSAA	*186.7*	0	0	*151.5*	0	*123*	*50-150*	0
Surr: d3-N-MeFOSAA	*162.6*	0	0	*151.5*	0	*107*	*50-150*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Fishbeck, Inc.
Work Order: 21060057
Project: St. Clair/IPP Development (210245)

QC BATCH REPORT

Batch ID: **177904** Instrument ID **LCMS1** Method: **E537 Mod**

DUP Sample ID: **21060173-01I DUP** Units: **ng/L** Analysis Date: **6/3/2021 11:30 PM**
Client ID: Run ID: **LCMS1_210603B** SeqNo: **7462003** Prep Date: **6/3/2021** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Fluorotelomer Sulphonic Acid	U	0.9	4.8	0	0	0	0-0	0	0	30	
Fluorotelomer Sulphonic Acid	U	0.64	4.8	0	0	0	0-0	0.3446	0	30	
Fluorotelomer Sulphonic Acid	U	1.1	4.8	0	0	0	0-0	0.1877	0	30	
Perfluorobutanesulfonic Acid (	2.547	0.34	4.8	0	0	0	0-0	2.366	0	30	J
Perfluorobutanoic Acid (PFBA)	7.188	2.5	4.8	0	0	0	0-0	6.591	8.67	30	
Perfluorodecanesulfonic Acid	U	1.3	4.8	0	0	0	0-0	0	0	30	
Perfluorodecanoic Acid (PFDA	U	1.2	4.8	0	0	0	0-0	0.1231	0	30	
Perfluorododecanoic Acid (PFI	U	1.4	4.8	0	0	0	0-0	0.1692	0	30	
Perfluoroheptanesulfonic Acid	U	0.54	4.8	0	0	0	0-0	0	0	30	
Perfluoroheptanoic Acid (PFH	1.226	0.42	4.8	0	0	0	0-0	1.209	0	30	J
Perfluorohexanesulfonic Acid	0.6621	0.35	4.8	0	0	0	0-0	0.8862	0	30	J
Perfluorohexanoic Acid (PFHx	7.206	1.1	4.8	0	0	0	0-0	7.649	5.97	30	
Perfluorononanesulfonic Acid	U	0.48	4.8	0	0	0	0-0	0	0	30	
Perfluorononanoic Acid (PFNA	U	0.83	4.8	0	0	0	0-0	0.5385	0	30	
Perfluorooctanesulfonamide (F	U	0.68	4.8	0	0	0	0-0	0.2923	0	30	
Perfluorooctanesulfonic Acid (	3.743	0.85	1.9	0	0	0	0-0	3.483	7.18	30	
Perfluorooctanoic Acid (PFOA	4.077	0.6	1.9	0	0	0	0-0	4.415	7.98	30	
Perfluoropentanesulfonic Acid	U	0.53	4.8	0	0	0	0-0	0	0	30	
Perfluoropentanoic Acid (PFPe	5.839	1.2	4.8	0	0	0	0-0	5.748	1.58	30	
Perfluorotetradecanoic Acid (F	U	2.5	4.8	0	0	0	0-0	0.3108	0	30	
Perfluorotridecanoic Acid (PFT	U	0.74	4.8	0	0	0	0-0	0.1692	0	30	
Perfluoroundecanoic Acid (PFI	U	0.93	4.8	0	0	0	0-0	0.08	0	30	
N-Ethylperfluorooctanesulfona	U	0.6	4.8	0	0	0	0-0	0	0	30	
N-Methylperfluorooctanesulfor	0.6835	0.62	4.8	0	0	0	0-0	0.7415	0	30	J
Hexafluoropropylene oxide din	UI	1.1	4.8	0	0	0	0-0	0	0	30	
4,8-Dioxa-3H-perfluorononano	U	0.54	4.8	0	0	0	0-0	0	0	30	
11Cl-Pf3OUdS	U	0.45	4.8	0	0	0	0-0	0.01846	0	30	
9Cl-PF3ONS	U	0.43	4.8	0	0	0	0-0	0	0	30	
Surr: 13C2-FtS 4:2	*349.8*	0	0	*143.1*	0	*244*	*50-150*	356.1	*1.79*	*30*	*S*
Surr: 13C2-FtS 6:2	*392.4*	0	0	*145.6*	0	*270*	*50-150*	415.1	*5.61*	*30*	*S*
Surr: 13C2-FtS 8:2	*263.7*	0	0	*146.8*	0	*180*	*50-150*	269.9	*2.31*	*30*	*S*
Surr: 13C2-PFDA	*152.9*	0	0	*153.3*	0	*99.8*	*50-150*	157.1	*2.7*	*30*	
Surr: 13C2-PFDoA	*139.7*	0	0	*153.3*	0	*91.1*	*50-150*	140.3	*0.456*	*30*	
Surr: 13C2-PFHxA	*168.2*	0	0	*153.3*	0	*110*	*50-150*	173.5	*3.05*	*30*	
Surr: 13C2-PFTeA	*111.8*	0	0	*153.3*	0	*72.9*	*50-150*	90.02	*21.5*	*30*	
Surr: 13C2-PFUnA	*133.9*	0	0	*153.3*	0	*87.3*	*50-150*	138.3	*3.24*	*30*	
Surr: 13C3-HFPO-DA	*162.9*	0	0	*153.3*	0	*106*	*50-150*	162.8	*0.0823*	*30*	
Surr: 13C3-PFBS	*129.7*	0	0	*142.5*	0	*91*	*50-150*	127	*2.08*	*30*	
Surr: 13C4-PFBA	*131.9*	0	0	*153.3*	0	*86*	*50-150*	134.5	*1.95*	*30*	
Surr: 13C4-PFHpA	*180*	0	0	*153.3*	0	*117*	*50-150*	172.6	*4.22*	*30*	
Surr: 13C4-PFOA	*187.2*	0	0	*153.3*	0	*122*	*50-150*	194.3	*3.71*	*30*	
Surr: 13C4-PFOS	*117*	0	0	*146.4*	0	*79.9*	*50-150*	118.3	*1.16*	*30*	
Surr: 13C5-PFNA	*166.2*	0	0	*153.3*	0	*108*	*50-150*	168.3	*1.21*	*30*	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **177904** Instrument ID **LCMS1** Method: **E537 Mod**

Surr: 13C5-PFPeA	*133.2*	0	0	*153.3*	0	*86.9*	*50-150*	134.7	*1.17*	*30*
Surr: 13C8-FOSA	*127.7*	0	0	*153.3*	0	*83.3*	*50-150*	132.2	*3.44*	*30*
Surr: 18O2-PFHxS	*126*	0	0	*144.8*	0	*87*	*50-150*	126.4	*0.341*	*30*
Surr: d5-N-EtFOSAA	*187*	0	0	*153.3*	0	*122*	*50-150*	191.6	*2.44*	*30*
Surr: d3-N-MeFOSAA	*212.9*	0	0	*153.3*	0	*139*	*50-150*	219.2	*2.92*	*30*

The following samples were analyzed in this batch: 21060057-01A 21060057-02A 21060057-04A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Fishbeck, Inc.
Work Order: 21060057
Project: St. Clair/IPP Development (210245)

QC BATCH REPORT

Batch ID: **178026** Instrument ID **LCMS1** Method: **D7968-17a**

MBLK1 Sample ID: **MBLK1-178026-178026** Units: **ng/Kg** Analysis Date: **6/5/2021 01:18 AM**
Client ID: Run ID: **LCMS1_210604D** SeqNo: **7463750** Prep Date: **6/4/2021** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Perfluorobutanoic Acid (PFBA)	U	42	120	0	0	0		0			
Perfluoropentanoic Acid (PFPe	U	17	120	0	0	0		0			
Perfluorohexanoic Acid (PFHx	U	15	120	0	0	0		0			
Perfluoroheptanoic Acid (PFHp	U	17	120	0	0	0		0			
Perfluorooctanoic Acid (PFOA	U	11	25	0	0	0		0			
Perfluorononanoic Acid (PFNA	U	13	25	0	0	0		0			
Perfluorodecanoic Acid (PFDA	U	19	120	0	0	0		0			
Perfluoroundecanoic Acid (PF	U	21	120	0	0	0		0			
Perfluorododecanoic Acid (PF	U	26	120	0	0	0		0			
Perfluorotridecanoic Acid (PFT	U	28	120	0	0	0		0			
Perfluorotetradecanoic Acid (F	U	40	120	0	0	0		0			
Perfluorobutanesulfonic Acid (	U	17	25	0	0	0		0			
Perfluoropentanesulfonic Acid	U	14	25	0	0	0		0			
Perfluorohexanesulfonic Acid (	U	24	120	0	0	0		0			
Perfluoroheptanesulfonic Acid	U	22	120	0	0	0		0			
Perfluorooctanesulfonic Acid (	U	10	25	0	0	0		0			
Perfluorononanesulfonic Acid (	U	22	120	0	0	0		0			
Perfluorodecanesulfonic Acid (	U	13	25	0	0	0		0			
Fluorotelomer Sulphonic Acid	U	28	120	0	0	0		0			
Fluorotelomer Sulphonic Acid	198.8	48	120	0	0	0		0			
Fluorotelomer Sulphonic Acid	U	59	120	0	0	0		0			
Perfluorooctanesulfonamide (F	U	8.5	25	0	0	0		0			
N-Ethylperfluorooctanesulfona	U	49	120	0	0	0		0			
N-Methylperfluorooctanesulfor	U	31	120	0	0	0		0			
11Cl-Pf3OUdS	U	10	25	0	0	0		0			
4,8-Dioxa-3H-perfluorononano	U	6.1	25	0	0	0		0			
9Cl-PF3ONS	U	4.8	25	0	0	0		0			
Hexafluoropropylene oxide din	U	100	120	0	0	0		0			
Surr: 13C4-PFBA	*380.3*	0	0	*400*	0	*95.1*	*50-130*	0			
Surr: 13C5-PFPeA	*394.5*	0	0	*400*	0	*98.6*	*50-130*	0			
Surr: 13C2-PFHxA	*419.6*	0	0	*400*	0	*105*	*50-130*	0			
Surr: 13C4-PFHpA	*394.8*	0	0	*400*	0	*98.7*	*50-130*	0			
Surr: 13C4-PFOA	*399.4*	0	0	*400*	0	*99.8*	*70-130*	0			
Surr: 13C5-PFNA	*423.3*	0	0	*400*	0	*106*	*70-130*	0			
Surr: 13C2-PFDA	*422.6*	0	0	*400*	0	*106*	*70-130*	0			
Surr: 13C2-PFUnA	*427.8*	0	0	*400*	0	*107*	*70-130*	0			
Surr: 13C2-PFDoA	*426.5*	0	0	*400*	0	*107*	*70-130*	0			
Surr: 13C2-PFTeA	*442.8*	0	0	*400*	0	*111*	*50-130*	0			
Surr: 13C3-PFBS	*381.7*	0	0	*400*	0	*95.4*	*50-130*	0			
Surr: 18O2-PFHxS	*383.5*	0	0	*378*	0	*101*	*70-130*	0			
Surr: 13C4-PFOS	*358.9*	0	0	*383*	0	*93.7*	*70-130*	0			
Surr: 13C2-FtS 4:2	*342.6*	0	0	*373*	0	*91.8*	*50-130*	0			
Surr: 13C2-FtS 6:2	*321.2*	0	0	*380*	0	*84.5*	*50-130*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **178026** Instrument ID **LCMS1** Method: **D7968-17a**

Surr: 13C2-FtS 8:2	*389.3*	0	0	*383*	0	*102*	*50-130*	0	
Surr: 13C8-FOSA	*407*	0	0	*400*	0	*102*	*50-130*	0	
Surr: d3-N-MeFOSAA	*444.5*	0	0	*400*	0	*111*	*50-130*	0	
Surr: d5-N-EtFOSAA	*520.6*	0	0	*400*	0	*130*	*50-130*	0	*S*
Surr: 13C3-HFPO-DA	*384.3*	0	0	*400*	0	*96.1*	*50-130*	0	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Fishbeck, Inc.
Work Order: 21060057
Project: St. Clair/IPP Development (210245)

QC BATCH REPORT

Batch ID: **178026** Instrument ID **LCMS1** Method: **D7968-17a**

MBLK2	Sample ID: **MBLK2-178026-178026**				Units: **ng/Kg**			Analysis Date: **6/5/2021 02:00 AM**			
Client ID:		Run ID: **LCMS1_210604D**			SeqNo: **7463754**			Prep Date: **6/4/2021**		DF: **1**	
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Perfluorobutanoic Acid (PFBA)	U	42	120	0	0	0		0			
Perfluoropentanoic Acid (PFPe	U	17	120	0	0	0		0			
Perfluorohexanoic Acid (PFHx	U	15	120	0	0	0		0			
Perfluoroheptanoic Acid (PFHp	U	17	120	0	0	0		0			
Perfluorooctanoic Acid (PFOA	U	11	25	0	0	0		0			
Perfluorononanoic Acid (PFNA	U	13	25	0	0	0		0			
Perfluorodecanoic Acid (PFDA	U	19	120	0	0	0		0			
Perfluoroundecanoic Acid (PF	U	21	120	0	0	0		0			
Perfluorododecanoic Acid (PF	U	26	120	0	0	0		0			
Perfluorotridecanoic Acid (PFT	U	28	120	0	0	0		0			
Perfluorotetradecanoic Acid (F	U	40	120	0	0	0		0			
Perfluorobutanesulfonic Acid (	U	17	25	0	0	0		0			
Perfluoropentanesulfonic Acid	U	14	25	0	0	0		0			
Perfluorohexanesulfonic Acid (	U	24	120	0	0	0		0			
Perfluoroheptanesulfonic Acid	U	22	120	0	0	0		0			
Perfluorooctanesulfonic Acid (	U	10	25	0	0	0		0			
Perfluorononanesulfonic Acid (	U	22	120	0	0	0		0			
Perfluorodecanesulfonic Acid (	U	13	25	0	0	0		0			
Fluorotelomer Sulphonic Acid	U	28	120	0	0	0		0			
Fluorotelomer Sulphonic Acid	U	48	120	0	0	0		0			
Fluorotelomer Sulphonic Acid	U	59	120	0	0	0		0			
Perfluorooctanesulfonamide (F	U	8.5	25	0	0	0		0			
N-Ethylperfluorooctanesulfona	U	49	120	0	0	0		0			
N-Methylperfluorooctanesulfor	U	31	120	0	0	0		0			
11Cl-Pf3OUdS	U	10	25	0	0	0		0			
4,8-Dioxa-3H-perfluorononano	U	6.1	25	0	0	0		0			
9Cl-PF3ONS	U	4.8	25	0	0	0		0			
Hexafluoropropylene oxide din	U	100	120	0	0	0		0			
Surr: 13C4-PFBA	*380.8*	0	0	*400*	0	*95.2*	*50-130*	0			
Surr: 13C5-PFPeA	*383.6*	0	0	*400*	0	*95.9*	*50-130*	0			
Surr: 13C2-PFHxA	*397.6*	0	0	*400*	0	*99.4*	*50-130*	0			
Surr: 13C4-PFHpA	*375.2*	0	0	*400*	0	*93.8*	*50-130*	0			
Surr: 13C4-PFOA	*377.3*	0	0	*400*	0	*94.3*	*70-130*	0			
Surr: 13C5-PFNA	*403.8*	0	0	*400*	0	*101*	*70-130*	0			
Surr: 13C2-PFDA	*387*	0	0	*400*	0	*96.7*	*70-130*	0			
Surr: 13C2-PFUnA	*367*	0	0	*400*	0	*91.8*	*70-130*	0			
Surr: 13C2-PFDoA	*393.1*	0	0	*400*	0	*98.3*	*70-130*	0			
Surr: 13C2-PFTeA	*408.8*	0	0	*400*	0	*102*	*50-130*	0			
Surr: 13C3-PFBS	*376*	0	0	*400*	0	*94*	*50-130*	0			
Surr: 18O2-PFHxS	*371.3*	0	0	*378*	0	*98.2*	*70-130*	0			
Surr: 13C4-PFOS	*365.9*	0	0	*383*	0	*95.5*	*70-130*	0			
Surr: 13C2-FtS 4:2	*316.2*	0	0	*373*	0	*84.8*	*50-130*	0			
Surr: 13C2-FtS 6:2	*325.1*	0	0	*380*	0	*85.6*	*50-130*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **178026** Instrument ID **LCMS1** Method: **D7968-17a**

Surr: 13C2-FtS 8:2	*346.2*	0	0	*383*	0	*90.4*	*50-130*	0
Surr: 13C8-FOSA	*402.1*	0	0	*400*	0	*101*	*50-130*	0
Surr: d3-N-MeFOSAA	*401.6*	0	0	*400*	0	*100*	*50-130*	0
Surr: d5-N-EtFOSAA	*461.3*	0	0	*400*	0	*115*	*50-130*	0
Surr: 13C3-HFPO-DA	*412.6*	0	0	*400*	0	*103*	*50-130*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Fishbeck, Inc.
Work Order: 21060057
Project: St. Clair/IPP Development (210245)

QC BATCH REPORT

Batch ID: **178026** Instrument ID **LCMS1** Method: **D7968-17a**

MS Sample ID: **21060057-03A MS** Units: **ng/Kg** Analysis Date: **6/5/2021 02:31 AM**

Client ID: **STC-21-05-Sludge/Biosolids(I)** Run ID: **LCMS1_210604D** SeqNo: **7463756** Prep Date: **6/4/2021** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Perfluorobutanoic Acid (PFBA)	442.3	42	120	500	81.08	72.2	50-130	0			
Perfluoropentanoic Acid (PFPe	398.1	17	120	500	32.2	73.2	70-130	0			
Perfluorohexanoic Acid (PFHx	559.5	15	120	500	88.22	94.3	50-130	0			
Perfluoroheptanoic Acid (PFHp	425	17	120	500	11.58	82.7	50-130	0			
Perfluorooctanoic Acid (PFOA	508.5	11	25	500	81.92	85.3	70-130	0			
Perfluorononanoic Acid (PFNA	444	13	25	500	29.11	83	70-130	0			
Perfluorodecanoic Acid (PFDA	539	19	120	500	121.6	83.5	70-130	0			
Perfluoroundecanoic Acid (PFU	422.4	21	120	500	25.82	79.3	70-130	0			
Perfluorododecanoic Acid (PFD	324.1	26	120	500	46.03	55.6	70-130	0			S
Perfluorotridecanoic Acid (PFT	95.94	28	120	500	12	16.8	70-130	0			JS
Perfluorotetradecanoic Acid (F	U	40	120	500	0	0	70-130	0			S
Perfluorobutanesulfonic Acid (	353.8	17	25	442	0	80.1	70-130	0			
Perfluoropentanesulfonic Acid	363.8	14	25	469	0	77.6	70-130	0			
Perfluorohexanesulfonic Acid (	319.8	24	120	455	0	70.3	70-130	0			
Perfluoroheptanesulfonic Acid	414.8	22	120	476	0	87.2	70-130	0			
Perfluorooctanesulfonic Acid (	541.8	10	25	464	246.2	63.7	70-130	0			S
Perfluorononanesulfonic Acid (	324.4	22	120	480	0	67.6	70-130	0			S
Perfluorodecanesulfonic Acid (	303.9	13	25	482	0	63.1	70-130	0			S
Fluorotelomer Sulphonic Acid	1263	28	120	467	0	270	70-130	0			S
Fluorotelomer Sulphonic Acid	1967	48	120	474	0	415	70-130	0			BS
Fluorotelomer Sulphonic Acid	2494	59	120	479	107.2	498	70-130	0			S
Perfluorooctanesulfonamide (F	134.9	8.5	25	500	13.96	24.2	70-130	0			S
N-Ethylperfluorooctanesulfona	864.5	49	120	500	239.7	125	70-130	0			
N-Methylperfluorooctanesulfor	821.7	31	120	500	300.7	104	70-130	0			
11Cl-Pf3OUdS	224.5	10	25	471	2.525	47.1	70-130	0			S
4,8-Dioxa-3H-perfluorononano	386.8	6.1	25	471	0	82.1	70-130	0			
9Cl-PF3ONS	332	4.8	25	466	0	71.3	70-130	0			
Hexafluoropropylene oxide din	413.9	100	120	500	0	82.8	50-130	0			
Surr: 13C4-PFBA	*302.2*	0	0	*400*	0	*75.6*	*50-130*	0			
Surr: 13C5-PFPeA	*305.9*	0	0	*400*	0	*76.5*	*50-130*	0			
Surr: 13C2-PFHxA	*347.9*	0	0	*400*	0	*87*	*50-130*	0			
Surr: 13C4-PFHpA	*340.5*	0	0	*400*	0	*85.1*	*50-130*	0			
Surr: 13C4-PFOA	*344.3*	0	0	*400*	0	*86.1*	*70-130*	0			
Surr: 13C5-PFNA	*342.1*	0	0	*400*	0	*85.5*	*70-130*	0			
Surr: 13C2-PFDA	*326.9*	0	0	*400*	0	*81.7*	*70-130*	0			
Surr: 13C2-PFUnA	*296.9*	0	0	*400*	0	*74.2*	*70-130*	0			
Surr: 13C2-PFDoA	*203.9*	0	0	*400*	0	*51*	*70-130*	0			*S*
Surr: 13C2-PFTeA	*26.13*	0	0	*400*	0	*6.53*	*50-130*	0			*S*
Surr: 13C3-PFBS	*287.6*	0	0	*400*	0	*71.9*	*50-130*	0			
Surr: 18O2-PFHxS	*298.3*	0	0	*378*	0	*78.9*	*70-130*	0			
Surr: 13C4-PFOS	*293.6*	0	0	*383*	0	*76.6*	*70-130*	0			
Surr: 13C2-FtS 4:2	*903.3*	0	0	*373*	0	*242*	*50-130*	0			*S*
Surr: 13C2-FtS 6:2	*1272*	0	0	*380*	0	*335*	*50-130*	0			*S*

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **178026** Instrument ID **LCMS1** Method: **D7968-17a**

Surr: 13C2-FtS 8:2	*1623*	0	0	*383*	0	*424*	*50-130*	0	*S*
Surr: 13C8-FOSA	*109.6*	0	0	*400*	0	*27.4*	*50-130*	0	*S*
Surr: d3-N-MeFOSAA	*387.2*	0	0	*400*	0	*96.8*	*50-130*	0	
Surr: d5-N-EtFOSAA	*479.6*	0	0	*400*	0	*120*	*50-130*	0	
Surr: 13C3-HFPO-DA	*339*	0	0	*400*	0	*84.8*	*50-130*	0	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Fishbeck, Inc.
Work Order: 21060057
Project: St. Clair/IPP Development (210245)

QC BATCH REPORT

Batch ID: **178026** Instrument ID **LCMS1** Method: **D7968-17a**

MSD Sample ID: **21060057-03A MSD** Units: **ng/Kg** Analysis Date: **6/5/2021 02:42 AM**

Client ID: **STC-21-05-Sludge/Biosolids(I)** Run ID: **LCMS1_210604D** SeqNo: **7463757** Prep Date: **6/4/2021** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Perfluorobutanoic Acid (PFBA)	408.6	42	120	500	81.08	65.5	50-130	442.3	7.92	30	
Perfluoropentanoic Acid (PFPe	377.5	17	120	500	32.2	69.1	70-130	398.1	5.3	30	S
Perfluorohexanoic Acid (PFHx	467.3	15	120	500	88.22	75.8	50-130	559.5	18	30	
Perfluoroheptanoic Acid (PFHp	449.8	17	120	500	11.58	87.6	50-130	425	5.67	30	
Perfluorooctanoic Acid (PFOA	484.9	11	25	500	81.92	80.6	70-130	508.5	4.76	30	
Perfluorononanoic Acid (PFNA	441.2	13	25	500	29.11	82.4	70-130	444	0.637	30	
Perfluorodecanoic Acid (PFDA	486	19	120	500	121.6	72.9	70-130	539	10.3	30	
Perfluoroundecanoic Acid (PFU	342.9	21	120	500	25.82	63.4	70-130	422.4	20.8	30	S
Perfluorododecanoic Acid (PFD	282.6	26	120	500	46.03	47.3	70-130	324.1	13.7	30	S
Perfluorotridecanoic Acid (PFT	84.99	28	120	500	12	14.6	70-130	95.94	0	30	JS
Perfluorotetradecanoic Acid (P	U	40	120	500	0	0	70-130	28.52	0	30	S
Perfluorobutanesulfonic Acid (	336.2	17	25	442	0	76.1	70-130	353.8	5.11	30	
Perfluoropentanesulfonic Acid	330.8	14	25	469	0	70.5	70-130	363.8	9.49	30	
Perfluorohexanesulfonic Acid (	307.6	24	120	455	0	67.6	70-130	319.8	3.89	30	S
Perfluoroheptanesulfonic Acid	357.3	22	120	476	0	75.1	70-130	414.8	14.9	30	
Perfluorooctanesulfonic Acid (	531.9	10	25	464	246.2	61.6	70-130	541.8	1.84	30	S
Perfluorononanesulfonic Acid (	292.6	22	120	480	0	61	70-130	324.4	10.3	30	S
Perfluorodecanesulfonic Acid (	215.1	13	25	482	0	44.6	70-130	303.9	34.2	30	SR
Fluorotelomer Sulphonic Acid	1154	28	120	467	0	247	70-130	1263	9.02	30	S
Fluorotelomer Sulphonic Acid	1724	48	120	474	0	364	70-130	1967	13.2	30	BS
Fluorotelomer Sulphonic Acid	2213	59	120	479	107.2	440	70-130	2494	12	30	S
Perfluorooctanesulfonamide (F	123.6	8.5	25	500	13.96	21.9	70-130	134.9	8.79	30	S
N-Ethylperfluorooctanesulfona	932.8	49	120	500	239.7	139	70-130	864.5	7.6	30	S
N-Methylperfluorooctanesulfor	900.6	31	120	500	300.7	120	70-130	821.7	9.17	30	
11Cl-Pf3OUdS	225.7	10	25	471	2.525	47.4	70-130	224.5	0.529	30	S
4,8-Dioxa-3H-perfluorononano	359.1	6.1	25	471	0	76.2	70-130	386.8	7.45	30	
9Cl-PF3ONS	316.1	4.8	25	466	0	67.8	70-130	332	4.92	30	S
Hexafluoropropylene oxide din	333	100	120	500	0	66.6	50-130	413.9	21.6	30	
Surr: 13C4-PFBA	*314.6*	0	0	*400*	0	*78.6*	*50-130*	302.2	*4*	*30*	
Surr: 13C5-PFPeA	*305*	0	0	*400*	0	*76.3*	*50-130*	305.9	*0.273*	*30*	
Surr: 13C2-PFHxA	*332.7*	0	0	*400*	0	*83.2*	*50-130*	347.9	*4.47*	*30*	
Surr: 13C4-PFHpA	*338.7*	0	0	*400*	0	*84.7*	*50-130*	340.5	*0.53*	*30*	
Surr: 13C4-PFOA	*336.4*	0	0	*400*	0	*84.1*	*70-130*	344.3	*2.3*	*30*	
Surr: 13C5-PFNA	*338.6*	0	0	*400*	0	*84.7*	*70-130*	342.1	*1.02*	*30*	
Surr: 13C2-PFDA	*327.3*	0	0	*400*	0	*81.8*	*70-130*	326.9	*0.112*	*30*	
Surr: 13C2-PFUnA	*270.2*	0	0	*400*	0	*67.5*	*70-130*	296.9	*9.42*	*30*	*S*
Surr: 13C2-PFDoA	*214.2*	0	0	*400*	0	*53.6*	*70-130*	203.9	*4.92*	*30*	*S*
Surr: 13C2-PFTeA	*23.75*	0	0	*400*	0	*5.94*	*50-130*	26.13	*9.55*	*30*	*S*
Surr: 13C3-PFBS	*277.3*	0	0	*400*	0	*69.3*	*50-130*	287.6	*3.67*	*30*	
Surr: 18O2-PFHxS	*283.2*	0	0	*378*	0	*74.9*	*70-130*	298.3	*5.2*	*30*	
Surr: 13C4-PFOS	*231.8*	0	0	*383*	0	*60.5*	*70-130*	293.6	*23.5*	*30*	*S*
Surr: 13C2-FtS 4:2	*890.3*	0	0	*373*	0	*239*	*50-130*	903.3	*1.45*	*30*	*S*
Surr: 13C2-FtS 6:2	*1232*	0	0	*380*	0	*324*	*50-130*	1272	*3.19*	*30*	*S*

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Batch ID: **178026** Instrument ID **LCMS1** Method: **D7968-17a**

Surr: 13C2-FtS 8:2	*1362*	0	0	*383*	0	*356*	*50-130*	1623	*17.5*	*30*	*S*
Surr: 13C8-FOSA	*104.5*	0	0	*400*	0	*26.1*	*50-130*	109.6	*4.83*	*30*	*S*
Surr: d3-N-MeFOSAA	*389*	0	0	*400*	0	*97.3*	*50-130*	387.2	*0.466*	*30*	
Surr: d5-N-EtFOSAA	*423.4*	0	0	*400*	0	*106*	*50-130*	479.6	*12.5*	*30*	
Surr: 13C3-HFPO-DA	*355*	0	0	*400*	0	*88.8*	*50-130*	339	*4.61*	*30*	

LCS1 Sample ID: **LCS1-178026-178026** Units: **ng/Kg** Analysis Date: **6/5/2021 01:28 AM**

Client ID: Run ID: **LCMS1_210604D** SeqNo: **7463751** Prep Date: **6/4/2021** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Perfluorooctanoic Acid (PFOA	35.07	11	25	25	0	140	35-150	0			
Perfluorononanoic Acid (PFNA	25.96	13	25	25	0	104	35-150	0			
Perfluorobutanesulfonic Acid (	25.89	17	25	22	0	118	35-150	0			
Perfluoropentanesulfonic Acid	22.17	14	25	23.5	0	94.4	35-150	0			J
Perfluorooctanesulfonic Acid (	16.32	10	25	23	0	71	35-150	0			J
Perfluorodecanesulfonic Acid (	40.55	13	25	24	0	169	35-150	0			S
Perfluorooctanesulfonamide (F	35.54	8.5	25	25	0	142	35-150	0			
11Cl-Pf3OUdS	27.07	10	25	23.5	0	115	35-150	0			
4,8-Dioxa-3H-perfluorononano	25.79	6.1	25	23.5	0	110	35-150	0			
9Cl-PF3ONS	24.92	4.8	25	23	0	108	35-150	0			J
Surr: 13C4-PFBA	*391.7*	0	0	*400*	0	*97.9*	*50-130*	0			
Surr: 13C5-PFPeA	*382.5*	0	0	*400*	0	*95.6*	*50-130*	0			
Surr: 13C2-PFHxA	*410.2*	0	0	*400*	0	*103*	*50-130*	0			
Surr: 13C4-PFHpA	*397.7*	0	0	*400*	0	*99.4*	*50-130*	0			
Surr: 13C4-PFOA	*388.5*	0	0	*400*	0	*97.1*	*70-130*	0			
Surr: 13C5-PFNA	*394.1*	0	0	*400*	0	*98.5*	*70-130*	0			
Surr: 13C2-PFDA	*410.3*	0	0	*400*	0	*103*	*70-130*	0			
Surr: 13C2-PFUnA	*396.4*	0	0	*400*	0	*99.1*	*70-130*	0			
Surr: 13C2-PFDoA	*421.2*	0	0	*400*	0	*105*	*70-130*	0			
Surr: 13C2-PFTeA	*414.4*	0	0	*400*	0	*104*	*50-130*	0			
Surr: 13C3-PFBS	*368.1*	0	0	*400*	0	*92*	*50-130*	0			
Surr: 18O2-PFHxS	*362.6*	0	0	*378*	0	*95.9*	*70-130*	0			
Surr: 13C4-PFOS	*378.8*	0	0	*383*	0	*98.9*	*70-130*	0			
Surr: 13C2-FtS 4:2	*328.9*	0	0	*373*	0	*88.2*	*50-130*	0			
Surr: 13C2-FtS 6:2	*304.4*	0	0	*380*	0	*80.1*	*50-130*	0			
Surr: 13C2-FtS 8:2	*324*	0	0	*383*	0	*84.6*	*50-130*	0			
Surr: 13C8-FOSA	*408.4*	0	0	*400*	0	*102*	*50-130*	0			
Surr: d3-N-MeFOSAA	*411.4*	0	0	*400*	0	*103*	*50-130*	0			
Surr: d5-N-EtFOSAA	*468.5*	0	0	*400*	0	*117*	*50-130*	0			
Surr: 13C3-HFPO-DA	*396.5*	0	0	*400*	0	*99.1*	*50-130*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Fishbeck, Inc.
Work Order: 21060057
Project: St. Clair/IPP Development (210245)

QC BATCH REPORT

Batch ID: **178026** Instrument ID **LCMS1** Method: **D7968-17a**

LCS2 Sample ID: **LCS2-178026-178026** Units: **ng/Kg** Analysis Date: **6/5/2021 01:49 AM**
Client ID: Run ID: **LCMS1_210604D** SeqNo: **7463753** Prep Date: **6/4/2021** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Perfluorobutanoic Acid (PFBA)	482	42	120	500	0	96.4	50-130	0			
Perfluoropentanoic Acid (PFPe	475.1	17	120	500	0	95	70-130	0			
Perfluorohexanoic Acid (PFHx	482.5	15	120	500	0	96.5	50-130	0			
Perfluoroheptanoic Acid (PFHp	475.5	17	120	500	0	95.1	50-130	0			
Perfluorooctanoic Acid (PFOA	479	11	25	500	0	95.8	70-130	0			
Perfluorononanoic Acid (PFNA	516.5	13	25	500	0	103	70-130	0			
Perfluorodecanoic Acid (PFDA	500.6	19	120	500	0	100	70-130	0			
Perfluoroundecanoic Acid (PF	464.4	21	120	500	0	92.9	70-130	0			
Perfluorododecanoic Acid (PF	510	26	120	500	0	102	70-130	0			
Perfluorotridecanoic Acid (PFT	589.2	28	120	500	0	118	70-130	0			
Perfluorotetradecanoic Acid (F	695.4	40	120	500	0	139	70-130	0			S
Perfluorobutanesulfonic Acid (	431.3	17	25	442	0	97.6	70-130	0			
Perfluoropentanesulfonic Acid	465.8	14	25	469	0	99.3	70-130	0			
Perfluorohexanesulfonic Acid (	423	24	120	455	0	93	70-130	0			
Perfluoroheptanesulfonic Acid	448.1	22	120	476	0	94.1	70-130	0			
Perfluorooctanesulfonic Acid (	452.7	10	25	464	0	97.6	70-130	0			
Perfluorononanesulfonic Acid (	444.9	22	120	480	0	92.7	70-130	0			
Perfluorodecanesulfonic Acid (	486.1	13	25	482	0	101	70-130	0			
Fluorotelomer Sulphonic Acid	432.4	28	120	467	0	92.6	70-130	0			
Fluorotelomer Sulphonic Acid	497	48	120	474	0	105	70-130	0			B
Fluorotelomer Sulphonic Acid	584.4	59	120	479	0	122	70-130	0			
Perfluorooctanesulfonamide (F	521.4	8.5	25	500	0	104	70-130	0			
N-Ethylperfluorooctanesulfona	590.4	49	120	500	0	118	70-130	0			
N-Methylperfluorooctanesulfor	563.2	31	120	500	0	113	70-130	0			
11Cl-Pf3OUdS	521.2	10	25	471	0	111	70-130	0			
4,8-Dioxa-3H-perfluorononano	473.9	6.1	25	471	0	101	70-130	0			
9Cl-PF3ONS	461.3	4.8	25	466	0	99	70-130	0			
Hexafluoropropylene oxide din	463.4	100	120	500	0	92.7	50-130	0			
Surr: 13C4-PFBA	*384.1*	0	0	*400*	0	*96*	*50-130*	0			
Surr: 13C5-PFPeA	*388.2*	0	0	*400*	0	*97*	*50-130*	0			
Surr: 13C2-PFHxA	*395.3*	0	0	*400*	0	*98.8*	*50-130*	0			
Surr: 13C4-PFHpA	*387.6*	0	0	*400*	0	*96.9*	*50-130*	0			
Surr: 13C4-PFOA	*403.4*	0	0	*400*	0	*101*	*70-130*	0			
Surr: 13C5-PFNA	*396.8*	0	0	*400*	0	*99.2*	*70-130*	0			
Surr: 13C2-PFDA	*400*	0	0	*400*	0	*100*	*70-130*	0			
Surr: 13C2-PFUnA	*364.4*	0	0	*400*	0	*91.1*	*70-130*	0			
Surr: 13C2-PFDoA	*426.4*	0	0	*400*	0	*107*	*70-130*	0			
Surr: 13C2-PFTeA	*439.3*	0	0	*400*	0	*110*	*50-130*	0			
Surr: 13C3-PFBS	*368.6*	0	0	*400*	0	*92.1*	*50-130*	0			
Surr: 18O2-PFHxS	*383.4*	0	0	*378*	0	*101*	*70-130*	0			
Surr: 13C4-PFOS	*368.6*	0	0	*383*	0	*96.2*	*70-130*	0			
Surr: 13C2-FtS 4:2	*335.3*	0	0	*373*	0	*89.9*	*50-130*	0			
Surr: 13C2-FtS 6:2	*339.5*	0	0	*380*	0	*89.3*	*50-130*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **178026** Instrument ID **LCMS1** Method: **D7968-17a**

Surr: 13C2-FtS 8:2	*323.5*	0	0	*383*	0	*84.5*	*50-130*	0
Surr: 13C8-FOSA	*406.3*	0	0	*400*	0	*102*	*50-130*	0
Surr: d3-N-MeFOSAA	*434.3*	0	0	*400*	0	*109*	*50-130*	0
Surr: d5-N-EtFOSAA	*481*	0	0	*400*	0	*120*	*50-130*	0
Surr: 13C3-HFPO-DA	*413.1*	0	0	*400*	0	*103*	*50-130*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Fishbeck, Inc.
Work Order: 21060057
Project: St. Clair/IPP Development (210245)

QC BATCH REPORT

Batch ID: **178026** Instrument ID **LCMS1** Method: **D7968-17a**

LCS3 Sample ID: **LCS3-178026-178026** Units: **ng/Kg** Analysis Date: **6/5/2021 01:39 AM**
Client ID: Run ID: **LCMS1_210604D** SeqNo: **7463752** Prep Date: **6/4/2021** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Perfluorobutanoic Acid (PFBA)	117.5	42	120	125	0	94	35-150	0			J
Perfluoropentanoic Acid (PFPe	109.2	17	120	125	0	87.3	35-150	0			J
Perfluorohexanoic Acid (PFHx	121.8	15	120	125	0	97.4	35-150	0			
Perfluoroheptanoic Acid (PFHp	116.4	17	120	125	0	93.1	35-150	0			J
Perfluorooctanoic Acid (PFOA	118.1	11	25	125	0	94.5	35-150	0			
Perfluorononanoic Acid (PFNA	126.2	13	25	125	0	101	35-150	0			
Perfluorodecanoic Acid (PFDA	123.2	19	120	125	0	98.6	35-150	0			
Perfluoroundecanoic Acid (PF	110.9	21	120	125	0	88.7	35-150	0			J
Perfluorododecanoic Acid (PF	107.9	26	120	125	0	86.3	35-150	0			J
Perfluorotridecanoic Acid (PFT	131.8	28	120	125	0	105	35-150	0			
Perfluorotetradecanoic Acid (F	143.4	40	120	125	0	115	35-150	0			
Perfluorobutanesulfonic Acid (	93.75	17	25	110	0	85.2	35-150	0			
Perfluoropentanesulfonic Acid	123.5	14	25	118	0	105	35-150	0			
Perfluorohexanesulfonic Acid (	106.7	24	120	115	0	92.8	35-150	0			J
Perfluoroheptanesulfonic Acid	112.6	22	120	120	0	93.9	35-150	0			J
Perfluorooctanesulfonic Acid (	88.75	10	25	115	0	77.2	35-150	0			
Perfluorononanesulfonic Acid (	107.5	22	120	120	0	89.6	35-150	0			J
Perfluorodecanesulfonic Acid (	105.6	13	25	120	0	88	35-150	0			
Fluorotelomer Sulphonic Acid	104.1	28	120	118	0	88.2	35-150	0			J
Fluorotelomer Sulphonic Acid	128.5	48	120	118	0	109	35-150	0			B
Fluorotelomer Sulphonic Acid	132.3	59	120	120	0	110	35-150	0			
Perfluorooctanesulfonamide (F	126.8	8.5	25	125	0	101	35-150	0			
N-Ethylperfluorooctanesulfona	136.6	49	120	125	0	109	35-150	0			
N-Methylperfluorooctanesulfor	103.1	31	120	125	0	82.5	35-150	0			J
11Cl-Pf3OUdS	109.5	10	25	118	0	92.8	35-150	0			
4,8-Dioxa-3H-perfluorononano	110.1	6.1	25	118	0	93.3	35-150	0			
9Cl-PF3ONS	108.2	4.8	25	118	0	91.7	35-150	0			
Hexafluoropropylene oxide din	100.8	100	120	125	0	80.6	35-150	0			J
Surr: 13C4-PFBA	*394.1*	0	0	*400*	0	*98.5*	*50-130*	0			
Surr: 13C5-PFPeA	*395.3*	0	0	*400*	0	*98.8*	*50-130*	0			
Surr: 13C2-PFHxA	*414.2*	0	0	*400*	0	*104*	*50-130*	0			
Surr: 13C4-PFHpA	*391.6*	0	0	*400*	0	*97.9*	*50-130*	0			
Surr: 13C4-PFOA	*396.1*	0	0	*400*	0	*99*	*70-130*	0			
Surr: 13C5-PFNA	*414.7*	0	0	*400*	0	*104*	*70-130*	0			
Surr: 13C2-PFDA	*418.6*	0	0	*400*	0	*105*	*70-130*	0			
Surr: 13C2-PFUnA	*391.6*	0	0	*400*	0	*97.9*	*70-130*	0			
Surr: 13C2-PFDoA	*415.4*	0	0	*400*	0	*104*	*70-130*	0			
Surr: 13C2-PFTeA	*381.6*	0	0	*400*	0	*95.4*	*50-130*	0			
Surr: 13C3-PFBS	*378.5*	0	0	*400*	0	*94.6*	*50-130*	0			
Surr: 18O2-PFHxS	*360.7*	0	0	*378*	0	*95.4*	*70-130*	0			
Surr: 13C4-PFOS	*384.3*	0	0	*383*	0	*100*	*70-130*	0			
Surr: 13C2-FtS 4:2	*331.7*	0	0	*373*	0	*88.9*	*50-130*	0			
Surr: 13C2-FtS 6:2	*324.3*	0	0	*380*	0	*85.3*	*50-130*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Fishbeck, Inc.
Work Order: 21060057
Project: St. Clair/IPP Development (210245)

QC BATCH REPORT

Batch ID: **178026**	Instrument ID **LCMS1**			Method: **D7968-17a**				
Surr: 13C2-FtS 8:2	*377*	0	0	*383*	0	*98.4*	*50-130*	0
Surr: 13C8-FOSA	*404.7*	0	0	*400*	0	*101*	*50-130*	0
Surr: d3-N-MeFOSAA	*427*	0	0	*400*	0	*107*	*50-130*	0
Surr: d5-N-EtFOSAA	*495.9*	0	0	*400*	0	*124*	*50-130*	0
Surr: 13C3-HFPO-DA	*409*	0	0	*400*	0	*102*	*50-130*	0

The following samples were analyzed in this batch: 21060057-03A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Fishbeck, Inc.
Work Order: 21060057
Project: St. Clair/IPP Development (210245)

QC BATCH REPORT

Batch ID: **R319043** Instrument ID **MOIST** Method: **SW3550C**

MBLK Sample ID: **WBLKS-R319043** Units: **% of sample** Analysis Date: **6/3/2021 03:37 PM**
Client ID: Run ID: **MOIST_210603E** SeqNo: **7457855** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	U	0.1	0.10								

LCS Sample ID: **LCS-R319043** Units: **% of sample** Analysis Date: **6/3/2021 03:37 PM**
Client ID: Run ID: **MOIST_210603E** SeqNo: **7457854** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	99.99	0.1	0.10	100	0	100	98-102	0			

DUP Sample ID: **21060059-03B DUP** Units: **% of sample** Analysis Date: **6/3/2021 03:37 PM**
Client ID: Run ID: **MOIST_210603E** SeqNo: **7457838** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	12.68	0.1	0.10	0	0	0	0-0	12.7	0.158	10	

DUP Sample ID: **21060187-03A DUP** Units: **% of sample** Analysis Date: **6/3/2021 03:37 PM**
Client ID: Run ID: **MOIST_210603E** SeqNo: **7457844** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	16.75	0.1	0.10	0	0	0	0-0	16.09	4.02	10	

The following samples were analyzed in this batch: 21060057-03A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

2106031

CHAIN OF CUSTODY RECORD

fishbeck
Address: 1515 Arboretum Dr. SE
Grand Rapids, MI 49546
Phone: 616.575.3824

Report to: Penni Mahler
Email: pdmahler@fishbeck.com
Copy to:
Email:

Invoice to: Accounts Payable
Email: acpay@fishbeck.com
Lab Quote Reference:

PROJECT NAME	PROJECT NO.
St. Clair/IPP Development	210245
PROJECT LOCATION	SAMPLER(S) NAME
St. Clair, MI	LNC
PROJECT MANAGER	PHONE 616.464.3
	EMAIL
ADDITIONAL INFORMATION	

PAGE 1 of 1

STD TAT ■
RUSH TAT □
DATE DUE:

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	MATRIX TYPE: AQUEOUS (WATER)	SOLID/SEMI-SOLID	AIR	NONAQUEOUS LIQUID	REQUIRED ANALYSES: PFAS/537 M/28 list	NUMBER OF CONTAINERS SUBMITTED	REMARKS
5/28/21	1050	STC-21-05-WW-INF(I)	X				3		
	1140	STC-21-05-WW-EFF(I)	X				3		
	1105	STC-21-05-Sludge/Biosolids(I)		X			3		
	1117	STC-21-05-QCFB	X				3		

None

RELINQUISHED BY	DATE	TIME	RELINQUISHED BY	DATE	TIME	RELINQUISHED BY	DATE	TIME	METHOD OF SHIPMENT/TRACKING NUMBER
[signature]	5/28/21	1151	[signature]	5/28/21	1151	[signature]	5/28/21	1500	
RECEIVED BY	DATE	TIME	RECEIVED BY	DATE	TIME	RECEIVED BY	DATE	TIME	RECEIVED FOR LAB DATE TIME
									5/28/21 1500

IR1 4.0c

ALS Group, USA

Sample Receipt Checklist

Client Name: **FTCH - GR** Date/Time Received: **28-May-21 15:00**

Work Order: **21060057** Received by: **DS**

Checklist completed by Diane Shaw (eSignature) 01-Jun-21 (Date) Reviewed by: Ehrland Bosworth (eSignature) 02-Jun-21 (Date)

Matrices: Water
Carrier name: Client

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Sample(s) received on ice?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	4.0/4.0 c	IR1	
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	6/1/2021 12:38:27 PM		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:	-		

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction: