

David Neste
Wisconsin Department of Natural Resources
625 County Road Y, Suite 700
Oshkosh, WI 54901

Arcadis U.S., Inc.
126 North Jefferson Street
Milwaukee, Wisconsin 53202
www.arcadis.com

Date:
November 2, 2020

Subject:
Sample Results Notification, Tyco Fire Technology Center PFAS, 2700 Industrial Parkway South, Marinette, Wisconsin
BRRTS Activity#: 02-38-580694

Tyco Environmental Assessment
Call Line:
(800) 314-1381

Responsible Party:
Tyco Fire Products LP
2700 Industrial Parkway S
Marinette, WI 54143

Dear Mr. Neste:

Site Name:
Tyco Fire Technology
Center

On behalf of Tyco Fire Products LP (Tyco), Arcadis is providing this Sample Results Notification for off-site investigation activities related to the Tyco Fire Technology Center PFAS site located at 2700 Industrial Parkway South in Marinette, Wisconsin (Site).

BRRTS No.:
02-38-580694

This Sample R

esults Notification is being provided to satisfy NR716.14(2) for surface water samples that were collected from Ditch B as part of a pre-design investigation for a source-control solution. Arcadis collected 31 surface water samples from Ditch B on October 7, 2020 consistent with our previously submitted *Pre-Design Investigation Work Plan*. We recorded the sample location, date, and other information and had the sample tested at an accredited, independent laboratory. That testing is now complete, and the results are summarized in the attached table with sample locations depicted in the attached figure.

The results show that the Ditch B treatment system works effectively to remove PFAS from water. Samples of water taken immediately after emerging from our treatment system are clean – PFAS is removed by the system. Water samples taken after passing through our treatment system, at a point 10 feet downstream, showed PFOA at 36 nanograms per liter (ng/L) and PFOS at 2.2 ng/L, well below Wisconsin proposed surface water standards (420 ng/L for PFOA and 11 ng/L for PFOS) – a marked improvement from readings taken in July at the same point. As we shared previously, PFAS levels were unacceptably high at that point because unusually wet weather led to significant volumes of water bypassing the system and not getting treated.

The water upstream in Ditch B was tested as well, as part of our effort now to move from interim measures toward a permanent source-control solution. As

David Neste
Wisconsin Department of Natural Resources
November 2, 2020

expected, this area of Ditch B has elevated levels of PFAS. The data are critical since it enables us to pinpoint where the most PFAS contamination is entering the ditch, so we know where the permanent treatment system needs to be located to stop the PFAS pollution.

Owners of each parcel accessed to collect the samples were notified of the results collected on their property via phone call on Friday, October 30, and received printed copies of the attached letters via overnight courier on Monday, November 2.

These results will be combined with other previously collected and future planned sampling results and evaluated comprehensively in a future submittal.

Please do not hesitate to call us if you have any questions.

Sincerely,

Arcadis U.S., Inc.



Peter Milionis
Principal Scientist

Attachment:

Summary Results Table
Sample Locations Figure
Laboratory Report
Owner Notification Letters

Table 1 - Sample Results

Location		SW-39	SW-L01	SW-L02	SW-L03	SW-L04	SW-L05
Sample Date		10/7/2020	10/7/2020	10/7/2020	10/7/2020	10/7/2020	10/7/2020
Chemical Name	Units						
10:2 FTS	ng/l	< 1.9 U	< 1.9 U	< 1.8 U [< 1.9 U]	< 1.8 U	< 1.8 U	< 1.8 U
F-53B Minor	ng/l	< 1.9 U	< 1.9 U	< 1.8 U [< 1.9 U]	< 1.8 U	< 1.8 U	< 1.8 U
GenX	ng/l	< 3.8 U	< 3.8 U	< 3.7 U [< 3.8 U]	< 3.6 U	< 3.7 U	< 3.6 U
DONA	ng/l	< 1.9 U	< 1.9 U	< 1.8 U [< 1.9 U]	< 1.8 U	< 1.8 U	< 1.8 U
4:2 FTS	ng/l	0.78 J	1.8 J	1.0 J [0.86 J]	0.74 J	0.76 J	0.70 J
6:2 FTS	ng/l	20	100	54 [47]	26	23	22
8:2 FTS	ng/l	1.0 J	17	11 [13]	2.9	2.0	1.9
F-53B Major	ng/l	< 1.9 U	< 1.9 U	< 1.8 U [< 1.9 U]	< 1.8 U	< 1.8 U	< 1.8 U
NEtFOSA	ng/l	< 1.9 U	< 1.9 U	< 1.8 U [< 1.9 U]	< 1.8 U	< 1.8 U	< 1.8 U
NEtFOSE	ng/l	< 1.9 U	< 1.9 U	< 1.8 U [< 1.9 U]	< 1.8 U	< 1.8 U	< 1.8 U
NEtFOSAA	ng/l	< 4.8 U	1.2 J	< 4.6 U [< 4.7 U]	< 4.5 U	< 4.6 U	< 4.5 U
NMeFOSA	ng/l	< 1.9 U	< 1.9 U	< 1.8 U [< 1.9 U]	< 1.8 U	< 1.8 U	< 1.8 U
NMeFOSE	ng/l	< 3.8 U	< 3.8 U	< 3.7 U [< 3.8 U]	< 3.6 U	< 3.7 U	< 3.6 U
NMeFOSAA	ng/l	< 4.8 U	< 4.7 U	< 4.6 U [< 4.7 U]	< 4.5 U	< 4.6 U	< 4.5 U
PFBS	ng/l	1.1 J	1.2 J	1.2 J [1.0 J]	1.0 J	1.1 J	1.0 J
PFBA	ng/l	24	23	24 [23]	23	24	23
PFDS	ng/l	< 1.9 U	< 1.9 U	< 1.8 U [< 1.9 U]	< 1.8 U	< 1.8 U	< 1.8 U
PFDA	ng/l	< 1.9 U	0.64 J	< 1.8 U [< 1.9 U]	< 1.8 U	< 1.8 U	< 1.8 U
PFDoS	ng/l	< 1.9 U	< 1.9 U	< 1.8 U [< 1.9 U]	< 1.8 U	< 1.8 U	< 1.8 U
PFDoA	ng/l	< 1.9 U	< 1.9 U	< 1.8 U [< 1.9 U]	< 1.8 U	< 1.8 U	< 1.8 U
PFHpS	ng/l	< 1.9 U	< 1.9 U	< 1.8 U [< 1.9 U]	< 1.8 U	< 1.8 U	< 1.8 U
PFHpA	ng/l	4.6	12	6.3 [6.0]	4.9	5.0	4.7
PFHxDA	ng/l	< 1.9 UB	< 1.9 U	< 1.8 U [< 1.9 U]	< 1.8 U	< 1.8 U	< 1.8 U
PFHxS	ng/l	2.6	5.2	3.1 [2.9]	2.5	2.7	2.4
PFHxA	ng/l	19	35	24 [24]	21	22	22
PFNS	ng/l	< 1.9 U	< 1.9 U	< 1.8 U [< 1.9 U]	< 1.8 U	< 1.8 U	< 1.8 U
PFNA	ng/l	0.92 J	6.2	3.1 [3.4]	1.5 J	1.5 J	1.1 J
PFODA	ng/l	< 1.9 U	< 1.9 U	< 1.8 U [< 1.9 U]	< 1.8 U	< 1.8 U	< 1.8 U
FOSA	ng/l	< 1.9 U	3.0	2.0 [1.8 J]	1.1 J	< 1.8 U	0.93 J
PFOS	ng/l	2.2	16	8.3 [9.5]	3.5	3.6	2.9
PFOA	ng/l	36	130	74 [71]	49	51	45
PFPeS	ng/l	< 1.9 U	0.45 J	0.28 J [< 1.9 U]	< 1.8 U	< 1.8 U	< 1.8 U
PFPeA	ng/l	33	43	36 [36]	34	34	32
PFTeA	ng/l	< 1.9 U	< 1.9 U	< 1.8 U [< 1.9 U]	< 1.8 U	< 1.8 U	< 1.8 U
PFTriA	ng/l	< 1.9 U	< 1.9 UJ	< 1.8 UJ [< 1.9 UJ]	< 1.8 UJ	< 1.8 UJ	< 1.8 UJ
PFUnA	ng/l	< 1.9 U	< 1.9 U	< 1.8 U [< 1.9 U]	< 1.8 U	< 1.8 U	< 1.8 U
TSS	mg/l	24	56	< 5.0 U [3.5 J]	< 5.0 U	< 5.0 U	9.0

Table 1 - Sample Results

Location		SW-L06	SW-L07	SW-L08	SW-L09	SW-L10	SW-M01
Sample Date		10/7/2020	10/7/2020	10/7/2020	10/7/2020	10/7/2020	10/7/2020
Chemical Name	Units						
10:2 FTS	ng/l	< 1.8 U	< 1.9 U	< 1.9 U	< 1.9 U	< 1.9 U	< 1.9 U [< 1.9 U]
F-53B Minor	ng/l	< 1.8 U	< 1.9 U	< 1.9 U	< 1.9 U	< 1.9 U	< 1.9 U [< 1.9 U]
GenX	ng/l	< 3.7 U	< 3.7 U	< 3.8 U	< 3.8 U	< 3.9 U	< 3.8 U [< 3.7 U]
DONA	ng/l	< 1.8 U	< 1.9 U	< 1.9 U	< 1.9 U	< 1.9 U	< 1.9 U [< 1.9 U]
4:2 FTS	ng/l	16	17	17	17	18	20 [18]
6:2 FTS	ng/l	1400 D	1200 D	1200 D	1300 D	1200 D	1800 D [1700 D]
8:2 FTS	ng/l	390 D	160	290	170	170	310 J- [260 J-]
F-53B Major	ng/l	< 1.8 U	< 1.9 U	< 1.9 U	< 1.9 U	< 1.9 U	< 1.9 U [< 1.9 U]
NEtFOSA	ng/l	< 1.8 U	< 1.9 U	< 1.9 U	< 1.9 U	< 1.9 U	< 1.9 U [< 1.9 U]
NEtFOSE	ng/l	< 1.8 U	< 1.9 U	< 1.9 U	< 1.9 U	< 1.9 U	< 1.9 U [< 1.9 U]
NEtFOSAA	ng/l	6.8	3.1 J	6.7	3.4 J	4.2 J	8.9 [6.6]
NMeFOSA	ng/l	< 1.8 U	< 1.9 U	< 1.9 U	< 1.9 U	< 1.9 U	< 1.9 U [< 1.9 U]
NMeFOSE	ng/l	< 3.7 U	< 3.7 U	< 3.8 U	< 3.8 U	< 3.9 U	< 3.8 U [< 3.7 U]
NMeFOSAA	ng/l	< 4.6 U	< 4.6 U	< 4.7 U	< 4.7 U	< 4.8 U	< 4.8 U [< 4.6 U]
PFBS	ng/l	4.8	4.4	4.1	4.6	4.6	4.4 [5.2]
PFBA	ng/l	65	66	65	67	67	70 [69]
PFDS	ng/l	< 1.8 U	< 1.9 U	< 1.9 U	< 1.9 U	< 1.9 U	< 1.9 U [< 1.9 U]
PFDA	ng/l	8.9	3.8	7.1	4.1	3.9	8.4 [6.8]
PFDoS	ng/l	< 1.8 U	< 1.9 U	< 1.9 U	< 1.9 U	< 1.9 U	< 1.9 U [< 1.9 U]
PFDoA	ng/l	< 1.8 U	< 1.9 U	< 1.9 U	< 1.9 U	< 1.9 U	< 1.9 U [< 1.9 U]
PFHpS	ng/l	5.1	3.6	4.2	3.7	3.6	4.7 [4.7]
PFHpA	ng/l	89	86	85	91	91	91 [92]
PFHxDA	ng/l	< 1.8 U	< 1.9 U	< 1.9 U	< 1.9 U	< 1.9 U	< 1.9 U [< 1.9 U]
PFHxS	ng/l	45	47	47	48	45	53 [51]
PFHxA	ng/l	220	220	220	230	230	230 [230]
PFNS	ng/l	< 1.8 U	< 1.9 U	< 1.9 U	< 1.9 U	< 1.9 U	< 1.9 U [< 1.9 U]
PFNA	ng/l	82	48	67	51	52	74 [65]
PFODA	ng/l	< 1.8 U	< 1.9 U	< 1.9 U	< 1.9 U	< 1.9 U	< 1.9 U [< 1.9 U]
FOSA	ng/l	40	21	32	22	22	42 [39]
PFOS	ng/l	300	150	250	160	160	280 [260]
PFOA	ng/l	1400 D	1200 D	1200 D	1300 D	1200 D	1200 D [1200 D]
PFPeS	ng/l	3.4	3.8	3.7	3.8	4.0	3.7 [3.7]
PFPeA	ng/l	190	200	190	200	200	210 [210]
PFTeA	ng/l	< 1.8 U	< 1.9 U	< 1.9 U	< 1.9 U	< 1.9 U	< 1.9 U [< 1.9 U]
PFTriA	ng/l	< 1.8 UJ	< 1.9 UJ	< 1.9 UJ	< 1.9 UJ	< 1.9 UJ	< 1.9 U [< 1.9 U]
PFUnA	ng/l	< 1.8 U	< 1.9 U	< 1.9 U	< 1.9 U	< 1.9 U	3.5 [3.1]
TSS	mg/l	4.0 J	3.5 J	15	7.5	4.5 J	3.0 J [3.0 J]

Table 1 - Sample Results

Location		SW-M02	SW-M03	SW-M04	SW-M05	SW-M06	SW-M07	SW-M08
Sample Date		10/7/2020	10/7/2020	10/7/2020	10/7/2020	10/7/2020	10/7/2020	10/7/2020
Chemical Name	Units							
10:2 FTS	ng/l	< 1.9 U	< 1.8 U	< 1.9 U	< 1.8 U	< 1.9 U	< 1.9 U	< 1.9 U
F-53B Minor	ng/l	< 1.9 U	< 1.8 U	< 1.9 U	< 1.8 U	< 1.9 U	< 1.9 U	< 1.9 U
GenX	ng/l	< 3.9 U	< 3.6 U	< 3.8 U	< 3.7 U	< 3.7 U	< 3.7 U	< 3.8 U
DONA	ng/l	< 1.9 U	< 1.8 U	< 1.9 U	< 1.8 U	< 1.9 U	< 1.9 U	< 1.9 U
4:2 FTS	ng/l	19	19	18	28 J-	23	22	15
6:2 FTS	ng/l	1700 D	1700 D	1600 D	2000 D	1800 D	2000 D	1500 D
8:2 FTS	ng/l	200 J-	190	220 J-	190 J-	130 J-	170 J-	310
F-53B Major	ng/l	< 1.9 U	< 1.8 U	< 1.9 U	< 1.8 U	< 1.9 U	< 1.9 U	< 1.9 U
NEtFOSA	ng/l	< 1.9 U	< 1.8 U	< 1.9 U	< 1.8 U	< 1.9 U	< 1.9 U	< 1.9 U
NEtFOSE	ng/l	< 1.9 U	< 1.8 U	< 1.9 U	< 1.8 U	< 1.9 U	< 1.9 U	< 1.9 U
NEtFOSAA	ng/l	5.7	4.5 J	4.7 J	4.6	2.8 J	3.7 J	1.8 J
NMeFOSA	ng/l	< 1.9 U	< 1.8 U	< 1.9 U	< 1.8 U	< 1.9 U	< 1.9 U	< 1.9 U
NMeFOSE	ng/l	< 3.9 U	< 3.6 U	< 3.8 U	< 3.7 U	< 3.7 U	< 3.7 U	< 3.8 U
NMeFOSAA	ng/l	< 4.8 U	< 4.6 U	< 4.8 U	< 4.6 U	< 4.6 U	< 4.7 U	< 4.7 U
PFBS	ng/l	4.1	3.9	3.8	4.7	4.1	4.1	3.5
PFBA	ng/l	70	70	69	80	75	81	68
PFDS	ng/l	< 1.9 U	< 1.8 U	< 1.9 U	< 1.8 U	< 1.9 U	< 1.9 U	< 1.9 U
PFDA	ng/l	5.2	4.8	6.2	5.0	3.5	4.3	8.4
PFDoS	ng/l	< 1.9 U	< 1.8 U	< 1.9 U	< 1.8 U	< 1.9 U	< 1.9 U	< 1.9 U
PFDoA	ng/l	< 1.9 U	< 1.8 U	< 1.9 U	< 1.8 U	< 1.9 U	< 1.9 U	< 1.9 U
PFHpS	ng/l	4.2	4.1	3.7	4.4	3.9	3.9	4.0
PFHpA	ng/l	87	90	80	110	95	110	78
PFHxDA	ng/l	< 1.9 U	< 1.8 U	< 1.9 U	< 1.8 U	< 1.9 U	< 1.9 U	< 1.9 U
PFHxS	ng/l	50	50	45	68	53	55	37
PFHxA	ng/l	230	230	220	280	250	270	200
PFNS	ng/l	< 1.9 U	< 1.8 U	< 1.9 U	< 1.8 U	< 1.9 U	< 1.9 U	< 1.9 U
PFNA	ng/l	54	56	54	77	58	71	49
PFODA	ng/l	< 1.9 U	< 1.8 U	< 1.9 U	< 1.8 U	< 1.9 U	< 1.9 U	< 1.9 U
FOSA	ng/l	29	29	23	39	24	43	2.7
PFOS	ng/l	200	210	230	190	160	190	270
PFOA	ng/l	1000 D	1100 D	870 D	1400 D	1100 D	1100 D	570 D
PFPeS	ng/l	3.7	3.5	3.1	4.7	3.6	3.9	2.7
PFPeA	ng/l	220	220	210	250	240	260	210
PFTeA	ng/l	< 1.9 U	< 1.8 U	< 1.9 U	< 1.8 U	< 1.9 U	< 1.9 U	< 1.9 U
PFTriA	ng/l	< 1.9 U	< 1.8 U	< 1.9 U	< 1.8 U	< 1.9 U	< 1.9 U	< 1.9 U
PFUnA	ng/l	2.0	2.0	2.8	2.3	1.2 J	2.3	1.2 J
TSS	mg/l	4.0 J	4.0 J	5.0	4.5 J	3.5 J	3.5 J	3.5 J

Table 1 - Sample Results

Location		SW-M09	SW-M10	SW-U01	SW-U02	SW-U03	SW-U04
Sample Date		10/7/2020	10/7/2020	10/7/2020	10/7/2020	10/7/2020	10/7/2020
Chemical Name	Units						
10:2 FTS	ng/l	< 1.9 U	< 1.9 U	< 1.8 U	< 1.8 U [< 1.9 U]	< 1.9 U	< 2.0 U
F-53B Minor	ng/l	< 1.9 U	< 1.9 U	< 1.8 U	< 1.8 U [< 1.9 U]	< 1.9 U	< 2.0 U
GenX	ng/l	< 3.8 U	< 3.7 U	< 3.7 U	< 3.7 U [< 3.7 U]	< 3.9 U	< 4.0 U
DONA	ng/l	< 1.9 U	< 1.9 U	< 1.8 U	< 1.8 U [< 1.9 U]	< 1.9 U	< 2.0 U
4:2 FTS	ng/l	15	12	13 J-	12 J- [11]	4.9 J-	2.3 J-
6:2 FTS	ng/l	1600 D	1400 D	1500 D	1300 D [1200 D]	530 D	240 J-
8:2 FTS	ng/l	140	94	160 J-	110 J- [110]	29 J-	45 J-
F-53B Major	ng/l	< 1.9 U	< 1.9 U	< 1.8 U	< 1.8 U [< 1.9 U]	< 1.9 U	< 2.0 U
NEtFOSA	ng/l	< 1.9 U	< 1.9 U	< 1.8 U	< 1.8 U [< 1.9 U]	< 1.9 U	< 2.0 U
NEtFOSE	ng/l	< 1.9 U	< 1.9 U	< 1.8 U	< 1.8 U [< 1.9 U]	< 1.9 U	< 2.0 U
NEtFOSAA	ng/l	< 4.8 U	< 4.7 U	< 4.6 U	< 4.6 U [< 4.7 U]	< 4.8 U	< 5.0 U
NMeFOSA	ng/l	< 1.9 U	< 1.9 U	< 1.8 U	< 1.8 U [< 1.9 U]	< 1.9 U	< 2.0 U
NMeFOSE	ng/l	< 3.8 U	< 3.7 U	< 3.7 U	< 3.7 U [< 3.7 U]	< 3.9 U	< 4.0 U
NMeFOSAA	ng/l	< 4.8 U	< 4.7 U	< 4.6 U	< 4.6 U [< 4.7 U]	< 4.8 U	< 5.0 U
PFBS	ng/l	3.2	3.3	3.3	3.3 [3.0]	3.2	3.1
PFBA	ng/l	67	62	65	63 [61]	48	41
PFDS	ng/l	< 1.9 U	< 1.9 U	< 1.8 U	< 1.8 U [< 1.9 U]	< 1.9 U	< 2.0 U
PFDA	ng/l	3.7	2.4	4.0	3.0 [2.6]	0.84 J	2.2
PFDoS	ng/l	< 1.9 U	< 1.9 U	< 1.8 U	< 1.8 U [< 1.9 U]	< 1.9 U	< 2.0 U
PFDoA	ng/l	< 1.9 U	< 1.9 U	< 1.8 U	< 1.8 U [< 1.9 U]	< 1.9 U	< 2.0 U
PFHpS	ng/l	3.5	4.0	5.1	4.1 [3.8]	4.1	6.8
PFHpA	ng/l	76	71	77	77 [73]	61	47
PFHxDA	ng/l	< 1.9 U	< 1.9 U	< 1.8 U	< 1.8 UB [< 1.9 UB]	< 1.9 UB	< 2.0 UB
PFHxS	ng/l	34	35	39	37 [35]	35	39
PFHxA	ng/l	200	170	170	160 [150]	110	86
PFNS	ng/l	< 1.9 U	< 1.9 U	< 1.8 U	< 1.8 U [< 1.9 U]	< 1.9 U	< 2.0 U
PFNA	ng/l	41	23	42	22 [25]	8.2	12
PFODA	ng/l	< 1.9 U	< 1.9 U	< 1.8 U	< 1.8 U [< 1.9 U]	< 1.9 U	< 2.0 U
FOSA	ng/l	1.7 J	1.1 J	1.8	1.4 J [1.3 J]	< 1.9 U	< 2.0 U
PFOS	ng/l	170	150	240	170 [150]	140	360 D
PFOA	ng/l	590 D	430 D	460 D	340 [360]	320	250
PFPeS	ng/l	2.8	2.5	2.8	2.7 [2.6]	2.5	2.6
PFPeA	ng/l	210	190	200	190 [180]	130	97
PFTeA	ng/l	< 1.9 U	< 1.9 U	< 1.8 U	< 1.8 U [< 1.9 U]	< 1.9 U	< 2.0 U
PFTriA	ng/l	< 1.9 U	< 1.9 U	< 1.8 U	< 1.8 U [< 1.9 U]	< 1.9 U	< 2.0 U
PFUnA	ng/l	< 1.9 U	< 1.9 U	< 1.8 U	< 1.8 U [< 1.9 U]	< 1.9 U	< 2.0 U
TSS	mg/l	2.5 J	3.5 J	3.0 J	3.5 J [5.0]	3.5 J	3.0 J

Table 1 - Sample Results

Location		SW-U05	SW-U06	SW-U07	SW-U08	SW-U09	SW-U10
Sample Date		10/7/2020	10/7/2020	10/7/2020	10/7/2020	10/7/2020	10/7/2020
Chemical Name	Units						
10:2 FTS	ng/l	< 1.8 U	< 1.9 U	< 1.8 U	< 1.9 U	< 1.9 U	< 1.8 U
F-53B Minor	ng/l	< 1.8 U	< 1.9 U	< 1.8 U	< 1.9 U	< 1.9 U	< 1.8 U
GenX	ng/l	< 3.6 U	< 3.7 U	< 3.7 U	< 3.8 U	< 3.7 U	< 3.7 U
DONA	ng/l	< 1.8 U	< 1.9 U	< 1.8 U	< 1.9 U	< 1.9 U	< 1.8 U
4:2 FTS	ng/l	1.2 J-	0.36 J	0.33 J-	0.24 J	< 1.9 U	< 1.8 U
6:2 FTS	ng/l	46 J-	28 J-	26 J-	28	41	18 J-
8:2 FTS	ng/l	4.2 J-	1.8 J-	2.0 J-	2.2	1.7 J	1.3 J
F-53B Major	ng/l	< 1.8 U	< 1.9 U	< 1.8 U	< 1.9 U	< 1.9 U	< 1.8 U
NEtFOSA	ng/l	< 1.8 U	< 1.9 U	< 1.8 U	< 1.9 U	< 1.9 U	< 1.8 U
NEtFOSE	ng/l	< 1.8 U	< 1.9 U	< 1.8 U	< 1.9 U	< 1.9 U	< 1.8 U
NEtFOSAA	ng/l	< 4.5 U	< 4.7 U	< 4.6 U	< 4.8 U	< 4.7 U	< 4.6 U
NMeFOSA	ng/l	< 1.8 U	< 1.9 U	< 1.8 U	< 1.9 U	< 1.9 U	< 1.8 U
NMeFOSE	ng/l	< 3.6 U	< 3.7 U	< 3.7 U	< 3.8 U	< 3.7 U	< 3.7 U
NMeFOSAA	ng/l	< 4.5 U	< 4.7 U	< 4.6 U	< 4.8 U	< 4.7 U	< 4.6 U
PFBS	ng/l	3.2	3.1	3.0	3.6	2.4	2.3
PFBA	ng/l	34	26	25	24	20	19
PFDS	ng/l	< 1.8 U	< 1.9 U	< 1.8 U	< 1.9 U	< 1.9 U	< 1.8 U
PFDA	ng/l	0.63 J	0.48 J	0.37 J	0.37 J	0.53 J	0.35 J
PFDoS	ng/l	< 1.8 U	< 1.9 U	< 1.8 U	< 1.9 U	< 1.9 U	< 1.8 U
PFDoSA	ng/l	< 1.8 U	< 1.9 U	< 1.8 U	< 1.9 U	< 1.9 U	< 1.8 U
PFHpS	ng/l	5.1	4.3	4.4	8.4	0.91 J	0.31 J
PFHpA	ng/l	35	25	22	24	17	16
PFHxDA	ng/l	< 1.8 U	< 1.9 U	< 1.8 UB	< 1.9 UB	< 1.9 UB	< 1.8 UB
PFHxS	ng/l	37	37	38	59	14	5.6
PFHxA	ng/l	54	37	37	36	28	26
PFNS	ng/l	< 1.8 U	< 1.9 U	< 1.8 U	< 1.9 U	< 1.9 U	< 1.8 U
PFNA	ng/l	6.1	3.7	3.5	4.4	3.1	3.1
PFODA	ng/l	< 1.8 U	< 1.9 U	< 1.8 U	< 1.9 U	< 1.9 U	< 1.8 U
FOSA	ng/l	< 1.8 U	< 1.9 U	< 1.8 U	< 1.9 U	< 1.9 U	< 1.8 U
PFOS	ng/l	200	140	150	230	69	11
PFOA	ng/l	120	40	40	38	27	25
PFPeS	ng/l	2.6	2.7	2.5	4.4	0.73 J	0.47 J
PFPeA	ng/l	68	52	49	48	39	35
PFTeA	ng/l	< 1.8 U	< 1.9 U	< 1.8 U	< 1.9 U	< 1.9 U	< 1.8 U
PFTriA	ng/l	< 1.8 U	< 1.9 U	< 1.8 U	< 1.9 U	< 1.9 U	< 1.8 U
PFUnA	ng/l	< 1.8 U	< 1.9 U	< 1.8 U	< 1.9 U	< 1.9 U	< 1.8 U
TSS	mg/l	3.0 J	5.0	4.5 J	3.5 J	3.0 J	4.0 J

Notes:

Detections are boldfaced

ng/l = nanograms per liter

mg/l = milligrams per liter

U = The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

J = The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

D = Dilution required for sample analysis.

UB = Compound considered non-detect at the listed value due to associated blank contamination.

J- = The result is an estimated quantity. The associated numerical value is expected to have a negative or low bias.

UJ = The compound was not detected above the reported sample method detection limit. However, the reported limit is approximate and may or may not represent the actual method detection limit.

PFOA = Perfluorooctanoic acid (C8)

PFOS = Perfluorooctanesulfonic acid (C8)

PFBS = Perfluorobutanesulfonic acid (C4)

PFHpA = Perfluoroheptanoic acid (C7)

PFHxS = Perfluorohexanesulfonic acid (C6)

PFNA = Perfluorononanoic acid (C9)

PFDA = Perfluorodecanoic acid (C10)

PFDoA = Perfluorododecanoic acid (C12)

PFHxA = Perfluorohexanoic acid (C6)

PFTeA = Perfluorotetradecanoic acid (C14)

PFTriA = Perfluorotridecanoic acid (C13)

PFUnA = Perfluoroundecanoic acid (C11)

NEtFOSAA = N-ethylperfluorooctanesulfonamidoacetic acid (C12)

NMeFOSAA = N-methylperfluorooctanesulfonamidoacetic acid (C11)

PFBA = Perfluorobutanoic acid (C4)

PFPeA = Perfluoropentanoic acid (C5)

PFHxDA = Perfluoro-n-hexadecanoic acid (C16)

PFODA = Perfluoro-n-octadecanoic acid (C18)

PFPeS = Perfluoropentanesulfonic acid (C5)

PFHpS = Perfluoroheptanesulfonic acid (C7)

PFNS = Perfluorononanesulfonic acid (C9)

PFDS = Perfluorodecanesulfonic acid (C10)

PFDoS = Perfluorododecanesulfonic acid (C12)

FOSA = Perfluorooctanesulfonamide (C8)

NEtFOSA = N-ethylperfluorooctanesulfonamide (C10)

NMeFOSA = N-methylperfluorooctanesulfonamide (C9)

NMeFOSE = N-methylperfluorooctanesulfonamidoethanol (C11)

NEtFOSE = N-ethylperfluorooctanesulfonamidoethanol (C12)

4:2 FTS = 4:2 fluorotelomer sulfonate (C6)

6:2 FTS = 6:2 fluorotelomer sulfonate (C8)

8:2 FTS = 8:2 fluorotelomer sulfonate (C10)

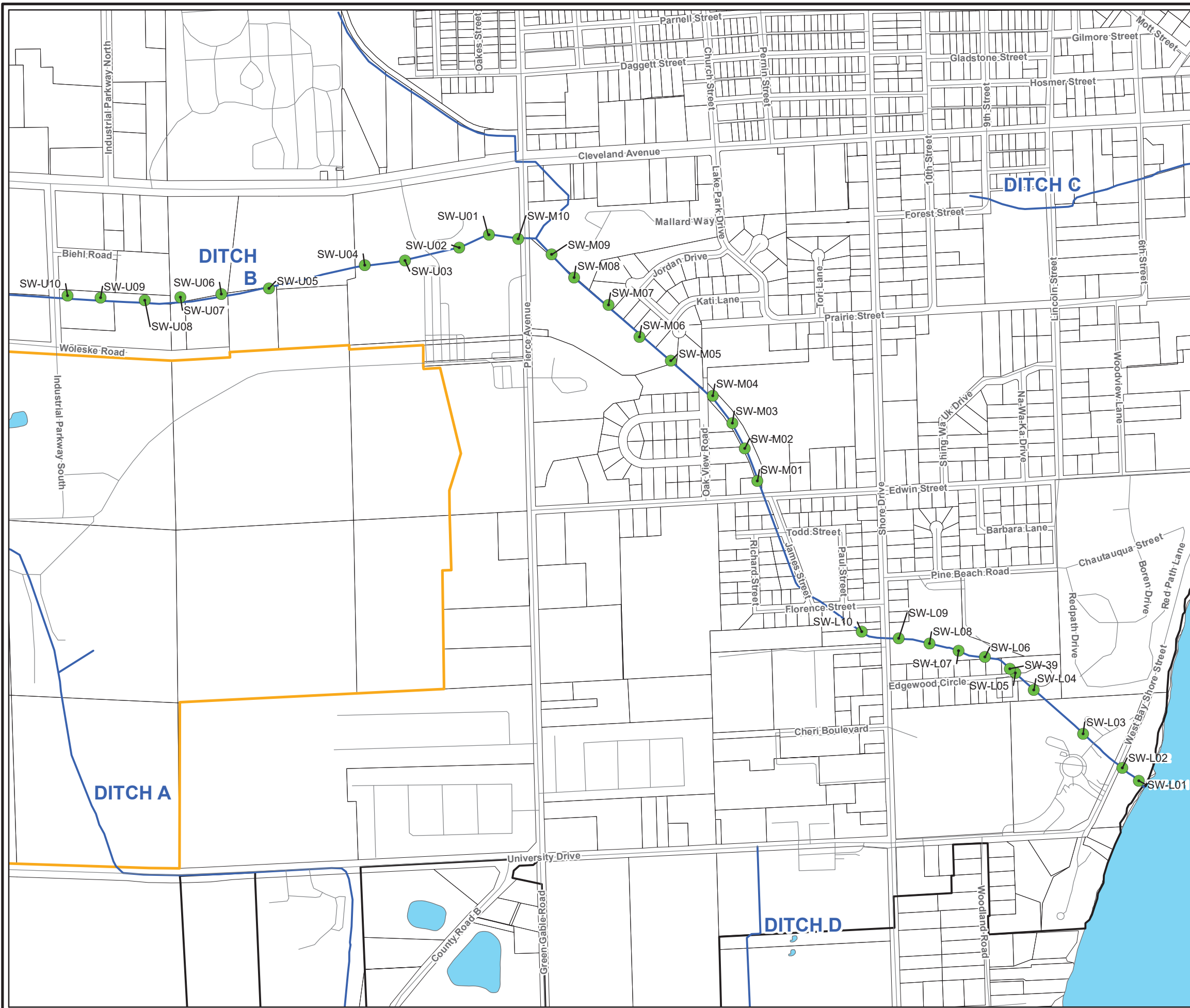
10:2 FTS = 10:2 fluorotelomer sulfonate (C12)

DONA = 4,8-Dioxo-3H-perfluorononanoic acid (C7)

GenX = Hexafluoropropylene oxide dimer acid (C6)

F-53B Major = 9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (C8)

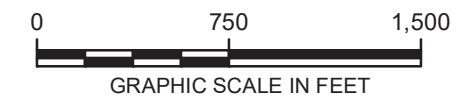
F-53B Minor = 11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (C10)



LEGEND:

- SURFACE WATER SAMPLE LOCATION
- APPROXIMATE SITE PROPERTY BOUNDARY
- APPROXIMATE MARINETTE CITY BOUNDARY
- PARCEL BOUNDARY
- ROAD
- DITCH/STREAM
- WATERBODY

- NOTES:**
1. CITY BOUNDARY DATA SOURCE: WISCONSIN LEGISLATIVE TECHNOLOGY SERVICES BUREAU, WISCONSIN COUNTY CLERKS AND LAND INFORMATION OFFICES, ACCESSED FALL 2017.
 2. DITCH/STREAM AND WATERBODY DATA SOURCE: U.S. GEOLOGICAL SURVEY NATIONAL HYDROGRAPHY DATASET, ACCESSED FALL 2017.
 3. ROAD DATA SOURCE: OPEN STREET MAP, ACCESSED FALL 2017.



TYCO FIRE TECHNOLOGY CENTER
 MARINETTE, WISCONSIN

SURFACE WATER SAMPLE LOCATIONS

FIGURE
1

ANALYTICAL REPORT

Eurofins TestAmerica, Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

Laboratory Job ID: 500-189111-1
Client Project/Site: Marinette 30015296.00009

For:
ARCADIS U.S., Inc.
126 North Jefferson Street
Suite 400
Milwaukee, Wisconsin 53202

Attn: Lisa Rutkowski



Authorized for release by:
10/19/2020 9:35:43 AM

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

LINKS

Review your project
results through
TotalAccess

Have a Question?



Visit us at:
www.eurofinsus.com/Env

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

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

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



Table of Contents

Cover Page	1
Table of Contents	2
Case Narrative	3
Method Summary	4
Sample Summary	5
Client Sample Results	6
Definitions	28
QC Sample Results	29
Chronicle	37
Certification Summary	40
Chain of Custody	41
Receipt Checklists	46
Field Data Sheets	48
Isotope Dilution Summary	49

Case Narrative

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189111-1

Job ID: 500-189111-1

Laboratory: Eurofins TestAmerica, Chicago

Narrative

Job Narrative 500-189111-1

Comments

No additional comments.

Receipt

The samples were received on 10/9/2020 9:40 AM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 4 coolers at receipt time were 2.4° C, 2.6° C, 2.7° C and 2.9° C.

LCMS

Method 537 (modified): Isotope Dilution Analyte (IDA) recovery is above the method recommended limit for M2-8:2 FTS for the following samples: 500-189111-1, 500-189111-2, 500-189111-3[MS], 500-189111-3[MSD], 500-189111-4, 500-189111-6, 500-189111-7 and 500-189111-11. Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries.

Method 537 (modified): Isotope Dilution Analyte (IDA) recovery is above the method recommended limit for M2-4:2 FTS and M2-8:2 FTS for the following sample: 500-189111-5. Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries.

Method 537 (modified): Due to the high concentration of several, the matrix spike / matrix spike duplicate (MS/MSD) for preparation batch 320-420800 and analytical batch 320-420953 could not be evaluated for accuracy and precision. The associated laboratory control sample (LCS) met acceptance criteria.

Method 537 (modified): The matrix spike / matrix spike duplicate (MS/MSD) precision for 8:2 FTS for preparation batch 320-420800 and analytical batch 320-420953 was outside control limits. Sample matrix interference is suspected.

Method 537 (modified): Results for samples 500-189111-1, 500-189111-2, 500-189111-3, 500-189111-3[MS], 500-189111-3[MSD], 500-189111-4, 500-189111-5, 500-189111-6, 500-189111-7, 500-189111-9, 500-189111-10 and 500-189111-11 were reported from the analysis of a diluted extract due to high concentration of the target analyte in the analysis of the undiluted extract. The dilution factor was applied to the labeled internal standard area counts and these area counts were within acceptance limits.

Method 537 (modified): The "I" qualifier means the transition mass ratio for the indicated analyte was outside of the established ratio limits. The qualitative identification of the analyte has some degree of uncertainty. However, analyst judgment was used to positively identify the analyte. CCVL 320-422430/2

Method 537 (modified): Results for samples 500-189111-8 were reported from the analysis of a diluted extract due to high concentration of the target analyte in the analysis of the undiluted extract. The dilution factor was applied to the labeled internal standard area counts and these area counts were within acceptance limits.

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

General Chemistry

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

Organic Prep

Method 3535: The following samples were beige prior to extraction: 500-189111-1, 500-189111-2, 500-189111-3, 500-189111-3[MS], 500-189111-3[MSD], 500-189111-4, 500-189111-5, 500-189111-6, 500-189111-7, 500-189111-8, 500-189111-9, 500-189111-10 and 500-189111-11 3535 PFC Water 320-420800 and 320-420800

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

Method Summary

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189111-1

Method	Method Description	Protocol	Laboratory
537 (modified)	Fluorinated Alkyl Substances	EPA	TAL SAC
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL CHI
3535	Solid-Phase Extraction (SPE)	SW846	TAL SAC

Protocol References:

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater"

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

Laboratory References:

TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

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

Sample Summary

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189111-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
500-189111-1	SW-M01 (10072020)	Water	10/07/20 12:15	10/09/20 09:40	
500-189111-2	SW-M02 (10072020)	Water	10/07/20 12:20	10/09/20 09:40	
500-189111-3	SW-M03 (10072020)	Water	10/07/20 12:25	10/09/20 09:40	
500-189111-4	SW-M04 (10072020)	Water	10/07/20 12:40	10/09/20 09:40	
500-189111-5	SW-M05 (10072020)	Water	10/07/20 13:00	10/09/20 09:40	
500-189111-6	SW-M06 (10072020)	Water	10/07/20 13:05	10/09/20 09:40	
500-189111-7	SW-M07 (10072020)	Water	10/07/20 13:20	10/09/20 09:40	
500-189111-8	SW-M08 (10072020)	Water	10/07/20 13:30	10/09/20 09:40	
500-189111-9	SW-M09 (10072020)	Water	10/07/20 13:40	10/09/20 09:40	
500-189111-10	SW-M10 (10072020)	Water	10/07/20 13:45	10/09/20 09:40	
500-189111-11	DUP-02-10072020	Water	10/07/20 00:00	10/09/20 09:40	



Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189111-1

Client Sample ID: SW-M01 (10072020)

Lab Sample ID: 500-189111-1

Date Collected: 10/07/20 12:15

Matrix: Water

Date Received: 10/09/20 09:40

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	70		4.8	2.3	ng/L		10/11/20 19:03	10/12/20 13:41	1
Perfluoropentanoic acid (PFPeA)	210		1.9	0.47	ng/L		10/11/20 19:03	10/12/20 13:41	1
Perfluorohexanoic acid (PFHxA)	230		1.9	0.55	ng/L		10/11/20 19:03	10/12/20 13:41	1
Perfluoroheptanoic acid (PFHpA)	91	B	1.9	0.24	ng/L		10/11/20 19:03	10/12/20 13:41	1
Perfluorononanoic acid (PFNA)	74		1.9	0.26	ng/L		10/11/20 19:03	10/12/20 13:41	1
Perfluorodecanoic acid (PFDA)	8.4		1.9	0.30	ng/L		10/11/20 19:03	10/12/20 13:41	1
Perfluoroundecanoic acid (PFUnA)	3.5		1.9	1.1	ng/L		10/11/20 19:03	10/12/20 13:41	1
Perfluorododecanoic acid (PFDoA)	<1.9		1.9	0.53	ng/L		10/11/20 19:03	10/12/20 13:41	1
Perfluorotridecanoic acid (PFTriA)	<1.9		1.9	1.2	ng/L		10/11/20 19:03	10/12/20 13:41	1
Perfluorotetradecanoic acid (PFTeA)	<1.9		1.9	0.70	ng/L		10/11/20 19:03	10/12/20 13:41	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<1.9		1.9	0.85	ng/L		10/11/20 19:03	10/12/20 13:41	1
Perfluoro-n-octadecanoic acid (PFODA)	<1.9		1.9	0.90	ng/L		10/11/20 19:03	10/12/20 13:41	1
Perfluorobutanesulfonic acid (PFBS)	4.4		1.9	0.19	ng/L		10/11/20 19:03	10/12/20 13:41	1
Perfluoropentanesulfonic acid (PFPeS)	3.7		1.9	0.29	ng/L		10/11/20 19:03	10/12/20 13:41	1
Perfluorohexanesulfonic acid (PFHxS)	53		1.9	0.54	ng/L		10/11/20 19:03	10/12/20 13:41	1
Perfluoroheptanesulfonic Acid (PFHpS)	4.7		1.9	0.18	ng/L		10/11/20 19:03	10/12/20 13:41	1
Perfluorooctanesulfonic acid (PFOS)	280		1.9	0.52	ng/L		10/11/20 19:03	10/12/20 13:41	1
Perfluorononanesulfonic acid (PFNS)	<1.9		1.9	0.35	ng/L		10/11/20 19:03	10/12/20 13:41	1
Perfluorodecanesulfonic acid (PFDS)	<1.9		1.9	0.31	ng/L		10/11/20 19:03	10/12/20 13:41	1
Perfluorododecanesulfonic acid (PFDoS)	<1.9		1.9	0.93	ng/L		10/11/20 19:03	10/12/20 13:41	1
Perfluorooctanesulfonamide (FOSA)	42		1.9	0.94	ng/L		10/11/20 19:03	10/12/20 13:41	1
NEtFOSA	<1.9		1.9	0.83	ng/L		10/11/20 19:03	10/12/20 13:41	1
NMeFOSA	<1.9		1.9	0.41	ng/L		10/11/20 19:03	10/12/20 13:41	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<4.8		4.8	1.1	ng/L		10/11/20 19:03	10/12/20 13:41	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	8.9		4.8	1.2	ng/L		10/11/20 19:03	10/12/20 13:41	1
NMeFOSE	<3.8		3.8	1.3	ng/L		10/11/20 19:03	10/12/20 13:41	1
NEtFOSE	<1.9		1.9	0.81	ng/L		10/11/20 19:03	10/12/20 13:41	1
4:2 FTS	20		1.9	0.23	ng/L		10/11/20 19:03	10/12/20 13:41	1
8:2 FTS	310		1.9	0.44	ng/L		10/11/20 19:03	10/12/20 13:41	1
10:2 FTS	<1.9		1.9	0.64	ng/L		10/11/20 19:03	10/12/20 13:41	1
DONA	<1.9		1.9	0.38	ng/L		10/11/20 19:03	10/12/20 13:41	1
HFPO-DA (GenX)	<3.8		3.8	1.4	ng/L		10/11/20 19:03	10/12/20 13:41	1
F-53B Major	<1.9		1.9	0.23	ng/L		10/11/20 19:03	10/12/20 13:41	1
F-53B Minor	<1.9		1.9	0.31	ng/L		10/11/20 19:03	10/12/20 13:41	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	62		25 - 150				10/11/20 19:03	10/12/20 13:41	1
13C5 PFPeA	84		25 - 150				10/11/20 19:03	10/12/20 13:41	1
13C2 PFHxA	97		25 - 150				10/11/20 19:03	10/12/20 13:41	1
13C4 PFHpA	105		25 - 150				10/11/20 19:03	10/12/20 13:41	1
13C5 PFNA	112		25 - 150				10/11/20 19:03	10/12/20 13:41	1

Eurofins TestAmerica, Chicago

Client Sample Results

Client: ARCADIS U.S., Inc.
 Project/Site: Marinette 30015296.00009

Job ID: 500-189111-1

Client Sample ID: SW-M01 (10072020)

Lab Sample ID: 500-189111-1

Date Collected: 10/07/20 12:15

Matrix: Water

Date Received: 10/09/20 09:40

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

<u>Isotope Dilution</u>	<u>%Recovery</u>	<u>Qualifier</u>	<u>Limits</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Dil Fac</u>
13C2 PFDA	106		25 - 150	10/11/20 19:03	10/12/20 13:41	1
13C2 PFUnA	108		25 - 150	10/11/20 19:03	10/12/20 13:41	1
13C2 PFDoA	101		25 - 150	10/11/20 19:03	10/12/20 13:41	1
13C2 PFTeDA	92		25 - 150	10/11/20 19:03	10/12/20 13:41	1
13C2 PFHxDA	79		25 - 150	10/11/20 19:03	10/12/20 13:41	1
13C3 PFBS	100		25 - 150	10/11/20 19:03	10/12/20 13:41	1
18O2 PFHxS	114		25 - 150	10/11/20 19:03	10/12/20 13:41	1
13C4 PFOS	111		25 - 150	10/11/20 19:03	10/12/20 13:41	1
13C8 FOSA	109		25 - 150	10/11/20 19:03	10/12/20 13:41	1
d3-NMeFOSAA	105		25 - 150	10/11/20 19:03	10/12/20 13:41	1
d5-NEtFOSAA	110		25 - 150	10/11/20 19:03	10/12/20 13:41	1
d-N-MeFOSA-M	64		20 - 150	10/11/20 19:03	10/12/20 13:41	1
d-N-EtFOSA-M	55		20 - 150	10/11/20 19:03	10/12/20 13:41	1
d7-N-MeFOSE-M	55		10 - 120	10/11/20 19:03	10/12/20 13:41	1
d9-N-EtFOSE-M	47		10 - 120	10/11/20 19:03	10/12/20 13:41	1
M2-4:2 FTS	137		25 - 150	10/11/20 19:03	10/12/20 13:41	1
M2-8:2 FTS	158	*5	25 - 150	10/11/20 19:03	10/12/20 13:41	1
13C3 HFPO-DA	105		25 - 150	10/11/20 19:03	10/12/20 13:41	1

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

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>RL</u>	<u>MDL</u>	<u>Unit</u>	<u>D</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Dil Fac</u>
Perfluorooctanoic acid (PFOA)	1200		19	8.1	ng/L		10/11/20 19:03	10/13/20 11:52	10
6:2 FTS	1800		48	24	ng/L		10/11/20 19:03	10/13/20 11:52	10
<u>Isotope Dilution</u>	<u>%Recovery</u>	<u>Qualifier</u>	<u>Limits</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Dil Fac</u>			
13C4 PFOA	86		25 - 150	10/11/20 19:03	10/13/20 11:52	10			
M2-6:2 FTS	108		25 - 150	10/11/20 19:03	10/13/20 11:52	10			

General Chemistry

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>RL</u>	<u>MDL</u>	<u>Unit</u>	<u>D</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Dil Fac</u>
Total Suspended Solids	3.0	J	5.0	1.9	mg/L			10/14/20 12:19	1

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189111-1

Client Sample ID: SW-M02 (10072020)

Lab Sample ID: 500-189111-2

Date Collected: 10/07/20 12:20

Matrix: Water

Date Received: 10/09/20 09:40

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	70		4.8	2.3	ng/L		10/11/20 19:03	10/12/20 13:50	1
Perfluoropentanoic acid (PFPeA)	220		1.9	0.47	ng/L		10/11/20 19:03	10/12/20 13:50	1
Perfluorohexanoic acid (PFHxA)	230		1.9	0.56	ng/L		10/11/20 19:03	10/12/20 13:50	1
Perfluoroheptanoic acid (PFHpA)	87	B	1.9	0.24	ng/L		10/11/20 19:03	10/12/20 13:50	1
Perfluorononanoic acid (PFNA)	54		1.9	0.26	ng/L		10/11/20 19:03	10/12/20 13:50	1
Perfluorodecanoic acid (PFDA)	5.2		1.9	0.30	ng/L		10/11/20 19:03	10/12/20 13:50	1
Perfluoroundecanoic acid (PFUnA)	2.0		1.9	1.1	ng/L		10/11/20 19:03	10/12/20 13:50	1
Perfluorododecanoic acid (PFDoA)	<1.9		1.9	0.53	ng/L		10/11/20 19:03	10/12/20 13:50	1
Perfluorotridecanoic acid (PFTriA)	<1.9		1.9	1.3	ng/L		10/11/20 19:03	10/12/20 13:50	1
Perfluorotetradecanoic acid (PFTeA)	<1.9		1.9	0.70	ng/L		10/11/20 19:03	10/12/20 13:50	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<1.9		1.9	0.86	ng/L		10/11/20 19:03	10/12/20 13:50	1
Perfluoro-n-octadecanoic acid (PFODA)	<1.9		1.9	0.91	ng/L		10/11/20 19:03	10/12/20 13:50	1
Perfluorobutanesulfonic acid (PFBS)	4.1		1.9	0.19	ng/L		10/11/20 19:03	10/12/20 13:50	1
Perfluoropentanesulfonic acid (PFPeS)	3.7		1.9	0.29	ng/L		10/11/20 19:03	10/12/20 13:50	1
Perfluorohexanesulfonic acid (PFHxS)	50		1.9	0.55	ng/L		10/11/20 19:03	10/12/20 13:50	1
Perfluoroheptanesulfonic Acid (PFHpS)	4.2		1.9	0.18	ng/L		10/11/20 19:03	10/12/20 13:50	1
Perfluorooctanesulfonic acid (PFOS)	200		1.9	0.52	ng/L		10/11/20 19:03	10/12/20 13:50	1
Perfluorononanesulfonic acid (PFNS)	<1.9		1.9	0.36	ng/L		10/11/20 19:03	10/12/20 13:50	1
Perfluorodecanesulfonic acid (PFDS)	<1.9		1.9	0.31	ng/L		10/11/20 19:03	10/12/20 13:50	1
Perfluorododecanesulfonic acid (PFDoS)	<1.9		1.9	0.94	ng/L		10/11/20 19:03	10/12/20 13:50	1
Perfluorooctanesulfonamide (FOSA)	29		1.9	0.95	ng/L		10/11/20 19:03	10/12/20 13:50	1
NEtFOSA	<1.9		1.9	0.84	ng/L		10/11/20 19:03	10/12/20 13:50	1
NMeFOSA	<1.9		1.9	0.41	ng/L		10/11/20 19:03	10/12/20 13:50	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<4.8		4.8	1.2	ng/L		10/11/20 19:03	10/12/20 13:50	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	5.7		4.8	1.3	ng/L		10/11/20 19:03	10/12/20 13:50	1
NMeFOSE	<3.9		3.9	1.4	ng/L		10/11/20 19:03	10/12/20 13:50	1
NEtFOSE	<1.9		1.9	0.82	ng/L		10/11/20 19:03	10/12/20 13:50	1
4:2 FTS	19		1.9	0.23	ng/L		10/11/20 19:03	10/12/20 13:50	1
8:2 FTS	200		1.9	0.44	ng/L		10/11/20 19:03	10/12/20 13:50	1
10:2 FTS	<1.9		1.9	0.65	ng/L		10/11/20 19:03	10/12/20 13:50	1
DONA	<1.9		1.9	0.39	ng/L		10/11/20 19:03	10/12/20 13:50	1
HFPO-DA (GenX)	<3.9		3.9	1.4	ng/L		10/11/20 19:03	10/12/20 13:50	1
F-53B Major	<1.9		1.9	0.23	ng/L		10/11/20 19:03	10/12/20 13:50	1
F-53B Minor	<1.9		1.9	0.31	ng/L		10/11/20 19:03	10/12/20 13:50	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	61		25 - 150				10/11/20 19:03	10/12/20 13:50	1
13C5 PFPeA	83		25 - 150				10/11/20 19:03	10/12/20 13:50	1
13C2 PFHxA	98		25 - 150				10/11/20 19:03	10/12/20 13:50	1
13C4 PFHpA	109		25 - 150				10/11/20 19:03	10/12/20 13:50	1
13C5 PFNA	115		25 - 150				10/11/20 19:03	10/12/20 13:50	1

Eurofins TestAmerica, Chicago

Client Sample Results

Client: ARCADIS U.S., Inc.
 Project/Site: Marinette 30015296.00009

Job ID: 500-189111-1

Client Sample ID: SW-M02 (10072020)

Lab Sample ID: 500-189111-2

Date Collected: 10/07/20 12:20

Matrix: Water

Date Received: 10/09/20 09:40

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

<u>Isotope Dilution</u>	<u>%Recovery</u>	<u>Qualifier</u>	<u>Limits</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Dil Fac</u>
13C2 PFDA	108		25 - 150	10/11/20 19:03	10/12/20 13:50	1
13C2 PFUnA	106		25 - 150	10/11/20 19:03	10/12/20 13:50	1
13C2 PFDoA	92		25 - 150	10/11/20 19:03	10/12/20 13:50	1
13C2 PFTeDA	78		25 - 150	10/11/20 19:03	10/12/20 13:50	1
13C2 PFHxDA	79		25 - 150	10/11/20 19:03	10/12/20 13:50	1
13C3 PFBS	98		25 - 150	10/11/20 19:03	10/12/20 13:50	1
18O2 PFHxS	111		25 - 150	10/11/20 19:03	10/12/20 13:50	1
13C4 PFOS	109		25 - 150	10/11/20 19:03	10/12/20 13:50	1
13C8 FOSA	113		25 - 150	10/11/20 19:03	10/12/20 13:50	1
d3-NMeFOSAA	96		25 - 150	10/11/20 19:03	10/12/20 13:50	1
d5-NEtFOSAA	102		25 - 150	10/11/20 19:03	10/12/20 13:50	1
d-N-MeFOSA-M	69		20 - 150	10/11/20 19:03	10/12/20 13:50	1
d-N-EtFOSA-M	56		20 - 150	10/11/20 19:03	10/12/20 13:50	1
d7-N-MeFOSE-M	57		10 - 120	10/11/20 19:03	10/12/20 13:50	1
d9-N-EtFOSE-M	47		10 - 120	10/11/20 19:03	10/12/20 13:50	1
M2-4:2 FTS	136		25 - 150	10/11/20 19:03	10/12/20 13:50	1
M2-8:2 FTS	163	*5	25 - 150	10/11/20 19:03	10/12/20 13:50	1
13C3 HFPO-DA	111		25 - 150	10/11/20 19:03	10/12/20 13:50	1

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

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>RL</u>	<u>MDL</u>	<u>Unit</u>	<u>D</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Dil Fac</u>
Perfluorooctanoic acid (PFOA)	1000		19	8.2	ng/L		10/11/20 19:03	10/13/20 12:01	10
6:2 FTS	1700		48	24	ng/L		10/11/20 19:03	10/13/20 12:01	10
<u>Isotope Dilution</u>	<u>%Recovery</u>	<u>Qualifier</u>	<u>Limits</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Dil Fac</u>			
13C4 PFOA	86		25 - 150	10/11/20 19:03	10/13/20 12:01	10			
M2-6:2 FTS	100		25 - 150	10/11/20 19:03	10/13/20 12:01	10			

General Chemistry

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>RL</u>	<u>MDL</u>	<u>Unit</u>	<u>D</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Dil Fac</u>
Total Suspended Solids	4.0	J	5.0	1.9	mg/L			10/14/20 12:20	1

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189111-1

Client Sample ID: SW-M03 (10072020)

Lab Sample ID: 500-189111-3

Date Collected: 10/07/20 12:25

Matrix: Water

Date Received: 10/09/20 09:40

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	70		4.6	2.2	ng/L		10/11/20 19:03	10/12/20 13:59	1
Perfluoropentanoic acid (PFPeA)	220		1.8	0.45	ng/L		10/11/20 19:03	10/12/20 13:59	1
Perfluorohexanoic acid (PFHxA)	230		1.8	0.53	ng/L		10/11/20 19:03	10/12/20 13:59	1
Perfluoroheptanoic acid (PFHpA)	90	B	1.8	0.23	ng/L		10/11/20 19:03	10/12/20 13:59	1
Perfluorononanoic acid (PFNA)	56		1.8	0.25	ng/L		10/11/20 19:03	10/12/20 13:59	1
Perfluorodecanoic acid (PFDA)	4.8		1.8	0.28	ng/L		10/11/20 19:03	10/12/20 13:59	1
Perfluoroundecanoic acid (PFUnA)	2.0		1.8	1.0	ng/L		10/11/20 19:03	10/12/20 13:59	1
Perfluorododecanoic acid (PFDoA)	<1.8		1.8	0.50	ng/L		10/11/20 19:03	10/12/20 13:59	1
Perfluorotridecanoic acid (PFTriA)	<1.8		1.8	1.2	ng/L		10/11/20 19:03	10/12/20 13:59	1
Perfluorotetradecanoic acid (PFTeA)	<1.8		1.8	0.66	ng/L		10/11/20 19:03	10/12/20 13:59	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<1.8		1.8	0.81	ng/L		10/11/20 19:03	10/12/20 13:59	1
Perfluoro-n-octadecanoic acid (PFODA)	<1.8		1.8	0.86	ng/L		10/11/20 19:03	10/12/20 13:59	1
Perfluorobutanesulfonic acid (PFBS)	3.9		1.8	0.18	ng/L		10/11/20 19:03	10/12/20 13:59	1
Perfluoropentanesulfonic acid (PFPeS)	3.5		1.8	0.27	ng/L		10/11/20 19:03	10/12/20 13:59	1
Perfluorohexanesulfonic acid (PFHxS)	50		1.8	0.52	ng/L		10/11/20 19:03	10/12/20 13:59	1
Perfluoroheptanesulfonic Acid (PFHpS)	4.1		1.8	0.17	ng/L		10/11/20 19:03	10/12/20 13:59	1
Perfluorooctanesulfonic acid (PFOS)	210		1.8	0.49	ng/L		10/11/20 19:03	10/12/20 13:59	1
Perfluorononanesulfonic acid (PFNS)	<1.8		1.8	0.34	ng/L		10/11/20 19:03	10/12/20 13:59	1
Perfluorodecanesulfonic acid (PFDS)	<1.8		1.8	0.29	ng/L		10/11/20 19:03	10/12/20 13:59	1
Perfluorododecanesulfonic acid (PFDoS)	<1.8		1.8	0.88	ng/L		10/11/20 19:03	10/12/20 13:59	1
Perfluorooctanesulfonamide (FOSA)	29		1.8	0.89	ng/L		10/11/20 19:03	10/12/20 13:59	1
NEtFOSA	<1.8		1.8	0.79	ng/L		10/11/20 19:03	10/12/20 13:59	1
NMeFOSA	<1.8		1.8	0.39	ng/L		10/11/20 19:03	10/12/20 13:59	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<4.6		4.6	1.1	ng/L		10/11/20 19:03	10/12/20 13:59	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.5	J	4.6	1.2	ng/L		10/11/20 19:03	10/12/20 13:59	1
NMeFOSE	<3.6		3.6	1.3	ng/L		10/11/20 19:03	10/12/20 13:59	1
NEtFOSE	<1.8		1.8	0.77	ng/L		10/11/20 19:03	10/12/20 13:59	1
4:2 FTS	19		1.8	0.22	ng/L		10/11/20 19:03	10/12/20 13:59	1
8:2 FTS	190	F2	1.8	0.42	ng/L		10/11/20 19:03	10/12/20 13:59	1
10:2 FTS	<1.8		1.8	0.61	ng/L		10/11/20 19:03	10/12/20 13:59	1
DONA	<1.8		1.8	0.36	ng/L		10/11/20 19:03	10/12/20 13:59	1
HFPO-DA (GenX)	<3.6		3.6	1.4	ng/L		10/11/20 19:03	10/12/20 13:59	1
F-53B Major	<1.8		1.8	0.22	ng/L		10/11/20 19:03	10/12/20 13:59	1
F-53B Minor	<1.8		1.8	0.29	ng/L		10/11/20 19:03	10/12/20 13:59	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	58		25 - 150	10/11/20 19:03	10/12/20 13:59	1
13C5 PFPeA	77		25 - 150	10/11/20 19:03	10/12/20 13:59	1
13C2 PFHxA	94		25 - 150	10/11/20 19:03	10/12/20 13:59	1
13C4 PFHpA	98		25 - 150	10/11/20 19:03	10/12/20 13:59	1
13C5 PFNA	109		25 - 150	10/11/20 19:03	10/12/20 13:59	1

Eurofins TestAmerica, Chicago

Client Sample Results

Client: ARCADIS U.S., Inc.
 Project/Site: Marinette 30015296.00009

Job ID: 500-189111-1

Client Sample ID: SW-M03 (10072020)

Lab Sample ID: 500-189111-3

Date Collected: 10/07/20 12:25

Matrix: Water

Date Received: 10/09/20 09:40

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFDA	101		25 - 150	10/11/20 19:03	10/12/20 13:59	1
13C2 PFUnA	95		25 - 150	10/11/20 19:03	10/12/20 13:59	1
13C2 PFDoA	99		25 - 150	10/11/20 19:03	10/12/20 13:59	1
13C2 PFTeDA	83		25 - 150	10/11/20 19:03	10/12/20 13:59	1
13C2 PFHxDA	81		25 - 150	10/11/20 19:03	10/12/20 13:59	1
13C3 PFBS	91		25 - 150	10/11/20 19:03	10/12/20 13:59	1
18O2 PFHxS	101		25 - 150	10/11/20 19:03	10/12/20 13:59	1
13C4 PFOS	100		25 - 150	10/11/20 19:03	10/12/20 13:59	1
13C8 FOSA	99		25 - 150	10/11/20 19:03	10/12/20 13:59	1
d3-NMeFOSAA	107		25 - 150	10/11/20 19:03	10/12/20 13:59	1
d5-NEtFOSAA	112		25 - 150	10/11/20 19:03	10/12/20 13:59	1
d-N-MeFOSA-M	62		20 - 150	10/11/20 19:03	10/12/20 13:59	1
d-N-EtFOSA-M	51		20 - 150	10/11/20 19:03	10/12/20 13:59	1
d7-N-MeFOSE-M	46		10 - 120	10/11/20 19:03	10/12/20 13:59	1
d9-N-EtFOSE-M	40		10 - 120	10/11/20 19:03	10/12/20 13:59	1
M2-4:2 FTS	124		25 - 150	10/11/20 19:03	10/12/20 13:59	1
M2-8:2 FTS	148		25 - 150	10/11/20 19:03	10/12/20 13:59	1
13C3 HFPO-DA	100		25 - 150	10/11/20 19:03	10/12/20 13:59	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanoic acid (PFOA)	1100		18	7.7	ng/L		10/11/20 19:03	10/13/20 12:11	10
6:2 FTS	1700		46	23	ng/L		10/11/20 19:03	10/13/20 12:11	10
Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
13C4 PFOA	84		25 - 150	10/11/20 19:03	10/13/20 12:11	10			
M2-6:2 FTS	106		25 - 150	10/11/20 19:03	10/13/20 12:11	10			

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	4.0	J	5.0	1.9	mg/L			10/14/20 12:21	1

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189111-1

Client Sample ID: SW-M04 (10072020)

Lab Sample ID: 500-189111-4

Date Collected: 10/07/20 12:40

Matrix: Water

Date Received: 10/09/20 09:40

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	69		4.8	2.3	ng/L		10/11/20 19:03	10/12/20 14:27	1
Perfluoropentanoic acid (PFPeA)	210		1.9	0.47	ng/L		10/11/20 19:03	10/12/20 14:27	1
Perfluorohexanoic acid (PFHxA)	220		1.9	0.56	ng/L		10/11/20 19:03	10/12/20 14:27	1
Perfluoroheptanoic acid (PFHpA)	80	B	1.9	0.24	ng/L		10/11/20 19:03	10/12/20 14:27	1
Perfluorononanoic acid (PFNA)	54		1.9	0.26	ng/L		10/11/20 19:03	10/12/20 14:27	1
Perfluorodecanoic acid (PFDA)	6.2		1.9	0.30	ng/L		10/11/20 19:03	10/12/20 14:27	1
Perfluoroundecanoic acid (PFUnA)	2.8		1.9	1.1	ng/L		10/11/20 19:03	10/12/20 14:27	1
Perfluorododecanoic acid (PFDoA)	<1.9		1.9	0.53	ng/L		10/11/20 19:03	10/12/20 14:27	1
Perfluorotridecanoic acid (PFTriA)	<1.9		1.9	1.2	ng/L		10/11/20 19:03	10/12/20 14:27	1
Perfluorotetradecanoic acid (PFTeA)	<1.9		1.9	0.70	ng/L		10/11/20 19:03	10/12/20 14:27	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<1.9		1.9	0.85	ng/L		10/11/20 19:03	10/12/20 14:27	1
Perfluoro-n-octadecanoic acid (PFODA)	<1.9		1.9	0.90	ng/L		10/11/20 19:03	10/12/20 14:27	1
Perfluorobutanesulfonic acid (PFBS)	3.8		1.9	0.19	ng/L		10/11/20 19:03	10/12/20 14:27	1
Perfluoropentanesulfonic acid (PFPeS)	3.1		1.9	0.29	ng/L		10/11/20 19:03	10/12/20 14:27	1
Perfluorohexanesulfonic acid (PFHxS)	45		1.9	0.55	ng/L		10/11/20 19:03	10/12/20 14:27	1
Perfluoroheptanesulfonic Acid (PFHpS)	3.7		1.9	0.18	ng/L		10/11/20 19:03	10/12/20 14:27	1
Perfluorooctanesulfonic acid (PFOS)	230		1.9	0.52	ng/L		10/11/20 19:03	10/12/20 14:27	1
Perfluorononanesulfonic acid (PFNS)	<1.9		1.9	0.36	ng/L		10/11/20 19:03	10/12/20 14:27	1
Perfluorodecanesulfonic acid (PFDS)	<1.9		1.9	0.31	ng/L		10/11/20 19:03	10/12/20 14:27	1
Perfluorododecanesulfonic acid (PFDoS)	<1.9		1.9	0.93	ng/L		10/11/20 19:03	10/12/20 14:27	1
Perfluorooctanesulfonamide (FOSA)	23		1.9	0.94	ng/L		10/11/20 19:03	10/12/20 14:27	1
NEtFOSA	<1.9		1.9	0.83	ng/L		10/11/20 19:03	10/12/20 14:27	1
NMeFOSA	<1.9		1.9	0.41	ng/L		10/11/20 19:03	10/12/20 14:27	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<4.8		4.8	1.2	ng/L		10/11/20 19:03	10/12/20 14:27	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.7	J	4.8	1.2	ng/L		10/11/20 19:03	10/12/20 14:27	1
NMeFOSE	<3.8		3.8	1.3	ng/L		10/11/20 19:03	10/12/20 14:27	1
NEtFOSE	<1.9		1.9	0.82	ng/L		10/11/20 19:03	10/12/20 14:27	1
4:2 FTS	18		1.9	0.23	ng/L		10/11/20 19:03	10/12/20 14:27	1
8:2 FTS	220		1.9	0.44	ng/L		10/11/20 19:03	10/12/20 14:27	1
10:2 FTS	<1.9		1.9	0.64	ng/L		10/11/20 19:03	10/12/20 14:27	1
DONA	<1.9		1.9	0.38	ng/L		10/11/20 19:03	10/12/20 14:27	1
HFPO-DA (GenX)	<3.8		3.8	1.4	ng/L		10/11/20 19:03	10/12/20 14:27	1
F-53B Major	<1.9		1.9	0.23	ng/L		10/11/20 19:03	10/12/20 14:27	1
F-53B Minor	<1.9		1.9	0.31	ng/L		10/11/20 19:03	10/12/20 14:27	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	61		25 - 150				10/11/20 19:03	10/12/20 14:27	1
13C5 PFPeA	83		25 - 150				10/11/20 19:03	10/12/20 14:27	1
13C2 PFHxA	98		25 - 150				10/11/20 19:03	10/12/20 14:27	1
13C4 PFHpA	109		25 - 150				10/11/20 19:03	10/12/20 14:27	1
13C5 PFNA	112		25 - 150				10/11/20 19:03	10/12/20 14:27	1

Eurofins TestAmerica, Chicago

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189111-1

Client Sample ID: SW-M04 (10072020)

Lab Sample ID: 500-189111-4

Date Collected: 10/07/20 12:40

Matrix: Water

Date Received: 10/09/20 09:40

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

<u>Isotope Dilution</u>	<u>%Recovery</u>	<u>Qualifier</u>	<u>Limits</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Dil Fac</u>
13C2 PFDA	111		25 - 150	10/11/20 19:03	10/12/20 14:27	1
13C2 PFUnA	104		25 - 150	10/11/20 19:03	10/12/20 14:27	1
13C2 PFDoA	96		25 - 150	10/11/20 19:03	10/12/20 14:27	1
13C2 PFTeDA	85		25 - 150	10/11/20 19:03	10/12/20 14:27	1
13C2 PFHxDA	80		25 - 150	10/11/20 19:03	10/12/20 14:27	1
13C3 PFBS	104		25 - 150	10/11/20 19:03	10/12/20 14:27	1
18O2 PFHxS	114		25 - 150	10/11/20 19:03	10/12/20 14:27	1
13C4 PFOS	114		25 - 150	10/11/20 19:03	10/12/20 14:27	1
13C8 FOSA	115		25 - 150	10/11/20 19:03	10/12/20 14:27	1
d3-NMeFOSAA	96		25 - 150	10/11/20 19:03	10/12/20 14:27	1
d5-NEtFOSAA	109		25 - 150	10/11/20 19:03	10/12/20 14:27	1
d-N-MeFOSA-M	68		20 - 150	10/11/20 19:03	10/12/20 14:27	1
d-N-EtFOSA-M	58		20 - 150	10/11/20 19:03	10/12/20 14:27	1
d7-N-MeFOSE-M	50		10 - 120	10/11/20 19:03	10/12/20 14:27	1
d9-N-EtFOSE-M	40		10 - 120	10/11/20 19:03	10/12/20 14:27	1
M2-4:2 FTS	134		25 - 150	10/11/20 19:03	10/12/20 14:27	1
M2-8:2 FTS	162	*5	25 - 150	10/11/20 19:03	10/12/20 14:27	1
13C3 HFPO-DA	110		25 - 150	10/11/20 19:03	10/12/20 14:27	1

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

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>RL</u>	<u>MDL</u>	<u>Unit</u>	<u>D</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Dil Fac</u>
Perfluorooctanoic acid (PFOA)	870		19	8.2	ng/L		10/11/20 19:03	10/13/20 12:39	10
6:2 FTS	1600		48	24	ng/L		10/11/20 19:03	10/13/20 12:39	10
<u>Isotope Dilution</u>	<u>%Recovery</u>	<u>Qualifier</u>	<u>Limits</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Dil Fac</u>			
13C4 PFOA	94		25 - 150	10/11/20 19:03	10/13/20 12:39	10			
M2-6:2 FTS	114		25 - 150	10/11/20 19:03	10/13/20 12:39	10			

General Chemistry

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>RL</u>	<u>MDL</u>	<u>Unit</u>	<u>D</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Dil Fac</u>
Total Suspended Solids	5.0		5.0	1.9	mg/L			10/14/20 12:24	1

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189111-1

Client Sample ID: SW-M05 (10072020)

Lab Sample ID: 500-189111-5

Date Collected: 10/07/20 13:00

Matrix: Water

Date Received: 10/09/20 09:40

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	80		4.6	2.2	ng/L		10/11/20 19:03	10/12/20 14:37	1
Perfluoropentanoic acid (PFPeA)	250		1.8	0.45	ng/L		10/11/20 19:03	10/12/20 14:37	1
Perfluorohexanoic acid (PFHxA)	280		1.8	0.53	ng/L		10/11/20 19:03	10/12/20 14:37	1
Perfluoroheptanoic acid (PFHpA)	110	B	1.8	0.23	ng/L		10/11/20 19:03	10/12/20 14:37	1
Perfluorononanoic acid (PFNA)	77		1.8	0.25	ng/L		10/11/20 19:03	10/12/20 14:37	1
Perfluorodecanoic acid (PFDA)	5.0		1.8	0.28	ng/L		10/11/20 19:03	10/12/20 14:37	1
Perfluoroundecanoic acid (PFUnA)	2.3		1.8	1.0	ng/L		10/11/20 19:03	10/12/20 14:37	1
Perfluorododecanoic acid (PFDoA)	<1.8		1.8	0.50	ng/L		10/11/20 19:03	10/12/20 14:37	1
Perfluorotridecanoic acid (PFTriA)	<1.8		1.8	1.2	ng/L		10/11/20 19:03	10/12/20 14:37	1
Perfluorotetradecanoic acid (PFTeA)	<1.8		1.8	0.67	ng/L		10/11/20 19:03	10/12/20 14:37	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<1.8		1.8	0.82	ng/L		10/11/20 19:03	10/12/20 14:37	1
Perfluoro-n-octadecanoic acid (PFODA)	<1.8		1.8	0.86	ng/L		10/11/20 19:03	10/12/20 14:37	1
Perfluorobutanesulfonic acid (PFBS)	4.7		1.8	0.18	ng/L		10/11/20 19:03	10/12/20 14:37	1
Perfluoropentanesulfonic acid (PFPeS)	4.7		1.8	0.27	ng/L		10/11/20 19:03	10/12/20 14:37	1
Perfluorohexanesulfonic acid (PFHxS)	68		1.8	0.52	ng/L		10/11/20 19:03	10/12/20 14:37	1
Perfluoroheptanesulfonic Acid (PFHpS)	4.4		1.8	0.17	ng/L		10/11/20 19:03	10/12/20 14:37	1
Perfluorooctanesulfonic acid (PFOS)	190		1.8	0.49	ng/L		10/11/20 19:03	10/12/20 14:37	1
Perfluorononanesulfonic acid (PFNS)	<1.8		1.8	0.34	ng/L		10/11/20 19:03	10/12/20 14:37	1
Perfluorodecanesulfonic acid (PFDS)	<1.8		1.8	0.29	ng/L		10/11/20 19:03	10/12/20 14:37	1
Perfluorododecanesulfonic acid (PFDoS)	<1.8		1.8	0.89	ng/L		10/11/20 19:03	10/12/20 14:37	1
Perfluorooctanesulfonamide (FOSA)	39		1.8	0.90	ng/L		10/11/20 19:03	10/12/20 14:37	1
NEtFOSA	<1.8		1.8	0.80	ng/L		10/11/20 19:03	10/12/20 14:37	1
NMeFOSA	<1.8		1.8	0.39	ng/L		10/11/20 19:03	10/12/20 14:37	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<4.6		4.6	1.1	ng/L		10/11/20 19:03	10/12/20 14:37	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.6		4.6	1.2	ng/L		10/11/20 19:03	10/12/20 14:37	1
NMeFOSE	<3.7		3.7	1.3	ng/L		10/11/20 19:03	10/12/20 14:37	1
NEtFOSE	<1.8		1.8	0.78	ng/L		10/11/20 19:03	10/12/20 14:37	1
4:2 FTS	28		1.8	0.22	ng/L		10/11/20 19:03	10/12/20 14:37	1
8:2 FTS	190		1.8	0.42	ng/L		10/11/20 19:03	10/12/20 14:37	1
10:2 FTS	<1.8		1.8	0.61	ng/L		10/11/20 19:03	10/12/20 14:37	1
DONA	<1.8		1.8	0.37	ng/L		10/11/20 19:03	10/12/20 14:37	1
HFPO-DA (GenX)	<3.7		3.7	1.4	ng/L		10/11/20 19:03	10/12/20 14:37	1
F-53B Major	<1.8		1.8	0.22	ng/L		10/11/20 19:03	10/12/20 14:37	1
F-53B Minor	<1.8		1.8	0.29	ng/L		10/11/20 19:03	10/12/20 14:37	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	70		25 - 150				10/11/20 19:03	10/12/20 14:37	1
13C5 PFPeA	94		25 - 150				10/11/20 19:03	10/12/20 14:37	1
13C2 PFHxA	112		25 - 150				10/11/20 19:03	10/12/20 14:37	1
13C4 PFHpA	120		25 - 150				10/11/20 19:03	10/12/20 14:37	1
13C5 PFNA	128		25 - 150				10/11/20 19:03	10/12/20 14:37	1

Eurofins TestAmerica, Chicago

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189111-1

Client Sample ID: SW-M05 (10072020)

Lab Sample ID: 500-189111-5

Date Collected: 10/07/20 13:00

Matrix: Water

Date Received: 10/09/20 09:40

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFDA	127		25 - 150	10/11/20 19:03	10/12/20 14:37	1
13C2 PFUnA	109		25 - 150	10/11/20 19:03	10/12/20 14:37	1
13C2 PFDoA	106		25 - 150	10/11/20 19:03	10/12/20 14:37	1
13C2 PFTeDA	88		25 - 150	10/11/20 19:03	10/12/20 14:37	1
13C2 PFHxDA	91		25 - 150	10/11/20 19:03	10/12/20 14:37	1
13C3 PFBS	112		25 - 150	10/11/20 19:03	10/12/20 14:37	1
18O2 PFHxS	120		25 - 150	10/11/20 19:03	10/12/20 14:37	1
13C4 PFOS	120		25 - 150	10/11/20 19:03	10/12/20 14:37	1
13C8 FOSA	125		25 - 150	10/11/20 19:03	10/12/20 14:37	1
d3-NMeFOSAA	111		25 - 150	10/11/20 19:03	10/12/20 14:37	1
d5-NEtFOSAA	125		25 - 150	10/11/20 19:03	10/12/20 14:37	1
d-N-MeFOSA-M	75		20 - 150	10/11/20 19:03	10/12/20 14:37	1
d-N-EtFOSA-M	61		20 - 150	10/11/20 19:03	10/12/20 14:37	1
d7-N-MeFOSE-M	52		10 - 120	10/11/20 19:03	10/12/20 14:37	1
d9-N-EtFOSE-M	48		10 - 120	10/11/20 19:03	10/12/20 14:37	1
M2-4:2 FTS	152	*5	25 - 150	10/11/20 19:03	10/12/20 14:37	1
M2-8:2 FTS	173	*5	25 - 150	10/11/20 19:03	10/12/20 14:37	1
13C3 HFPO-DA	124		25 - 150	10/11/20 19:03	10/12/20 14:37	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanoic acid (PFOA)	1400		18	7.8	ng/L		10/11/20 19:03	10/13/20 12:48	10
6:2 FTS	2000		46	23	ng/L		10/11/20 19:03	10/13/20 12:48	10
Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
13C4 PFOA	95		25 - 150	10/11/20 19:03	10/13/20 12:48	10			
M2-6:2 FTS	120		25 - 150	10/11/20 19:03	10/13/20 12:48	10			

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	4.5	J	5.0	1.9	mg/L			10/14/20 12:25	1

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189111-1

Client Sample ID: SW-M06 (10072020)

Lab Sample ID: 500-189111-6

Date Collected: 10/07/20 13:05

Matrix: Water

Date Received: 10/09/20 09:40

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	75		4.6	2.2	ng/L		10/11/20 19:03	10/12/20 14:46	1
Perfluoropentanoic acid (PFPeA)	240		1.9	0.46	ng/L		10/11/20 19:03	10/12/20 14:46	1
Perfluorohexanoic acid (PFHxA)	250		1.9	0.54	ng/L		10/11/20 19:03	10/12/20 14:46	1
Perfluoroheptanoic acid (PFHpA)	95	B	1.9	0.23	ng/L		10/11/20 19:03	10/12/20 14:46	1
Perfluorononanoic acid (PFNA)	58		1.9	0.25	ng/L		10/11/20 19:03	10/12/20 14:46	1
Perfluorodecanoic acid (PFDA)	3.5		1.9	0.29	ng/L		10/11/20 19:03	10/12/20 14:46	1
Perfluoroundecanoic acid (PFUnA)	1.2	J	1.9	1.0	ng/L		10/11/20 19:03	10/12/20 14:46	1
Perfluorododecanoic acid (PFDoA)	<1.9		1.9	0.51	ng/L		10/11/20 19:03	10/12/20 14:46	1
Perfluorotridecanoic acid (PFTriA)	<1.9		1.9	1.2	ng/L		10/11/20 19:03	10/12/20 14:46	1
Perfluorotetradecanoic acid (PFTeA)	<1.9		1.9	0.68	ng/L		10/11/20 19:03	10/12/20 14:46	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<1.9		1.9	0.83	ng/L		10/11/20 19:03	10/12/20 14:46	1
Perfluoro-n-octadecanoic acid (PFODA)	<1.9		1.9	0.87	ng/L		10/11/20 19:03	10/12/20 14:46	1
Perfluorobutanesulfonic acid (PFBS)	4.1		1.9	0.19	ng/L		10/11/20 19:03	10/12/20 14:46	1
Perfluoropentanesulfonic acid (PFPeS)	3.6		1.9	0.28	ng/L		10/11/20 19:03	10/12/20 14:46	1
Perfluorohexanesulfonic acid (PFHxS)	53		1.9	0.53	ng/L		10/11/20 19:03	10/12/20 14:46	1
Perfluoroheptanesulfonic Acid (PFHpS)	3.9		1.9	0.18	ng/L		10/11/20 19:03	10/12/20 14:46	1
Perfluorooctanesulfonic acid (PFOS)	160		1.9	0.50	ng/L		10/11/20 19:03	10/12/20 14:46	1
Perfluorononanesulfonic acid (PFNS)	<1.9		1.9	0.34	ng/L		10/11/20 19:03	10/12/20 14:46	1
Perfluorodecanesulfonic acid (PFDS)	<1.9		1.9	0.30	ng/L		10/11/20 19:03	10/12/20 14:46	1
Perfluorododecanesulfonic acid (PFDoS)	<1.9		1.9	0.90	ng/L		10/11/20 19:03	10/12/20 14:46	1
Perfluorooctanesulfonamide (FOSA)	24		1.9	0.91	ng/L		10/11/20 19:03	10/12/20 14:46	1
NEtFOSA	<1.9		1.9	0.81	ng/L		10/11/20 19:03	10/12/20 14:46	1
NMeFOSA	<1.9		1.9	0.40	ng/L		10/11/20 19:03	10/12/20 14:46	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<4.6		4.6	1.1	ng/L		10/11/20 19:03	10/12/20 14:46	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.8	J	4.6	1.2	ng/L		10/11/20 19:03	10/12/20 14:46	1
NMeFOSE	<3.7		3.7	1.3	ng/L		10/11/20 19:03	10/12/20 14:46	1
NEtFOSE	<1.9		1.9	0.79	ng/L		10/11/20 19:03	10/12/20 14:46	1
4:2 FTS	23		1.9	0.22	ng/L		10/11/20 19:03	10/12/20 14:46	1
8:2 FTS	130		1.9	0.43	ng/L		10/11/20 19:03	10/12/20 14:46	1
10:2 FTS	<1.9		1.9	0.62	ng/L		10/11/20 19:03	10/12/20 14:46	1
DONA	<1.9		1.9	0.37	ng/L		10/11/20 19:03	10/12/20 14:46	1
HFPO-DA (GenX)	<3.7		3.7	1.4	ng/L		10/11/20 19:03	10/12/20 14:46	1
F-53B Major	<1.9		1.9	0.22	ng/L		10/11/20 19:03	10/12/20 14:46	1
F-53B Minor	<1.9		1.9	0.30	ng/L		10/11/20 19:03	10/12/20 14:46	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	58		25 - 150				10/11/20 19:03	10/12/20 14:46	1
13C5 PFPeA	78		25 - 150				10/11/20 19:03	10/12/20 14:46	1
13C2 PFHxA	92		25 - 150				10/11/20 19:03	10/12/20 14:46	1
13C4 PFHpA	104		25 - 150				10/11/20 19:03	10/12/20 14:46	1
13C5 PFNA	116		25 - 150				10/11/20 19:03	10/12/20 14:46	1

Eurofins TestAmerica, Chicago

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189111-1

Client Sample ID: SW-M06 (10072020)

Lab Sample ID: 500-189111-6

Date Collected: 10/07/20 13:05

Matrix: Water

Date Received: 10/09/20 09:40

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFDA	109		25 - 150	10/11/20 19:03	10/12/20 14:46	1
13C2 PFUnA	103		25 - 150	10/11/20 19:03	10/12/20 14:46	1
13C2 PFDoA	99		25 - 150	10/11/20 19:03	10/12/20 14:46	1
13C2 PFTeDA	76		25 - 150	10/11/20 19:03	10/12/20 14:46	1
13C2 PFHxDA	88		25 - 150	10/11/20 19:03	10/12/20 14:46	1
13C3 PFBS	95		25 - 150	10/11/20 19:03	10/12/20 14:46	1
18O2 PFHxS	106		25 - 150	10/11/20 19:03	10/12/20 14:46	1
13C4 PFOS	105		25 - 150	10/11/20 19:03	10/12/20 14:46	1
13C8 FOSA	110		25 - 150	10/11/20 19:03	10/12/20 14:46	1
d3-NMeFOSAA	96		25 - 150	10/11/20 19:03	10/12/20 14:46	1
d5-NEtFOSAA	103		25 - 150	10/11/20 19:03	10/12/20 14:46	1
d-N-MeFOSA-M	65		20 - 150	10/11/20 19:03	10/12/20 14:46	1
d-N-EtFOSA-M	54		20 - 150	10/11/20 19:03	10/12/20 14:46	1
d7-N-MeFOSE-M	54		10 - 120	10/11/20 19:03	10/12/20 14:46	1
d9-N-EtFOSE-M	42		10 - 120	10/11/20 19:03	10/12/20 14:46	1
M2-4:2 FTS	126		25 - 150	10/11/20 19:03	10/12/20 14:46	1
M2-8:2 FTS	151	*5	25 - 150	10/11/20 19:03	10/12/20 14:46	1
13C3 HFPO-DA	101		25 - 150	10/11/20 19:03	10/12/20 14:46	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanoic acid (PFOA)	1100		19	7.9	ng/L		10/11/20 19:03	10/13/20 13:06	10
6:2 FTS	1800		46	23	ng/L		10/11/20 19:03	10/13/20 13:06	10
Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
13C4 PFOA	81		25 - 150	10/11/20 19:03	10/13/20 13:06	10			
M2-6:2 FTS	98		25 - 150	10/11/20 19:03	10/13/20 13:06	10			

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	3.5	J	5.0	1.9	mg/L			10/14/20 12:26	1

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189111-1

Client Sample ID: SW-M07 (10072020)

Lab Sample ID: 500-189111-7

Date Collected: 10/07/20 13:20

Matrix: Water

Date Received: 10/09/20 09:40

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	81		4.7	2.2	ng/L		10/11/20 19:03	10/12/20 14:55	1
Perfluoropentanoic acid (PFPeA)	260		1.9	0.46	ng/L		10/11/20 19:03	10/12/20 14:55	1
Perfluorohexanoic acid (PFHxA)	270		1.9	0.54	ng/L		10/11/20 19:03	10/12/20 14:55	1
Perfluoroheptanoic acid (PFHpA)	110	B	1.9	0.23	ng/L		10/11/20 19:03	10/12/20 14:55	1
Perfluorononanoic acid (PFNA)	71		1.9	0.25	ng/L		10/11/20 19:03	10/12/20 14:55	1
Perfluorodecanoic acid (PFDA)	4.3		1.9	0.29	ng/L		10/11/20 19:03	10/12/20 14:55	1
Perfluoroundecanoic acid (PFUnA)	2.3		1.9	1.0	ng/L		10/11/20 19:03	10/12/20 14:55	1
Perfluorododecanoic acid (PFDoA)	<1.9		1.9	0.51	ng/L		10/11/20 19:03	10/12/20 14:55	1
Perfluorotridecanoic acid (PFTriA)	<1.9		1.9	1.2	ng/L		10/11/20 19:03	10/12/20 14:55	1
Perfluorotetradecanoic acid (PFTeA)	<1.9		1.9	0.68	ng/L		10/11/20 19:03	10/12/20 14:55	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<1.9		1.9	0.83	ng/L		10/11/20 19:03	10/12/20 14:55	1
Perfluoro-n-octadecanoic acid (PFODA)	<1.9		1.9	0.88	ng/L		10/11/20 19:03	10/12/20 14:55	1
Perfluorobutanesulfonic acid (PFBS)	4.1		1.9	0.19	ng/L		10/11/20 19:03	10/12/20 14:55	1
Perfluoropentanesulfonic acid (PFPeS)	3.9		1.9	0.28	ng/L		10/11/20 19:03	10/12/20 14:55	1
Perfluorohexanesulfonic acid (PFHxS)	55		1.9	0.53	ng/L		10/11/20 19:03	10/12/20 14:55	1
Perfluoroheptanesulfonic Acid (PFHpS)	3.9		1.9	0.18	ng/L		10/11/20 19:03	10/12/20 14:55	1
Perfluorooctanesulfonic acid (PFOS)	190		1.9	0.50	ng/L		10/11/20 19:03	10/12/20 14:55	1
Perfluorononanesulfonic acid (PFNS)	<1.9		1.9	0.35	ng/L		10/11/20 19:03	10/12/20 14:55	1
Perfluorodecanesulfonic acid (PFDS)	<1.9		1.9	0.30	ng/L		10/11/20 19:03	10/12/20 14:55	1
Perfluorododecanesulfonic acid (PFDoS)	<1.9		1.9	0.91	ng/L		10/11/20 19:03	10/12/20 14:55	1
Perfluorooctanesulfonamide (FOSA)	43		1.9	0.92	ng/L		10/11/20 19:03	10/12/20 14:55	1
NEtFOSA	<1.9		1.9	0.81	ng/L		10/11/20 19:03	10/12/20 14:55	1
NMeFOSA	<1.9		1.9	0.40	ng/L		10/11/20 19:03	10/12/20 14:55	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<4.7		4.7	1.1	ng/L		10/11/20 19:03	10/12/20 14:55	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	3.7	J	4.7	1.2	ng/L		10/11/20 19:03	10/12/20 14:55	1
NMeFOSE	<3.7		3.7	1.3	ng/L		10/11/20 19:03	10/12/20 14:55	1
NEtFOSE	<1.9		1.9	0.79	ng/L		10/11/20 19:03	10/12/20 14:55	1
4:2 FTS	22		1.9	0.22	ng/L		10/11/20 19:03	10/12/20 14:55	1
8:2 FTS	170		1.9	0.43	ng/L		10/11/20 19:03	10/12/20 14:55	1
10:2 FTS	<1.9		1.9	0.63	ng/L		10/11/20 19:03	10/12/20 14:55	1
DONA	<1.9		1.9	0.37	ng/L		10/11/20 19:03	10/12/20 14:55	1
HFPO-DA (GenX)	<3.7		3.7	1.4	ng/L		10/11/20 19:03	10/12/20 14:55	1
F-53B Major	<1.9		1.9	0.22	ng/L		10/11/20 19:03	10/12/20 14:55	1
F-53B Minor	<1.9		1.9	0.30	ng/L		10/11/20 19:03	10/12/20 14:55	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	63		25 - 150				10/11/20 19:03	10/12/20 14:55	1
13C5 PFPeA	84		25 - 150				10/11/20 19:03	10/12/20 14:55	1
13C2 PFHxA	103		25 - 150				10/11/20 19:03	10/12/20 14:55	1
13C4 PFHpA	105		25 - 150				10/11/20 19:03	10/12/20 14:55	1
13C5 PFNA	111		25 - 150				10/11/20 19:03	10/12/20 14:55	1

Eurofins TestAmerica, Chicago

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189111-1

Client Sample ID: SW-M07 (10072020)

Lab Sample ID: 500-189111-7

Date Collected: 10/07/20 13:20

Matrix: Water

Date Received: 10/09/20 09:40

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

<u>Isotope Dilution</u>	<u>%Recovery</u>	<u>Qualifier</u>	<u>Limits</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Dil Fac</u>
13C2 PFDA	113		25 - 150	10/11/20 19:03	10/12/20 14:55	1
13C2 PFUnA	102		25 - 150	10/11/20 19:03	10/12/20 14:55	1
13C2 PFDoA	93		25 - 150	10/11/20 19:03	10/12/20 14:55	1
13C2 PFTeDA	90		25 - 150	10/11/20 19:03	10/12/20 14:55	1
13C2 PFHxDA	93		25 - 150	10/11/20 19:03	10/12/20 14:55	1
13C3 PFBS	102		25 - 150	10/11/20 19:03	10/12/20 14:55	1
18O2 PFHxS	115		25 - 150	10/11/20 19:03	10/12/20 14:55	1
13C4 PFOS	113		25 - 150	10/11/20 19:03	10/12/20 14:55	1
13C8 FOSA	118		25 - 150	10/11/20 19:03	10/12/20 14:55	1
d3-NMeFOSAA	88		25 - 150	10/11/20 19:03	10/12/20 14:55	1
d5-NEtFOSAA	100		25 - 150	10/11/20 19:03	10/12/20 14:55	1
d-N-MeFOSA-M	75		20 - 150	10/11/20 19:03	10/12/20 14:55	1
d-N-EtFOSA-M	59		20 - 150	10/11/20 19:03	10/12/20 14:55	1
d7-N-MeFOSE-M	60		10 - 120	10/11/20 19:03	10/12/20 14:55	1
d9-N-EtFOSE-M	52		10 - 120	10/11/20 19:03	10/12/20 14:55	1
M2-4:2 FTS	148		25 - 150	10/11/20 19:03	10/12/20 14:55	1
M2-8:2 FTS	158	*5	25 - 150	10/11/20 19:03	10/12/20 14:55	1
13C3 HFPO-DA	107		25 - 150	10/11/20 19:03	10/12/20 14:55	1

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

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>RL</u>	<u>MDL</u>	<u>Unit</u>	<u>D</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Dil Fac</u>
Perfluorooctanoic acid (PFOA)	1100		19	7.9	ng/L		10/11/20 19:03	10/13/20 13:16	10
6:2 FTS	2000		47	23	ng/L		10/11/20 19:03	10/13/20 13:16	10
<u>Isotope Dilution</u>	<u>%Recovery</u>	<u>Qualifier</u>	<u>Limits</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Dil Fac</u>			
13C4 PFOA	88		25 - 150	10/11/20 19:03	10/13/20 13:16	10			
M2-6:2 FTS	103		25 - 150	10/11/20 19:03	10/13/20 13:16	10			

General Chemistry

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>RL</u>	<u>MDL</u>	<u>Unit</u>	<u>D</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Dil Fac</u>
Total Suspended Solids	3.5	J	5.0	1.9	mg/L			10/13/20 15:39	1

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189111-1

Client Sample ID: SW-M08 (10072020)

Lab Sample ID: 500-189111-8

Date Collected: 10/07/20 13:30

Matrix: Water

Date Received: 10/09/20 09:40

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	68		4.7	2.3	ng/L		10/11/20 19:03	10/12/20 15:04	1
Perfluoropentanoic acid (PFPeA)	210		1.9	0.46	ng/L		10/11/20 19:03	10/12/20 15:04	1
Perfluorohexanoic acid (PFHxA)	200		1.9	0.55	ng/L		10/11/20 19:03	10/12/20 15:04	1
Perfluoroheptanoic acid (PFHpA)	78	B	1.9	0.24	ng/L		10/11/20 19:03	10/12/20 15:04	1
Perfluorononanoic acid (PFNA)	49		1.9	0.25	ng/L		10/11/20 19:03	10/12/20 15:04	1
Perfluorodecanoic acid (PFDA)	8.4		1.9	0.29	ng/L		10/11/20 19:03	10/12/20 15:04	1
Perfluoroundecanoic acid (PFUnA)	1.2	J	1.9	1.0	ng/L		10/11/20 19:03	10/12/20 15:04	1
Perfluorododecanoic acid (PFDoA)	<1.9		1.9	0.52	ng/L		10/11/20 19:03	10/12/20 15:04	1
Perfluorotridecanoic acid (PFTriA)	<1.9		1.9	1.2	ng/L		10/11/20 19:03	10/12/20 15:04	1
Perfluorotetradecanoic acid (PFTeA)	<1.9		1.9	0.69	ng/L		10/11/20 19:03	10/12/20 15:04	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<1.9		1.9	0.84	ng/L		10/11/20 19:03	10/12/20 15:04	1
Perfluoro-n-octadecanoic acid (PFODA)	<1.9		1.9	0.88	ng/L		10/11/20 19:03	10/12/20 15:04	1
Perfluorobutanesulfonic acid (PFBS)	3.5		1.9	0.19	ng/L		10/11/20 19:03	10/12/20 15:04	1
Perfluoropentanesulfonic acid (PFPeS)	2.7		1.9	0.28	ng/L		10/11/20 19:03	10/12/20 15:04	1
Perfluorohexanesulfonic acid (PFHxS)	37		1.9	0.54	ng/L		10/11/20 19:03	10/12/20 15:04	1
Perfluoroheptanesulfonic Acid (PFHpS)	4.0		1.9	0.18	ng/L		10/11/20 19:03	10/12/20 15:04	1
Perfluorooctanesulfonic acid (PFOS)	270		1.9	0.51	ng/L		10/11/20 19:03	10/12/20 15:04	1
Perfluorononanesulfonic acid (PFNS)	<1.9		1.9	0.35	ng/L		10/11/20 19:03	10/12/20 15:04	1
Perfluorodecanesulfonic acid (PFDS)	<1.9		1.9	0.30	ng/L		10/11/20 19:03	10/12/20 15:04	1
Perfluorododecanesulfonic acid (PFDoS)	<1.9		1.9	0.91	ng/L		10/11/20 19:03	10/12/20 15:04	1
Perfluorooctanesulfonamide (FOSA)	2.7		1.9	0.92	ng/L		10/11/20 19:03	10/12/20 15:04	1
NEtFOSA	<1.9		1.9	0.82	ng/L		10/11/20 19:03	10/12/20 15:04	1
NMeFOSA	<1.9		1.9	0.40	ng/L		10/11/20 19:03	10/12/20 15:04	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<4.7		4.7	1.1	ng/L		10/11/20 19:03	10/12/20 15:04	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	1.8	J	4.7	1.2	ng/L		10/11/20 19:03	10/12/20 15:04	1
NMeFOSE	<3.8		3.8	1.3	ng/L		10/11/20 19:03	10/12/20 15:04	1
NEtFOSE	<1.9		1.9	0.80	ng/L		10/11/20 19:03	10/12/20 15:04	1
4:2 FTS	15		1.9	0.23	ng/L		10/11/20 19:03	10/12/20 15:04	1
8:2 FTS	310		1.9	0.43	ng/L		10/11/20 19:03	10/12/20 15:04	1
10:2 FTS	<1.9		1.9	0.63	ng/L		10/11/20 19:03	10/12/20 15:04	1
DONA	<1.9		1.9	0.38	ng/L		10/11/20 19:03	10/12/20 15:04	1
HFPO-DA (GenX)	<3.8		3.8	1.4	ng/L		10/11/20 19:03	10/12/20 15:04	1
F-53B Major	<1.9		1.9	0.23	ng/L		10/11/20 19:03	10/12/20 15:04	1
F-53B Minor	<1.9		1.9	0.30	ng/L		10/11/20 19:03	10/12/20 15:04	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	49		25 - 150				10/11/20 19:03	10/12/20 15:04	1
13C5 PFPeA	65		25 - 150				10/11/20 19:03	10/12/20 15:04	1
13C2 PFHxA	79		25 - 150				10/11/20 19:03	10/12/20 15:04	1
13C4 PFHpA	83		25 - 150				10/11/20 19:03	10/12/20 15:04	1
13C5 PFNA	86		25 - 150				10/11/20 19:03	10/12/20 15:04	1

Eurofins TestAmerica, Chicago

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189111-1

Client Sample ID: SW-M08 (10072020)

Lab Sample ID: 500-189111-8

Date Collected: 10/07/20 13:30

Matrix: Water

Date Received: 10/09/20 09:40

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFDA	90		25 - 150	10/11/20 19:03	10/12/20 15:04	1
13C2 PFUnA	79		25 - 150	10/11/20 19:03	10/12/20 15:04	1
13C2 PFDoA	76		25 - 150	10/11/20 19:03	10/12/20 15:04	1
13C2 PFTeDA	74		25 - 150	10/11/20 19:03	10/12/20 15:04	1
13C2 PFHxDA	75		25 - 150	10/11/20 19:03	10/12/20 15:04	1
13C3 PFBS	79		25 - 150	10/11/20 19:03	10/12/20 15:04	1
18O2 PFHxS	86		25 - 150	10/11/20 19:03	10/12/20 15:04	1
13C4 PFOS	86		25 - 150	10/11/20 19:03	10/12/20 15:04	1
13C8 FOSA	88		25 - 150	10/11/20 19:03	10/12/20 15:04	1
d3-NMeFOSAA	81		25 - 150	10/11/20 19:03	10/12/20 15:04	1
d5-NEtFOSAA	87		25 - 150	10/11/20 19:03	10/12/20 15:04	1
d-N-MeFOSA-M	52		20 - 150	10/11/20 19:03	10/12/20 15:04	1
d-N-EtFOSA-M	45		20 - 150	10/11/20 19:03	10/12/20 15:04	1
d7-N-MeFOSE-M	41		10 - 120	10/11/20 19:03	10/12/20 15:04	1
d9-N-EtFOSE-M	37		10 - 120	10/11/20 19:03	10/12/20 15:04	1
M2-4:2 FTS	108		25 - 150	10/11/20 19:03	10/12/20 15:04	1
M2-8:2 FTS	122		25 - 150	10/11/20 19:03	10/12/20 15:04	1
13C3 HFPO-DA	85		25 - 150	10/11/20 19:03	10/12/20 15:04	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanoic acid (PFOA)	570		19	8.0	ng/L		10/11/20 19:03	10/16/20 12:51	10
6:2 FTS	1500		47	24	ng/L		10/11/20 19:03	10/16/20 12:51	10
Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
13C4 PFOA	101		25 - 150	10/11/20 19:03	10/16/20 12:51	10			
M2-6:2 FTS	124		25 - 150	10/11/20 19:03	10/16/20 12:51	10			

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	3.5	J	5.0	1.9	mg/L			10/13/20 15:40	1

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189111-1

Client Sample ID: SW-M09 (10072020)

Lab Sample ID: 500-189111-9

Date Collected: 10/07/20 13:40

Matrix: Water

Date Received: 10/09/20 09:40

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	67		4.8	2.3	ng/L		10/11/20 19:04	10/12/20 15:31	1
Perfluoropentanoic acid (PFPeA)	210		1.9	0.47	ng/L		10/11/20 19:04	10/12/20 15:31	1
Perfluorohexanoic acid (PFHxA)	200		1.9	0.55	ng/L		10/11/20 19:04	10/12/20 15:31	1
Perfluoroheptanoic acid (PFHpA)	76	B	1.9	0.24	ng/L		10/11/20 19:04	10/12/20 15:31	1
Perfluorononanoic acid (PFNA)	41		1.9	0.26	ng/L		10/11/20 19:04	10/12/20 15:31	1
Perfluorodecanoic acid (PFDA)	3.7		1.9	0.30	ng/L		10/11/20 19:04	10/12/20 15:31	1
Perfluoroundecanoic acid (PFUnA)	<1.9		1.9	1.0	ng/L		10/11/20 19:04	10/12/20 15:31	1
Perfluorododecanoic acid (PFDoA)	<1.9		1.9	0.52	ng/L		10/11/20 19:04	10/12/20 15:31	1
Perfluorotridecanoic acid (PFTriA)	<1.9		1.9	1.2	ng/L		10/11/20 19:04	10/12/20 15:31	1
Perfluorotetradecanoic acid (PFTeA)	<1.9		1.9	0.70	ng/L		10/11/20 19:04	10/12/20 15:31	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<1.9		1.9	0.85	ng/L		10/11/20 19:04	10/12/20 15:31	1
Perfluoro-n-octadecanoic acid (PFODA)	<1.9		1.9	0.90	ng/L		10/11/20 19:04	10/12/20 15:31	1
Perfluorobutanesulfonic acid (PFBS)	3.2		1.9	0.19	ng/L		10/11/20 19:04	10/12/20 15:31	1
Perfluoropentanesulfonic acid (PFPeS)	2.8		1.9	0.29	ng/L		10/11/20 19:04	10/12/20 15:31	1
Perfluorohexanesulfonic acid (PFHxS)	34		1.9	0.54	ng/L		10/11/20 19:04	10/12/20 15:31	1
Perfluoroheptanesulfonic Acid (PFHpS)	3.5		1.9	0.18	ng/L		10/11/20 19:04	10/12/20 15:31	1
Perfluorooctanesulfonic acid (PFOS)	170		1.9	0.51	ng/L		10/11/20 19:04	10/12/20 15:31	1
Perfluorononanesulfonic acid (PFNS)	<1.9		1.9	0.35	ng/L		10/11/20 19:04	10/12/20 15:31	1
Perfluorodecanesulfonic acid (PFDS)	<1.9		1.9	0.31	ng/L		10/11/20 19:04	10/12/20 15:31	1
Perfluorododecanesulfonic acid (PFDoS)	<1.9		1.9	0.92	ng/L		10/11/20 19:04	10/12/20 15:31	1
Perfluorooctanesulfonamide (FOSA)	1.7	J	1.9	0.93	ng/L		10/11/20 19:04	10/12/20 15:31	1
NEtFOSA	<1.9		1.9	0.83	ng/L		10/11/20 19:04	10/12/20 15:31	1
NMeFOSA	<1.9		1.9	0.41	ng/L		10/11/20 19:04	10/12/20 15:31	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<4.8		4.8	1.1	ng/L		10/11/20 19:04	10/12/20 15:31	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<4.8		4.8	1.2	ng/L		10/11/20 19:04	10/12/20 15:31	1
NMeFOSE	<3.8		3.8	1.3	ng/L		10/11/20 19:04	10/12/20 15:31	1
NEtFOSE	<1.9		1.9	0.81	ng/L		10/11/20 19:04	10/12/20 15:31	1
4:2 FTS	15		1.9	0.23	ng/L		10/11/20 19:04	10/12/20 15:31	1
8:2 FTS	140		1.9	0.44	ng/L		10/11/20 19:04	10/12/20 15:31	1
10:2 FTS	<1.9		1.9	0.64	ng/L		10/11/20 19:04	10/12/20 15:31	1
DONA	<1.9		1.9	0.38	ng/L		10/11/20 19:04	10/12/20 15:31	1
HFPO-DA (GenX)	<3.8		3.8	1.4	ng/L		10/11/20 19:04	10/12/20 15:31	1
F-53B Major	<1.9		1.9	0.23	ng/L		10/11/20 19:04	10/12/20 15:31	1
F-53B Minor	<1.9		1.9	0.31	ng/L		10/11/20 19:04	10/12/20 15:31	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	59		25 - 150				10/11/20 19:04	10/12/20 15:31	1
13C5 PFPeA	77		25 - 150				10/11/20 19:04	10/12/20 15:31	1
13C2 PFHxA	91		25 - 150				10/11/20 19:04	10/12/20 15:31	1
13C4 PFHpA	98		25 - 150				10/11/20 19:04	10/12/20 15:31	1
13C5 PFNA	105		25 - 150				10/11/20 19:04	10/12/20 15:31	1
13C2 PFDA	95		25 - 150				10/11/20 19:04	10/12/20 15:31	1

Eurofins TestAmerica, Chicago

Client Sample Results

Client: ARCADIS U.S., Inc.
 Project/Site: Marinette 30015296.00009

Job ID: 500-189111-1

Client Sample ID: SW-M09 (10072020)

Lab Sample ID: 500-189111-9

Date Collected: 10/07/20 13:40

Matrix: Water

Date Received: 10/09/20 09:40

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFUnA	96		25 - 150	10/11/20 19:04	10/12/20 15:31	1
13C2 PFDoA	86		25 - 150	10/11/20 19:04	10/12/20 15:31	1
13C2 PFTeDA	78		25 - 150	10/11/20 19:04	10/12/20 15:31	1
13C2 PFHxDA	81		25 - 150	10/11/20 19:04	10/12/20 15:31	1
13C3 PFBS	90		25 - 150	10/11/20 19:04	10/12/20 15:31	1
18O2 PFHxS	100		25 - 150	10/11/20 19:04	10/12/20 15:31	1
13C4 PFOS	99		25 - 150	10/11/20 19:04	10/12/20 15:31	1
13C8 FOSA	104		25 - 150	10/11/20 19:04	10/12/20 15:31	1
d3-NMeFOSAA	90		25 - 150	10/11/20 19:04	10/12/20 15:31	1
d5-NEtFOSAA	101		25 - 150	10/11/20 19:04	10/12/20 15:31	1
d-N-MeFOSA-M	59		20 - 150	10/11/20 19:04	10/12/20 15:31	1
d-N-EtFOSA-M	50		20 - 150	10/11/20 19:04	10/12/20 15:31	1
d7-N-MeFOSE-M	46		10 - 120	10/11/20 19:04	10/12/20 15:31	1
d9-N-EtFOSE-M	37		10 - 120	10/11/20 19:04	10/12/20 15:31	1
M2-4:2 FTS	126		25 - 150	10/11/20 19:04	10/12/20 15:31	1
M2-8:2 FTS	137		25 - 150	10/11/20 19:04	10/12/20 15:31	1
13C3 HFPO-DA	101		25 - 150	10/11/20 19:04	10/12/20 15:31	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanoic acid (PFOA)	590		19	8.1	ng/L		10/11/20 19:04	10/13/20 13:34	10
6:2 FTS	1600		48	24	ng/L		10/11/20 19:04	10/13/20 13:34	10
Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
13C4 PFOA	86		25 - 150	10/11/20 19:04	10/13/20 13:34	10			
M2-6:2 FTS	107		25 - 150	10/11/20 19:04	10/13/20 13:34	10			

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	2.5	J	5.0	1.9	mg/L			10/13/20 15:41	1

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189111-1

Client Sample ID: SW-M10 (10072020)

Lab Sample ID: 500-189111-10

Date Collected: 10/07/20 13:45

Matrix: Water

Date Received: 10/09/20 09:40

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	62		4.7	2.2	ng/L		10/11/20 19:04	10/12/20 15:40	1
Perfluoropentanoic acid (PFPeA)	190		1.9	0.46	ng/L		10/11/20 19:04	10/12/20 15:40	1
Perfluorohexanoic acid (PFHxA)	170		1.9	0.54	ng/L		10/11/20 19:04	10/12/20 15:40	1
Perfluoroheptanoic acid (PFHpA)	71	B	1.9	0.23	ng/L		10/11/20 19:04	10/12/20 15:40	1
Perfluorononanoic acid (PFNA)	23		1.9	0.25	ng/L		10/11/20 19:04	10/12/20 15:40	1
Perfluorodecanoic acid (PFDA)	2.4		1.9	0.29	ng/L		10/11/20 19:04	10/12/20 15:40	1
Perfluoroundecanoic acid (PFUnA)	<1.9		1.9	1.0	ng/L		10/11/20 19:04	10/12/20 15:40	1
Perfluorododecanoic acid (PFDoA)	<1.9		1.9	0.51	ng/L		10/11/20 19:04	10/12/20 15:40	1
Perfluorotridecanoic acid (PFTriA)	<1.9		1.9	1.2	ng/L		10/11/20 19:04	10/12/20 15:40	1
Perfluorotetradecanoic acid (PFTeA)	<1.9		1.9	0.68	ng/L		10/11/20 19:04	10/12/20 15:40	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<1.9		1.9	0.83	ng/L		10/11/20 19:04	10/12/20 15:40	1
Perfluoro-n-octadecanoic acid (PFODA)	<1.9		1.9	0.88	ng/L		10/11/20 19:04	10/12/20 15:40	1
Perfluorobutanesulfonic acid (PFBS)	3.3		1.9	0.19	ng/L		10/11/20 19:04	10/12/20 15:40	1
Perfluoropentanesulfonic acid (PFPeS)	2.5		1.9	0.28	ng/L		10/11/20 19:04	10/12/20 15:40	1
Perfluorohexanesulfonic acid (PFHxS)	35		1.9	0.53	ng/L		10/11/20 19:04	10/12/20 15:40	1
Perfluoroheptanesulfonic Acid (PFHpS)	4.0		1.9	0.18	ng/L		10/11/20 19:04	10/12/20 15:40	1
Perfluorooctanesulfonic acid (PFOS)	150		1.9	0.50	ng/L		10/11/20 19:04	10/12/20 15:40	1
Perfluorononanesulfonic acid (PFNS)	<1.9		1.9	0.35	ng/L		10/11/20 19:04	10/12/20 15:40	1
Perfluorodecanesulfonic acid (PFDS)	<1.9		1.9	0.30	ng/L		10/11/20 19:04	10/12/20 15:40	1
Perfluorododecanesulfonic acid (PFDoS)	<1.9		1.9	0.90	ng/L		10/11/20 19:04	10/12/20 15:40	1
Perfluorooctanesulfonamide (FOSA)	1.1	J	1.9	0.91	ng/L		10/11/20 19:04	10/12/20 15:40	1
NEtFOSA	<1.9		1.9	0.81	ng/L		10/11/20 19:04	10/12/20 15:40	1
NMeFOSA	<1.9		1.9	0.40	ng/L		10/11/20 19:04	10/12/20 15:40	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<4.7		4.7	1.1	ng/L		10/11/20 19:04	10/12/20 15:40	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<4.7		4.7	1.2	ng/L		10/11/20 19:04	10/12/20 15:40	1
NMeFOSE	<3.7		3.7	1.3	ng/L		10/11/20 19:04	10/12/20 15:40	1
NEtFOSE	<1.9		1.9	0.79	ng/L		10/11/20 19:04	10/12/20 15:40	1
4:2 FTS	12		1.9	0.22	ng/L		10/11/20 19:04	10/12/20 15:40	1
8:2 FTS	94		1.9	0.43	ng/L		10/11/20 19:04	10/12/20 15:40	1
10:2 FTS	<1.9		1.9	0.63	ng/L		10/11/20 19:04	10/12/20 15:40	1
DONA	<1.9		1.9	0.37	ng/L		10/11/20 19:04	10/12/20 15:40	1
HFPO-DA (GenX)	<3.7		3.7	1.4	ng/L		10/11/20 19:04	10/12/20 15:40	1
F-53B Major	<1.9		1.9	0.22	ng/L		10/11/20 19:04	10/12/20 15:40	1
F-53B Minor	<1.9		1.9	0.30	ng/L		10/11/20 19:04	10/12/20 15:40	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	52		25 - 150				10/11/20 19:04	10/12/20 15:40	1
13C5 PFPeA	71		25 - 150				10/11/20 19:04	10/12/20 15:40	1
13C2 PFHxA	82		25 - 150				10/11/20 19:04	10/12/20 15:40	1
13C4 PFHpA	89		25 - 150				10/11/20 19:04	10/12/20 15:40	1
13C5 PFNA	97		25 - 150				10/11/20 19:04	10/12/20 15:40	1
13C2 PFDA	84		25 - 150				10/11/20 19:04	10/12/20 15:40	1

Eurofins TestAmerica, Chicago

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189111-1

Client Sample ID: SW-M10 (10072020)

Lab Sample ID: 500-189111-10

Date Collected: 10/07/20 13:45

Matrix: Water

Date Received: 10/09/20 09:40

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFUnA	86		25 - 150	10/11/20 19:04	10/12/20 15:40	1
13C2 PFDoA	88		25 - 150	10/11/20 19:04	10/12/20 15:40	1
13C2 PFTeDA	72		25 - 150	10/11/20 19:04	10/12/20 15:40	1
13C2 PFHxDA	80		25 - 150	10/11/20 19:04	10/12/20 15:40	1
13C3 PFBS	82		25 - 150	10/11/20 19:04	10/12/20 15:40	1
18O2 PFHxS	90		25 - 150	10/11/20 19:04	10/12/20 15:40	1
13C4 PFOS	92		25 - 150	10/11/20 19:04	10/12/20 15:40	1
13C8 FOSA	98		25 - 150	10/11/20 19:04	10/12/20 15:40	1
d3-NMeFOSAA	82		25 - 150	10/11/20 19:04	10/12/20 15:40	1
d5-NEtFOSAA	91		25 - 150	10/11/20 19:04	10/12/20 15:40	1
d-N-MeFOSA-M	55		20 - 150	10/11/20 19:04	10/12/20 15:40	1
d-N-EtFOSA-M	47		20 - 150	10/11/20 19:04	10/12/20 15:40	1
d7-N-MeFOSE-M	44		10 - 120	10/11/20 19:04	10/12/20 15:40	1
d9-N-EtFOSE-M	36		10 - 120	10/11/20 19:04	10/12/20 15:40	1
M2-4:2 FTS	115		25 - 150	10/11/20 19:04	10/12/20 15:40	1
M2-8:2 FTS	131		25 - 150	10/11/20 19:04	10/12/20 15:40	1
13C3 HFPO-DA	90		25 - 150	10/11/20 19:04	10/12/20 15:40	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanoic acid (PFOA)	430		19	7.9	ng/L		10/11/20 19:04	10/13/20 13:43	10
6:2 FTS	1400		47	23	ng/L		10/11/20 19:04	10/13/20 13:43	10
Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
13C4 PFOA	83		25 - 150	10/11/20 19:04	10/13/20 13:43	10			
M2-6:2 FTS	95		25 - 150	10/11/20 19:04	10/13/20 13:43	10			

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	3.5	J	5.0	1.9	mg/L			10/13/20 15:42	1

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189111-1

Client Sample ID: DUP-02-10072020

Lab Sample ID: 500-189111-11

Date Collected: 10/07/20 00:00

Matrix: Water

Date Received: 10/09/20 09:40

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	69		4.6	2.2	ng/L		10/11/20 19:04	10/12/20 15:50	1
Perfluoropentanoic acid (PFPeA)	210		1.9	0.45	ng/L		10/11/20 19:04	10/12/20 15:50	1
Perfluorohexanoic acid (PFHxA)	230		1.9	0.54	ng/L		10/11/20 19:04	10/12/20 15:50	1
Perfluoroheptanoic acid (PFHpA)	92	B	1.9	0.23	ng/L		10/11/20 19:04	10/12/20 15:50	1
Perfluorononanoic acid (PFNA)	65		1.9	0.25	ng/L		10/11/20 19:04	10/12/20 15:50	1
Perfluorodecanoic acid (PFDA)	6.8		1.9	0.29	ng/L		10/11/20 19:04	10/12/20 15:50	1
Perfluoroundecanoic acid (PFUnA)	3.1		1.9	1.0	ng/L		10/11/20 19:04	10/12/20 15:50	1
Perfluorododecanoic acid (PFDoA)	<1.9		1.9	0.51	ng/L		10/11/20 19:04	10/12/20 15:50	1
Perfluorotridecanoic acid (PFTriA)	<1.9		1.9	1.2	ng/L		10/11/20 19:04	10/12/20 15:50	1
Perfluorotetradecanoic acid (PFTeA)	<1.9		1.9	0.68	ng/L		10/11/20 19:04	10/12/20 15:50	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<1.9		1.9	0.82	ng/L		10/11/20 19:04	10/12/20 15:50	1
Perfluoro-n-octadecanoic acid (PFODA)	<1.9		1.9	0.87	ng/L		10/11/20 19:04	10/12/20 15:50	1
Perfluorobutanesulfonic acid (PFBS)	5.2		1.9	0.19	ng/L		10/11/20 19:04	10/12/20 15:50	1
Perfluoropentanesulfonic acid (PFPeS)	3.7		1.9	0.28	ng/L		10/11/20 19:04	10/12/20 15:50	1
Perfluorohexanesulfonic acid (PFHxS)	51		1.9	0.53	ng/L		10/11/20 19:04	10/12/20 15:50	1
Perfluoroheptanesulfonic Acid (PFHpS)	4.7		1.9	0.18	ng/L		10/11/20 19:04	10/12/20 15:50	1
Perfluorooctanesulfonic acid (PFOS)	260		1.9	0.50	ng/L		10/11/20 19:04	10/12/20 15:50	1
Perfluorononanesulfonic acid (PFNS)	<1.9		1.9	0.34	ng/L		10/11/20 19:04	10/12/20 15:50	1
Perfluorodecanesulfonic acid (PFDS)	<1.9		1.9	0.30	ng/L		10/11/20 19:04	10/12/20 15:50	1
Perfluorododecanesulfonic acid (PFDoS)	<1.9		1.9	0.90	ng/L		10/11/20 19:04	10/12/20 15:50	1
Perfluorooctanesulfonamide (FOSA)	39		1.9	0.91	ng/L		10/11/20 19:04	10/12/20 15:50	1
NEtFOSA	<1.9		1.9	0.81	ng/L		10/11/20 19:04	10/12/20 15:50	1
NMeFOSA	<1.9		1.9	0.40	ng/L		10/11/20 19:04	10/12/20 15:50	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<4.6		4.6	1.1	ng/L		10/11/20 19:04	10/12/20 15:50	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	6.6		4.6	1.2	ng/L		10/11/20 19:04	10/12/20 15:50	1
NMeFOSE	<3.7		3.7	1.3	ng/L		10/11/20 19:04	10/12/20 15:50	1
NEtFOSE	<1.9		1.9	0.79	ng/L		10/11/20 19:04	10/12/20 15:50	1
4:2 FTS	18		1.9	0.22	ng/L		10/11/20 19:04	10/12/20 15:50	1
8:2 FTS	260		1.9	0.43	ng/L		10/11/20 19:04	10/12/20 15:50	1
10:2 FTS	<1.9		1.9	0.62	ng/L		10/11/20 19:04	10/12/20 15:50	1
DONA	<1.9		1.9	0.37	ng/L		10/11/20 19:04	10/12/20 15:50	1
HFPO-DA (GenX)	<3.7		3.7	1.4	ng/L		10/11/20 19:04	10/12/20 15:50	1
F-53B Major	<1.9		1.9	0.22	ng/L		10/11/20 19:04	10/12/20 15:50	1
F-53B Minor	<1.9		1.9	0.30	ng/L		10/11/20 19:04	10/12/20 15:50	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	56		25 - 150				10/11/20 19:04	10/12/20 15:50	1
13C5 PFPeA	75		25 - 150				10/11/20 19:04	10/12/20 15:50	1
13C2 PFHxA	87		25 - 150				10/11/20 19:04	10/12/20 15:50	1
13C4 PFHpA	94		25 - 150				10/11/20 19:04	10/12/20 15:50	1
13C5 PFNA	101		25 - 150				10/11/20 19:04	10/12/20 15:50	1

Eurofins TestAmerica, Chicago

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189111-1

Client Sample ID: DUP-02-10072020

Lab Sample ID: 500-189111-11

Date Collected: 10/07/20 00:00

Matrix: Water

Date Received: 10/09/20 09:40

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

<u>Isotope Dilution</u>	<u>%Recovery</u>	<u>Qualifier</u>	<u>Limits</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Dil Fac</u>
13C2 PFDA	105		25 - 150	10/11/20 19:04	10/12/20 15:50	1
13C2 PFUnA	93		25 - 150	10/11/20 19:04	10/12/20 15:50	1
13C2 PFDoA	101		25 - 150	10/11/20 19:04	10/12/20 15:50	1
13C2 PFTeDA	82		25 - 150	10/11/20 19:04	10/12/20 15:50	1
13C2 PFHxDA	80		25 - 150	10/11/20 19:04	10/12/20 15:50	1
13C3 PFBS	93		25 - 150	10/11/20 19:04	10/12/20 15:50	1
18O2 PFHxS	99		25 - 150	10/11/20 19:04	10/12/20 15:50	1
13C4 PFOS	100		25 - 150	10/11/20 19:04	10/12/20 15:50	1
13C8 FOSA	103		25 - 150	10/11/20 19:04	10/12/20 15:50	1
d3-NMeFOSAA	97		25 - 150	10/11/20 19:04	10/12/20 15:50	1
d5-NEtFOSAA	105		25 - 150	10/11/20 19:04	10/12/20 15:50	1
d-N-MeFOSA-M	62		20 - 150	10/11/20 19:04	10/12/20 15:50	1
d-N-EtFOSA-M	54		20 - 150	10/11/20 19:04	10/12/20 15:50	1
d7-N-MeFOSE-M	54		10 - 120	10/11/20 19:04	10/12/20 15:50	1
d9-N-EtFOSE-M	42		10 - 120	10/11/20 19:04	10/12/20 15:50	1
M2-4:2 FTS	125		25 - 150	10/11/20 19:04	10/12/20 15:50	1
M2-8:2 FTS	154	*5	25 - 150	10/11/20 19:04	10/12/20 15:50	1
13C3 HFPO-DA	94		25 - 150	10/11/20 19:04	10/12/20 15:50	1

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

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>RL</u>	<u>MDL</u>	<u>Unit</u>	<u>D</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Dil Fac</u>
Perfluorooctanoic acid (PFOA)	1200		19	7.9	ng/L		10/11/20 19:04	10/13/20 13:52	10
6:2 FTS	1700		46	23	ng/L		10/11/20 19:04	10/13/20 13:52	10
<u>Isotope Dilution</u>	<u>%Recovery</u>	<u>Qualifier</u>	<u>Limits</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Dil Fac</u>			
13C4 PFOA	75		25 - 150	10/11/20 19:04	10/13/20 13:52	10			
M2-6:2 FTS	97		25 - 150	10/11/20 19:04	10/13/20 13:52	10			

General Chemistry

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>RL</u>	<u>MDL</u>	<u>Unit</u>	<u>D</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Dil Fac</u>
Total Suspended Solids	3.0	J	5.0	1.9	mg/L			10/13/20 15:43	1

Definitions/Glossary

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189111-1

Qualifiers

LCMS

Qualifier	Qualifier Description
*5	Isotope dilution analyte is outside acceptance limits.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
B	Compound was found in the blank and sample.
F2	MS/MSD RPD exceeds control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

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

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189111-1

Method: 537 (modified) - Fluorinated Alkyl Substances

Lab Sample ID: MB 320-420800/1-A
Matrix: Water
Analysis Batch: 420953

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 420800

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<5.0		5.0	2.4	ng/L		10/11/20 19:03	10/12/20 12:18	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	0.49	ng/L		10/11/20 19:03	10/12/20 12:18	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	0.58	ng/L		10/11/20 19:03	10/12/20 12:18	1
Perfluoroheptanoic acid (PFHpA)	0.445	J	2.0	0.25	ng/L		10/11/20 19:03	10/12/20 12:18	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	0.85	ng/L		10/11/20 19:03	10/12/20 12:18	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	0.27	ng/L		10/11/20 19:03	10/12/20 12:18	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	0.31	ng/L		10/11/20 19:03	10/12/20 12:18	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	1.1	ng/L		10/11/20 19:03	10/12/20 12:18	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	0.55	ng/L		10/11/20 19:03	10/12/20 12:18	1
Perfluorotridecanoic acid (PFTriA)	<2.0		2.0	1.3	ng/L		10/11/20 19:03	10/12/20 12:18	1
Perfluorotetradecanoic acid (PFTeA)	<2.0		2.0	0.73	ng/L		10/11/20 19:03	10/12/20 12:18	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<2.0		2.0	0.89	ng/L		10/11/20 19:03	10/12/20 12:18	1
Perfluoro-n-octadecanoic acid (PFODA)	<2.0		2.0	0.94	ng/L		10/11/20 19:03	10/12/20 12:18	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	0.20	ng/L		10/11/20 19:03	10/12/20 12:18	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	0.30	ng/L		10/11/20 19:03	10/12/20 12:18	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	0.57	ng/L		10/11/20 19:03	10/12/20 12:18	1
Perfluoroheptanesulfonic Acid (PFHpS)	<2.0		2.0	0.19	ng/L		10/11/20 19:03	10/12/20 12:18	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	0.54	ng/L		10/11/20 19:03	10/12/20 12:18	1
Perfluorononanesulfonic acid (PFNS)	<2.0		2.0	0.37	ng/L		10/11/20 19:03	10/12/20 12:18	1
Perfluorodecanesulfonic acid (PFDS)	<2.0		2.0	0.32	ng/L		10/11/20 19:03	10/12/20 12:18	1
Perfluorododecanesulfonic acid (PFDoS)	<2.0		2.0	0.97	ng/L		10/11/20 19:03	10/12/20 12:18	1
Perfluorooctanesulfonamide (FOSA)	<2.0		2.0	0.98	ng/L		10/11/20 19:03	10/12/20 12:18	1
NEtFOSA	<2.0		2.0	0.87	ng/L		10/11/20 19:03	10/12/20 12:18	1
NMeFOSA	<2.0		2.0	0.43	ng/L		10/11/20 19:03	10/12/20 12:18	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<5.0		5.0	1.2	ng/L		10/11/20 19:03	10/12/20 12:18	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<5.0		5.0	1.3	ng/L		10/11/20 19:03	10/12/20 12:18	1
NMeFOSE	<4.0		4.0	1.4	ng/L		10/11/20 19:03	10/12/20 12:18	1
NEtFOSE	<2.0		2.0	0.85	ng/L		10/11/20 19:03	10/12/20 12:18	1
4:2 FTS	<2.0		2.0	0.24	ng/L		10/11/20 19:03	10/12/20 12:18	1
6:2 FTS	<5.0		5.0	2.5	ng/L		10/11/20 19:03	10/12/20 12:18	1
8:2 FTS	<2.0		2.0	0.46	ng/L		10/11/20 19:03	10/12/20 12:18	1
10:2 FTS	<2.0		2.0	0.67	ng/L		10/11/20 19:03	10/12/20 12:18	1
DONA	<2.0		2.0	0.40	ng/L		10/11/20 19:03	10/12/20 12:18	1
HFPO-DA (GenX)	<4.0		4.0	1.5	ng/L		10/11/20 19:03	10/12/20 12:18	1
F-53B Major	<2.0		2.0	0.24	ng/L		10/11/20 19:03	10/12/20 12:18	1
F-53B Minor	<2.0		2.0	0.32	ng/L		10/11/20 19:03	10/12/20 12:18	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	100		25 - 150	10/11/20 19:03	10/12/20 12:18	1
13C5 PFPeA	108		25 - 150	10/11/20 19:03	10/12/20 12:18	1
13C2 PFHxA	104		25 - 150	10/11/20 19:03	10/12/20 12:18	1
13C4 PFHpA	105		25 - 150	10/11/20 19:03	10/12/20 12:18	1
13C4 PFOA	99		25 - 150	10/11/20 19:03	10/12/20 12:18	1

Eurofins TestAmerica, Chicago

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189111-1

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

Lab Sample ID: MB 320-420800/1-A
Matrix: Water
Analysis Batch: 420953

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 420800

Isotope Dilution	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
13C5 PFNA	109		25 - 150	10/11/20 19:03	10/12/20 12:18	1
13C2 PFDA	108		25 - 150	10/11/20 19:03	10/12/20 12:18	1
13C2 PFUnA	107		25 - 150	10/11/20 19:03	10/12/20 12:18	1
13C2 PFDoA	101		25 - 150	10/11/20 19:03	10/12/20 12:18	1
13C2 PFTeDA	103		25 - 150	10/11/20 19:03	10/12/20 12:18	1
13C2 PFHxDA	118		25 - 150	10/11/20 19:03	10/12/20 12:18	1
13C3 PFBS	105		25 - 150	10/11/20 19:03	10/12/20 12:18	1
18O2 PFHxS	111		25 - 150	10/11/20 19:03	10/12/20 12:18	1
13C4 PFOS	108		25 - 150	10/11/20 19:03	10/12/20 12:18	1
13C8 FOSA	103		25 - 150	10/11/20 19:03	10/12/20 12:18	1
d3-NMeFOSAA	109		25 - 150	10/11/20 19:03	10/12/20 12:18	1
d5-NEtFOSAA	119		25 - 150	10/11/20 19:03	10/12/20 12:18	1
d-N-MeFOSA-M	88		20 - 150	10/11/20 19:03	10/12/20 12:18	1
d-N-EtFOSA-M	57		20 - 150	10/11/20 19:03	10/12/20 12:18	1
d7-N-MeFOSE-M	37		10 - 120	10/11/20 19:03	10/12/20 12:18	1
d9-N-EtFOSE-M	28		10 - 120	10/11/20 19:03	10/12/20 12:18	1
M2-4:2 FTS	115		25 - 150	10/11/20 19:03	10/12/20 12:18	1
M2-6:2 FTS	123		25 - 150	10/11/20 19:03	10/12/20 12:18	1
M2-8:2 FTS	129		25 - 150	10/11/20 19:03	10/12/20 12:18	1
13C3 HFPO-DA	107		25 - 150	10/11/20 19:03	10/12/20 12:18	1

Lab Sample ID: LCS 320-420800/2-A
Matrix: Water
Analysis Batch: 420953

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 420800

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluoropentanoic acid (PFPeA)	40.0	36.8		ng/L		92	71 - 131
Perfluorohexanoic acid (PFHxA)	40.0	42.4		ng/L		106	73 - 133
Perfluoroheptanoic acid (PFHpA)	40.0	39.5		ng/L		99	72 - 132
Perfluorooctanoic acid (PFOA)	40.0	40.7		ng/L		102	70 - 130
Perfluorononanoic acid (PFNA)	40.0	38.7		ng/L		97	75 - 135
Perfluorodecanoic acid (PFDA)	40.0	46.3		ng/L		116	76 - 136
Perfluoroundecanoic acid (PFUnA)	40.0	39.4		ng/L		99	68 - 128
Perfluorododecanoic acid (PFDoA)	40.0	40.9		ng/L		102	71 - 131
Perfluorotridecanoic acid (PFTriA)	40.0	35.2		ng/L		88	71 - 131
Perfluorotetradecanoic acid (PFTeA)	40.0	38.1		ng/L		95	70 - 130
Perfluoro-n-hexadecanoic acid (PFHxDA)	40.0	40.3		ng/L		101	76 - 136
Perfluoro-n-octadecanoic acid (PFODA)	40.0	41.7		ng/L		104	58 - 145
Perfluorobutanesulfonic acid (PFBS)	35.4	35.8		ng/L		101	67 - 127
Perfluoropentanesulfonic acid (PFPeS)	37.5	38.8		ng/L		103	66 - 126
Perfluorohexanesulfonic acid (PFHxS)	36.4	33.4		ng/L		92	59 - 119

Eurofins TestAmerica, Chicago

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189111-1

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

Lab Sample ID: LCS 320-420800/2-A
Matrix: Water
Analysis Batch: 420953

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 420800

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluoroheptanesulfonic Acid (PFHpS)	38.1	41.4		ng/L		109	76 - 136
Perfluorooctanesulfonic acid (PFOS)	37.1	37.8		ng/L		102	70 - 130
Perfluorononanesulfonic acid (PFNS)	38.4	39.6		ng/L		103	75 - 135
Perfluorodecanesulfonic acid (PFDS)	38.6	39.3		ng/L		102	71 - 131
Perfluorododecanesulfonic acid (PFDoS)	38.7	42.3		ng/L		109	67 - 127
Perfluorooctanesulfonamide (FOSA)	40.0	40.3		ng/L		101	73 - 133
NMeFOSA	40.0	42.3		ng/L		106	67 - 154
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	39.9		ng/L		100	76 - 136
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	37.4		ng/L		94	76 - 136
NMeFOSE	40.0	43.6		ng/L		109	70 - 130
NEtFOSE	40.0	39.6		ng/L		99	71 - 131
4:2 FTS	37.4	37.8		ng/L		101	79 - 139
6:2 FTS	37.9	36.2		ng/L		95	59 - 175
8:2 FTS	38.3	38.3		ng/L		100	75 - 135
10:2 FTS	38.6	47.8		ng/L		124	64 - 142
DONA	37.7	38.8		ng/L		103	79 - 139
HFPO-DA (GenX)	40.0	39.3		ng/L		98	51 - 173
F-53B Major	37.3	37.0		ng/L		99	75 - 135
F-53B Minor	37.7	40.4		ng/L		107	54 - 114

Isotope Dilution	LCS LCS		Limits
	%Recovery	Qualifier	
13C4 PFBA	100		25 - 150
13C5 PFPeA	107		25 - 150
13C2 PFHxA	102		25 - 150
13C4 PFHpA	103		25 - 150
13C4 PFOA	102		25 - 150
13C5 PFNA	111		25 - 150
13C2 PFDA	98		25 - 150
13C2 PFUnA	106		25 - 150
13C2 PFDoA	102		25 - 150
13C2 PFTeDA	113		25 - 150
13C2 PFHxDA	117		25 - 150
13C3 PFBS	102		25 - 150
18O2 PFHxS	110		25 - 150
13C4 PFOS	104		25 - 150
13C8 FOSA	104		25 - 150
d3-NMeFOSAA	110		25 - 150
d5-NEtFOSAA	117		25 - 150
d-N-MeFOSA-M	95		20 - 150
d-N-EtFOSA-M	73		20 - 150
d7-N-MeFOSE-M	42		10 - 120
d9-N-EtFOSE-M	36		10 - 120
M2-4:2 FTS	113		25 - 150

Eurofins TestAmerica, Chicago

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189111-1

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

Lab Sample ID: LCS 320-420800/2-A
Matrix: Water
Analysis Batch: 420953

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 420800

Isotope Dilution	LCS		Limits
	%Recovery	Qualifier	
M2-6:2 FTS	126		25 - 150
M2-8:2 FTS	131		25 - 150
13C3 HFPO-DA	105		25 - 150

Lab Sample ID: 500-189111-3 MS
Matrix: Water
Analysis Batch: 420953

Client Sample ID: SW-M03 (10072020)
Prep Type: Total/NA
Prep Batch: 420800

Analyte	Sample Result	Sample Qualifier	Spike Added	MS		Unit	D	%Rec	Limits
				Result	Qualifier				
Perfluorobutanoic acid (PFBA)	70		37.9	109		ng/L		103	76 - 136
Perfluoropentanoic acid (PFPeA)	220		37.9	248	4	ng/L		72	71 - 131
Perfluorohexanoic acid (PFHxA)	230		37.9	272	4	ng/L		108	73 - 133
Perfluoroheptanoic acid (PFHpA)	90	B	37.9	124		ng/L		89	72 - 132
Perfluorononanoic acid (PFNA)	56		37.9	93.1		ng/L		98	75 - 135
Perfluorodecanoic acid (PFDA)	4.8		37.9	42.3		ng/L		99	76 - 136
Perfluoroundecanoic acid (PFUnA)	2.0		37.9	40.9		ng/L		103	68 - 128
Perfluorododecanoic acid (PFDoA)	<1.8		37.9	45.2		ng/L		119	71 - 131
Perfluorotridecanoic acid (PFTriA)	<1.8		37.9	41.6		ng/L		110	71 - 131
Perfluorotetradecanoic acid (PFTeA)	<1.8		37.9	41.6		ng/L		110	70 - 130
Perfluoro-n-hexadecanoic acid (PFHxDA)	<1.8		37.9	37.6		ng/L		99	76 - 136
Perfluoro-n-octadecanoic acid (PFODA)	<1.8		37.9	33.1		ng/L		87	58 - 145
Perfluorobutanesulfonic acid (PFBS)	3.9		33.5	37.6		ng/L		101	67 - 127
Perfluoropentanesulfonic acid (PFPeS)	3.5		35.6	42.7		ng/L		110	66 - 126
Perfluorohexanesulfonic acid (PFHxS)	50		34.5	79.7		ng/L		87	59 - 119
Perfluoroheptanesulfonic Acid (PFHpS)	4.1		36.1	40.0		ng/L		99	76 - 136
Perfluorooctanesulfonic acid (PFOS)	210		35.2	202	4	ng/L		-11	70 - 130
Perfluorononanesulfonic acid (PFNS)	<1.8		36.4	36.4		ng/L		100	75 - 135
Perfluorodecanesulfonic acid (PFDS)	<1.8		36.6	34.0		ng/L		93	71 - 131
Perfluorododecanesulfonic acid (PFDoS)	<1.8		36.7	29.1		ng/L		79	67 - 127
Perfluorooctanesulfonamide (FOSA)	29		37.9	62.1		ng/L		87	73 - 133
NMeFOSA	<1.8		37.9	38.0		ng/L		100	67 - 154
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<4.6		37.9	38.4		ng/L		101	76 - 136
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.5	J	37.9	39.0		ng/L		91	76 - 136
NMeFOSE	<3.6		37.9	37.2		ng/L		98	70 - 130
NEtFOSE	<1.8		37.9	36.0		ng/L		95	71 - 131
4:2 FTS	19		35.4	53.7		ng/L		98	79 - 139

Eurofins TestAmerica, Chicago

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189111-1

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

Lab Sample ID: 500-189111-3 MS

Client Sample ID: SW-M03 (10072020)

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 420953

Prep Batch: 420800

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.	Limits
	Result	Qualifier	Added	Result	Qualifier					
8:2 FTS	190	F2	36.3	177	4	ng/L		-27		75 - 135
10:2 FTS	<1.8		36.6	35.3		ng/L		97		64 - 142
DONA	<1.8		35.7	35.0		ng/L		98		79 - 139
HFPO-DA (GenX)	<3.6		37.9	37.8		ng/L		100		51 - 173
F-53B Major	<1.8		35.3	34.8		ng/L		98		75 - 135
F-53B Minor	<1.8		35.7	33.5		ng/L		94		54 - 114

Isotope Dilution	MS	MS	Limits
	%Recovery	Qualifier	
13C4 PFBA	63		25 - 150
13C5 PFPeA	84		25 - 150
13C2 PFHxA	99		25 - 150
13C4 PFHpA	108		25 - 150
13C5 PFNA	111		25 - 150
13C2 PFDA	110		25 - 150
13C2 PFUnA	118		25 - 150
13C2 PFDaA	88		25 - 150
13C2 PFTeDA	86		25 - 150
13C2 PFHxDA	88		25 - 150
13C3 PFBS	98		25 - 150
18O2 PFHxS	109		25 - 150
13C4 PFOS	108		25 - 150
13C8 FOSA	117		25 - 150
d3-NMeFOSAA	104		25 - 150
d5-NEtFOSAA	116		25 - 150
d-N-MeFOSA-M	67		20 - 150
d-N-EtFOSA-M	57		20 - 150
d7-N-MeFOSE-M	54		10 - 120
d9-N-EtFOSE-M	44		10 - 120
M2-4:2 FTS	132		25 - 150
M2-8:2 FTS	169	*5	25 - 150
13C3 HFPO-DA	114		25 - 150

Lab Sample ID: 500-189111-3 MSD

Client Sample ID: SW-M03 (10072020)

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 420953

Prep Batch: 420800

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	Limits	RPD	RPD
	Result	Qualifier	Added	Result	Qualifier						Limit	
Perfluorobutanoic acid (PFBA)	70		38.5	110		ng/L		106		76 - 136	2	30
Perfluoropentanoic acid (PFPeA)	220		38.5	251	4	ng/L		79		71 - 131	1	30
Perfluorohexanoic acid (PFHxA)	230		38.5	266	4	ng/L		91		73 - 133	2	30
Perfluoroheptanoic acid (PFHpA)	90	B	38.5	120		ng/L		78		72 - 132	3	30
Perfluorononanoic acid (PFNA)	56		38.5	97.8		ng/L		109		75 - 135	5	30
Perfluorodecanoic acid (PFDA)	4.8		38.5	43.8		ng/L		101		76 - 136	3	30
Perfluoroundecanoic acid (PFUnA)	2.0		38.5	45.2		ng/L		112		68 - 128	10	30
Perfluorododecanoic acid (PFDaA)	<1.8		38.5	38.2		ng/L		99		71 - 131	17	30
Perfluorotridecanoic acid (PFTriA)	<1.8		38.5	31.3		ng/L		81		71 - 131	28	30

Eurofins TestAmerica, Chicago

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189111-1

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

Lab Sample ID: 500-189111-3 MSD

Client Sample ID: SW-M03 (10072020)

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 420953

Prep Batch: 420800

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perfluorotetradecanoic acid (PFTeA)	<1.8		38.5	35.6		ng/L		92	70 - 130	16	30
Perfluoro-n-hexadecanoic acid (PFHxDA)	<1.8		38.5	37.1		ng/L		96	76 - 136	1	30
Perfluoro-n-octadecanoic acid (PFODA)	<1.8		38.5	32.0		ng/L		83	58 - 145	3	30
Perfluorobutanesulfonic acid (PFBS)	3.9		34.1	37.0		ng/L		97	67 - 127	2	30
Perfluoropentanesulfonic acid (PFPeS)	3.5		36.1	43.1		ng/L		110	66 - 126	1	30
Perfluorohexanesulfonic acid (PFHxS)	50		35.1	84.0		ng/L		98	59 - 119	5	30
Perfluoroheptanesulfonic Acid (PFHpS)	4.1		36.7	38.8		ng/L		95	76 - 136	3	30
Perfluorooctanesulfonic acid (PFOS)	210		35.7	249	4	ng/L		119	70 - 130	21	30
Perfluorononanesulfonic acid (PFNS)	<1.8		37.0	36.5		ng/L		99	75 - 135	0	30
Perfluorodecanesulfonic acid (PFDS)	<1.8		37.1	34.5		ng/L		93	71 - 131	1	30
Perfluorododecanesulfonic acid (PFDoS)	<1.8		37.3	31.8		ng/L		85	67 - 127	9	30
Perfluorooctanesulfonamide (FOSA)	29		38.5	69.7		ng/L		106	73 - 133	12	30
NMeFOSA	<1.8		38.5	39.0		ng/L		101	67 - 154	3	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<4.6		38.5	39.1		ng/L		101	76 - 136	2	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.5	J	38.5	42.3		ng/L		98	76 - 136	8	30
NMeFOSE	<3.6		38.5	36.8		ng/L		96	70 - 130	1	30
NEtFOSE	<1.8		38.5	42.3		ng/L		110	71 - 131	16	30
4:2 FTS	19		36.0	56.8		ng/L		105	79 - 139	6	30
8:2 FTS	190	F2	36.9	248	4 F2	ng/L		167	75 - 135	34	30
10:2 FTS	<1.8		37.1	37.3		ng/L		100	64 - 142	5	30
DONA	<1.8		36.3	33.8		ng/L		93	79 - 139	3	30
HFPO-DA (GenX)	<3.6		38.5	39.9		ng/L		104	51 - 173	6	30
F-53B Major	<1.8		35.9	35.2		ng/L		98	75 - 135	1	30
F-53B Minor	<1.8		36.3	33.8		ng/L		93	54 - 114	1	30

Isotope Dilution	MSD MSD		Limits
	%Recovery	Qualifier	
13C4 PFBA	69		25 - 150
13C5 PFPeA	93		25 - 150
13C2 PFHxA	111		25 - 150
13C4 PFHpA	119		25 - 150
13C5 PFNA	123		25 - 150
13C2 PFDA	122		25 - 150
13C2 PFUnA	117		25 - 150
13C2 PFDoA	116		25 - 150
13C2 PFTeDA	102		25 - 150
13C2 PFHxDA	98		25 - 150
13C3 PFBS	112		25 - 150
18O2 PFHxS	122		25 - 150

Eurofins TestAmerica, Chicago

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189111-1

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

Lab Sample ID: 500-189111-3 MSD
Matrix: Water
Analysis Batch: 420953

Client Sample ID: SW-M03 (10072020)
Prep Type: Total/NA
Prep Batch: 420800

Isotope Dilution	MSD		Limits
	%Recovery	Qualifier	
13C4 PFOS	123		25 - 150
13C8 FOSA	124		25 - 150
d3-NMeFOSAA	113		25 - 150
d5-NEtFOSAA	120		25 - 150
d-N-MeFOSA-M	73		20 - 150
d-N-EtFOSA-M	63		20 - 150
d7-N-MeFOSE-M	55		10 - 120
d9-N-EtFOSE-M	45		10 - 120
M2-4:2 FTS	149		25 - 150
M2-8:2 FTS	180	*5	25 - 150
13C3 HFPO-DA	118		25 - 150

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

Lab Sample ID: 500-189111-3 MS
Matrix: Water
Analysis Batch: 421237

Client Sample ID: SW-M03 (10072020)
Prep Type: Total/NA
Prep Batch: 420800

Analyte	Sample Result	Sample Qualifier	Spike Added	MS		Unit	D	%Rec	%Rec. Limits
				Result	Qualifier				
Perfluorooctanoic acid (PFOA) - DL	1100		37.9	1050	4	ng/L		-4	70 - 130
6:2 FTS - DL	1700		35.9	1670	4	ng/L		6	59 - 175

Isotope Dilution	MS		Limits
	%Recovery	Qualifier	
13C4 PFOA - DL	93		25 - 150
M2-6:2 FTS - DL	118		25 - 150

Lab Sample ID: 500-189111-3 MSD
Matrix: Water
Analysis Batch: 421237

Client Sample ID: SW-M03 (10072020)
Prep Type: Total/NA
Prep Batch: 420800

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD		Unit	D	%Rec	%Rec. Limits	RPD	
				Result	Qualifier					RPD	Limit
Perfluorooctanoic acid (PFOA) - DL	1100		38.5	1170	4	ng/L		299	70 - 130	10	30
6:2 FTS - DL	1700		36.5	1680	4	ng/L		39	59 - 175	1	30

Isotope Dilution	MSD		Limits
	%Recovery	Qualifier	
13C4 PFOA - DL	96		25 - 150
M2-6:2 FTS - DL	125		25 - 150

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 500-566337/1
Matrix: Water
Analysis Batch: 566337

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

Analyte	MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Total Suspended Solids	<5.0		5.0	1.9	mg/L			10/13/20 15:35	1

Eurofins TestAmerica, Chicago

QC Sample Results

Client: ARCADIS U.S., Inc.
 Project/Site: Marinette 30015296.00009

Job ID: 500-189111-1

Method: SM 2540D - Solids, Total Suspended (TSS) (Continued)

Lab Sample ID: LCS 500-566337/2
Matrix: Water
Analysis Batch: 566337

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	200	185		mg/L		92	80 - 120

Lab Sample ID: MB 500-566524/1
Matrix: Water
Analysis Batch: 566524

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	<5.0		5.0	1.9	mg/L			10/14/20 12:15	1

Lab Sample ID: LCS 500-566524/2
Matrix: Water
Analysis Batch: 566524

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	200	185		mg/L		93	80 - 120

Lab Sample ID: 500-189111-3 MS
Matrix: Water
Analysis Batch: 566524

Client Sample ID: SW-M03 (10072020)
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	4.0	J	100	81.0		mg/L		77	75 - 125

Lab Sample ID: 500-189111-3 MSD
Matrix: Water
Analysis Batch: 566524

Client Sample ID: SW-M03 (10072020)
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Suspended Solids	4.0	J	100	98.0		mg/L		94	75 - 125	19	20

Lab Chronicle

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189111-1

Client Sample ID: SW-M01 (10072020)

Lab Sample ID: 500-189111-1

Date Collected: 10/07/20 12:15

Matrix: Water

Date Received: 10/09/20 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			420800	10/11/20 19:03	VP	TAL SAC
Total/NA	Analysis	537 (modified)		1	420953	10/12/20 13:41	RS1	TAL SAC
Total/NA	Prep	3535	DL		420800	10/11/20 19:03	VP	TAL SAC
Total/NA	Analysis	537 (modified)	DL	10	421237	10/13/20 11:52	GMK	TAL SAC
Total/NA	Analysis	SM 2540D		1	566524		SMO	TAL CHI
					(Start)	10/14/20 12:19		
					(End)	10/14/20 12:20		

Client Sample ID: SW-M02 (10072020)

Lab Sample ID: 500-189111-2

Date Collected: 10/07/20 12:20

Matrix: Water

Date Received: 10/09/20 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			420800	10/11/20 19:03	VP	TAL SAC
Total/NA	Analysis	537 (modified)		1	420953	10/12/20 13:50	RS1	TAL SAC
Total/NA	Prep	3535	DL		420800	10/11/20 19:03	VP	TAL SAC
Total/NA	Analysis	537 (modified)	DL	10	421237	10/13/20 12:01	GMK	TAL SAC
Total/NA	Analysis	SM 2540D		1	566524		SMO	TAL CHI
					(Start)	10/14/20 12:20		
					(End)	10/14/20 12:21		

Client Sample ID: SW-M03 (10072020)

Lab Sample ID: 500-189111-3

Date Collected: 10/07/20 12:25

Matrix: Water

Date Received: 10/09/20 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			420800	10/11/20 19:03	VP	TAL SAC
Total/NA	Analysis	537 (modified)		1	420953	10/12/20 13:59	RS1	TAL SAC
Total/NA	Prep	3535	DL		420800	10/11/20 19:03	VP	TAL SAC
Total/NA	Analysis	537 (modified)	DL	10	421237	10/13/20 12:11	GMK	TAL SAC
Total/NA	Analysis	SM 2540D		1	566524		SMO	TAL CHI
					(Start)	10/14/20 12:21		
					(End)	10/14/20 12:22		

Client Sample ID: SW-M04 (10072020)

Lab Sample ID: 500-189111-4

Date Collected: 10/07/20 12:40

Matrix: Water

Date Received: 10/09/20 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			420800	10/11/20 19:03	VP	TAL SAC
Total/NA	Analysis	537 (modified)		1	420953	10/12/20 14:27	RS1	TAL SAC
Total/NA	Prep	3535	DL		420800	10/11/20 19:03	VP	TAL SAC
Total/NA	Analysis	537 (modified)	DL	10	421237	10/13/20 12:39	GMK	TAL SAC
Total/NA	Analysis	SM 2540D		1	566524		SMO	TAL CHI
					(Start)	10/14/20 12:24		
					(End)	10/14/20 12:25		

Eurofins TestAmerica, Chicago

Lab Chronicle

Client: ARCADIS U.S., Inc.
 Project/Site: Marinette 30015296.00009

Job ID: 500-189111-1

Client Sample ID: SW-M05 (10072020)

Lab Sample ID: 500-189111-5

Date Collected: 10/07/20 13:00

Matrix: Water

Date Received: 10/09/20 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			420800	10/11/20 19:03	VP	TAL SAC
Total/NA	Analysis	537 (modified)		1	420953	10/12/20 14:37	RS1	TAL SAC
Total/NA	Prep	3535	DL		420800	10/11/20 19:03	VP	TAL SAC
Total/NA	Analysis	537 (modified)	DL	10	421237	10/13/20 12:48	GMK	TAL SAC
Total/NA	Analysis	SM 2540D		1	566524		SMO	TAL CHI
					(Start)	10/14/20 12:25		
					(End)	10/14/20 12:26		

Client Sample ID: SW-M06 (10072020)

Lab Sample ID: 500-189111-6

Date Collected: 10/07/20 13:05

Matrix: Water

Date Received: 10/09/20 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			420800	10/11/20 19:03	VP	TAL SAC
Total/NA	Analysis	537 (modified)		1	420953	10/12/20 14:46	RS1	TAL SAC
Total/NA	Prep	3535	DL		420800	10/11/20 19:03	VP	TAL SAC
Total/NA	Analysis	537 (modified)	DL	10	421237	10/13/20 13:06	GMK	TAL SAC
Total/NA	Analysis	SM 2540D		1	566524		SMO	TAL CHI
					(Start)	10/14/20 12:26		
					(End)	10/14/20 12:27		

Client Sample ID: SW-M07 (10072020)

Lab Sample ID: 500-189111-7

Date Collected: 10/07/20 13:20

Matrix: Water

Date Received: 10/09/20 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			420800	10/11/20 19:03	VP	TAL SAC
Total/NA	Analysis	537 (modified)		1	420953	10/12/20 14:55	RS1	TAL SAC
Total/NA	Prep	3535	DL		420800	10/11/20 19:03	VP	TAL SAC
Total/NA	Analysis	537 (modified)	DL	10	421237	10/13/20 13:16	GMK	TAL SAC
Total/NA	Analysis	SM 2540D		1	566337		SMO	TAL CHI
					(Start)	10/13/20 15:39		
					(End)	10/13/20 15:40		

Client Sample ID: SW-M08 (10072020)

Lab Sample ID: 500-189111-8

Date Collected: 10/07/20 13:30

Matrix: Water

Date Received: 10/09/20 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			420800	10/11/20 19:03	VP	TAL SAC
Total/NA	Analysis	537 (modified)		1	420953	10/12/20 15:04	RS1	TAL SAC
Total/NA	Prep	3535	DL		420800	10/11/20 19:03	VP	TAL SAC
Total/NA	Analysis	537 (modified)	DL	10	422430	10/16/20 12:51	YH	TAL SAC
Total/NA	Analysis	SM 2540D		1	566337		SMO	TAL CHI
					(Start)	10/13/20 15:40		
					(End)	10/13/20 15:41		

Eurofins TestAmerica, Chicago

Lab Chronicle

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189111-1

Client Sample ID: SW-M09 (10072020)

Lab Sample ID: 500-189111-9

Date Collected: 10/07/20 13:40

Matrix: Water

Date Received: 10/09/20 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			420800	10/11/20 19:04	VP	TAL SAC
Total/NA	Analysis	537 (modified)		1	420953	10/12/20 15:31	RS1	TAL SAC
Total/NA	Prep	3535	DL		420800	10/11/20 19:04	VP	TAL SAC
Total/NA	Analysis	537 (modified)	DL	10	421237	10/13/20 13:34	GMK	TAL SAC
Total/NA	Analysis	SM 2540D		1	566337		SMO	TAL CHI
					(Start)	10/13/20 15:41		
					(End)	10/13/20 15:42		

Client Sample ID: SW-M10 (10072020)

Lab Sample ID: 500-189111-10

Date Collected: 10/07/20 13:45

Matrix: Water

Date Received: 10/09/20 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			420800	10/11/20 19:04	VP	TAL SAC
Total/NA	Analysis	537 (modified)		1	420953	10/12/20 15:40	RS1	TAL SAC
Total/NA	Prep	3535	DL		420800	10/11/20 19:04	VP	TAL SAC
Total/NA	Analysis	537 (modified)	DL	10	421237	10/13/20 13:43	GMK	TAL SAC
Total/NA	Analysis	SM 2540D		1	566337		SMO	TAL CHI
					(Start)	10/13/20 15:42		
					(End)	10/13/20 15:43		

Client Sample ID: DUP-02-10072020

Lab Sample ID: 500-189111-11

Date Collected: 10/07/20 00:00

Matrix: Water

Date Received: 10/09/20 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			420800	10/11/20 19:04	VP	TAL SAC
Total/NA	Analysis	537 (modified)		1	420953	10/12/20 15:50	RS1	TAL SAC
Total/NA	Prep	3535	DL		420800	10/11/20 19:04	VP	TAL SAC
Total/NA	Analysis	537 (modified)	DL	10	421237	10/13/20 13:52	GMK	TAL SAC
Total/NA	Analysis	SM 2540D		1	566337		SMO	TAL CHI
					(Start)	10/13/20 15:43		
					(End)	10/13/20 15:43		

Laboratory References:

TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

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

Accreditation/Certification Summary

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189111-1

Laboratory: Eurofins TestAmerica, Chicago

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

Authority	Program	Identification Number	Expiration Date
Wisconsin	State	999580010	08-31-21

Laboratory: Eurofins TestAmerica, Sacramento

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

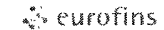
Authority	Program	Identification Number	Expiration Date
Wisconsin	State	998204680	08-31-21

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Eurofins TestAmerica, Chicago

2417 Pond Street
University Park, IL 60484
Phone: 708-534-5200 Fax: 708-534-5211

Chain of Custody Record



Client Information		Sampler: Amy Siefer		Lab PM: Fredrick, Sandie		Carrier Tracking No(s):		COC No: 500-85814-38797.2			
Client Contact: Elizabeth Hover		Phone:		E-Mail: sandra.fredrick@eurofinset.com				Page 1 of 1			
Company: ARCADIS U.S., Inc.				Analysis Requested							
Address: 126 North Jefferson Street Suite 400				Due Date Requested:				Job #: 500-189111			
City: Milwaukee				TAT Requested (days): Standard				Preservation Codes:			
State, Zip: WI, 53202				PO #: 30015296.00009				A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA			
Phone:				WO #:				M - Hexane N - None O - ASINgO2 P - Na2O4S Q - Na2SG3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)			
E-mail: Elizabeth.Hover@arcadis.com				Project #: 50017363				Other:			
Project Name: Marinette 30015296.00009				SSOW#:							
Site: Marinette, WI											
Sample Identification		Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, G=waste/oil)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	2840D - TSS	PFC_IDA - PFAS - Extended List (36 Analytes)	Total Number of Containers	Special Instructions/Note:
				Preservation Code:							
SW-M01 (10072020)		10/7/20	1215	G	Water	N	N	X	X		
SW-M02 (10072020)			1220		Water	N	N				
SW-M03 (10072020)			1225		Water	Y	N				MS/MSD
SW-M04 (10072020)			1240		Water	N	N				
SW-M05 (10072020)			1300		Water						
SW-M06 (10072020)			1305		Water						
SW-M07 (10072020)			1320		Water						
SW-M08 (10072020)			1330		Water						
SW-M09 (10072020)			1340		Water						
SW-M10 (10072020)			1345		Water						
DUP-02-10072020			-		Water						Duplicate
Possible Hazard Identification						Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)					
<input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological						<input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months					
Deliverable Requested I, II, III, IV, Other (specify):						Special Instructions/QC Requirements:					
Empty Kit Relinquished by:		Date:		Time		Method of Shipment					
Relinquished by: Amy Siefer		Date/Time: 10/8/20 / 1700		Company: Arcadis		Received by: Shirley Scott		Date/Time: 10/9/20 0940		Company: TRC	
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:		Company:	
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:		Company:	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: 2.6, 1.9 → 2.9, 1.4 → 2.4, 1.7 → 2.7							

110902054

ORIGIN ID:RRLA (262) 202-5955
GUEST: JEREMY HAMLIN
COUNTRY INN & SUITES
2020 OLD PESHTIGO RD

SHIP DATE: 28FEB20
ACTWGT: 25.00 LB MAN
CAD: 525155/CAFE3211

MARINETTE, WI 54143
UNITED STATES US

TO

TESTAMERICA CHICAGO
2417 BOND STREET

UNIVERSITY PARK IL 60484-31

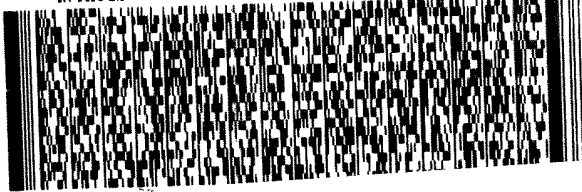
(708) 634-6200
INV: PO:

REF:

DEPT:

500-189111 Wayb

RMA: ||| ||| |||



FedEx
Express



5111806801™

551127484F/104C

ORIGIN ID:RRLA (262) 202-5955
GUEST: JEREMY HAMLIN
COUNTRY INN & SUITES
2020 OLD PESHTIGO RD

SHIP DATE: 06MAR20
ACTWGT: 25.00 LB MAN
CAD: 525155/CAFE3211

MARINETTE, WI 54143
UNITED STATES US

TO

TESTAMERICA CHICAGO
2417 BOND STREET

UNIVERSITY PARK IL 60484-3101

(708) 634-6200
INV: PO:

REF:

DEPT:

RMA: ||| ||| |||

FedEx
TRK# 7125 4942 2161
0221

FRI - 09 OCT 10:30A
PRIORITY OVERNIGHT

NA JOTA

60484
IL-US ORD



48qt.

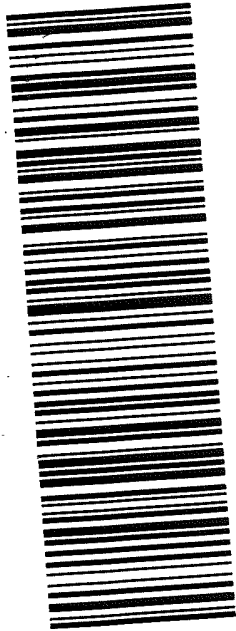
551127484F/104C

FRI - 09 OCT 10:30A
PRIORITY OVERNIGHT

FedEx
TRK# 7125 4942 1544
0221

60484
IL-US ORD

NA JOTA



*179495 10/08 56812/P27E/P766

48qt.

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

ORIGIN ID:RRLA (262) 202-5955
GUEST: JEREMY HAMLIN
COUNTRY INN & SUITES
2020 OLD PESHTIGO RD

SHIP DATE: 06MAR20
ACTWGT: 25.00 LB MAN
CAD: 525155/CAFE3211

MARINETTE, WI 54143
UNITED STATES US

ORIGIN ID:RRLA (262) 202-5955
GUEST: JEREMY HAMLIN
COUNTRY INN & SUITES
2020 OLD PESHTIGO RD

SHIP DATE: 06MAR20
ACTWGT: 25.00 LB MAN
CAD: 525155/CAFE3211

MARINETTE, WI 54143
UNITED STATES US

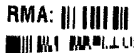
TO

TESTAMERICA CHICAGO
2417 BOND STREET

UNIVERSITY PARK IL 60484-3101

(708) 634-6200

REF: INU: PO: DEPT:

RMA: 

FedEx
TRK# 7125 4942 2117
0221

FRI - 09 OCT 10:30A x
PRIORITY OVERNIGHT

NA JOTA

60484
IL-US ORD



16qt.

551724681/104F

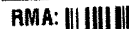
TO

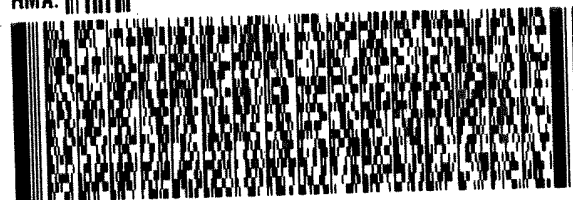
TESTAMERICA CHICAGO
2417 BOND STREET

UNIVERSITY PARK IL 60484-3101

(708) 634-6200

REF: INU: PO: DEPT:

RMA: 



FedEx
Express



J181118060501 US

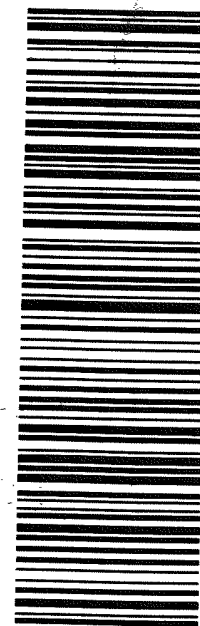
RETURNS MON-SAT

FRI - 09 OCT 10:30A
PRIORITY OVERNIGHT

FedEx
TRK# 7125 4942 2128
0221

NA JOTA

60484
IL-US ORD



*179495 10/08 589J2/R27E/2765

RT 519
ST 22
5 10:30 A
2128
10.00

48qt.

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Eurofins TestAmerica, Chicago

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

Chain of Custody Record



Environment Testing
 America

Client Information (Sub Contract Lab)		Sampler:	Lab PM:	Carrier Tracking No(s):	COC No:																																																																																				
Client Contact: Shipping/Receiving		Phone:	Fredrick, Sandie	State of Origin: Wisconsin	500-140771.1																																																																																				
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State - Wisconsin; State Program - Wisconsin			Page: Page 1 of 2																																																																																				
Address: 880 Riverside Parkway,		Due Date Requested: 10/21/2020	<table border="1"> <thead> <tr> <th colspan="12">Analysis Requested</th> </tr> </thead> <tbody> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </tbody> </table>		Analysis Requested																																																																																				Job #: 500-189111-1
Analysis Requested																																																																																									
City: West Sacramento		TAT Requested (days):	Field Filtered Sample (Yes or No)		Total Number of containers																																																																																				
State, Zip: CA, 95605		PO #:	Perform MS/MSD (Yes or No)																																																																																						
Phone: 916-373-5600(Tel) 916-372-1059(Fax)		WO #:	PFC IDA/3535_PFC PFAS_Extended List (36 Analytes)																																																																																						
Email:		Project #:																																																																																							
Project Name: Marinette 30015296.00009		SSOW#:																																																																																							
Site:																																																																																									
Sample Identification - Client ID (Lab ID)		Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	PFC IDA/3535_PFC PFAS_Extended List (36 Analytes)				Total Number of containers	Special Instructions/Note:																																																																												
SW-M01 (10072020) (500-189111-1)		10/7/20	12:15 Central		Water		X					2																																																																													
SW-M02 (10072020) (500-189111-2)		10/7/20	12:20 Central		Water		X					2																																																																													
SW-M03 (10072020) (500-189111-3)		10/7/20	12:25 Central		Water		X					2																																																																													
SW-M03 (10072020) (500-189111-3MS)		10/7/20	12:25 Central	MS	Water		X					2																																																																													
SW-M03 (10072020) (500-189111-3MSD)		10/7/20	12:25 Central	MSD	Water		X					2																																																																													
SW-M04 (10072020) (500-189111-4)		10/7/20	12:40 Central		Water		X					2																																																																													
SW-M05 (10072020) (500-189111-5)		10/7/20	13:00 Central		Water		X					2																																																																													
SW-M06 (10072020) (500-189111-6)		10/7/20	13:05 Central		Water		X					2																																																																													
SW-M07 (10072020) (500-189111-7)		10/7/20	13:20 Central		Water		X					2																																																																													
Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.																																																																																									
Possible Hazard Identification						Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)																																																																																			
Unconfirmed						<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months																																																																																			
Deliverable Requested: I, II, III, IV, Other (specify)						Primary Deliverable Rank: 2		Special Instructions/QC Requirements:																																																																																	
Empty Kit Relinquished by:				Date:		Time:		Method of Shipment:																																																																																	
Relinquished by: <i>[Signature]</i>				Date/Time: 10/9/20 1700		Company: TA		Received by: <i>[Signature]</i>				Date/Time: 10/10/20 09:05		Company: ETA-SAC																																																																											
Relinquished by:				Date/Time:		Company:		Received by:				Date/Time:		Company:																																																																											
Custody Seals Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.: 1346 F66				Cooler Temperature(s) °C and Other Remarks: 08: 2.7. CORL: 2.2																																																																																			



Eurofins TestAmerica, Chicago

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

Chain of Custody Record



Client Information (Sub Contract Lab), Analysis Requested, Preservation Codes, Sample Identification - Client ID (Lab ID), Possible Hazard Identification, Sample Disposal, Relinquished by, Custody Seals Intact, Cooler Temperature(s) °C and Other Remarks.

Page 45 of 51

10/19/2020



Login Sample Receipt Checklist

Client: ARCADIS U.S., Inc.

Job Number: 500-189111-1

Login Number: 189111

List Source: Eurofins TestAmerica, Chicago

List Number: 1

Creator: Scott, Sherri L

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are 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.	True	
Cooler Temperature is recorded.	True	2.6,2.9,2.4,2.7
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: ARCADIS U.S., Inc.

Job Number: 500-189111-1

Login Number: 189111

List Number: 2

Creator: Saephan, Kae C

List Source: Eurofins TestAmerica, Sacramento

List Creation: 10/10/20 12:28 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	1346766
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	ob: 2.7c corr: 2.2c
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



500-189111 Field Sheet

Tracking #: 189344497465

Job: _____

SO / PO / FO / (SAT) 2-Day / Ground / UPS / CDO / Courier
GSO / OnTrac / Goldstreak / USPS / Other _____

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

Therm. ID: AK-5 Corr. Factor: (+ 0) 0.5 °C

Ice X Wet X Gel _____ Other _____

Cooler Custody Seal: 1346766

Cooler ID: 2 OF 2

Temp Observed: 2.7 °C Corrected: 2.2 °C
From: Temp Blank Sample

Opening/Processing The Shipment	Yes	No	NA
Cooler compromised/tampered with?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Cooler Temperature is acceptable?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Initials: [Signature] Date: 10/10/20

Unpacking/Labeling The Samples	Yes	No	NA
CoC is complete w/o discrepancies?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Samples compromised/tampered with?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Sample containers have legible labels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample custody seal?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Containers are not broken or leaking?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample date/times are provided?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Appropriate containers are used?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample bottles are completely filled?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample preservatives verified?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Samples w/o discrepancies?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Zero headspace?*	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Alkalinity has no headspace?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Perchlorate has headspace? (Methods 314, 331, 6850)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Multiphasic samples are not present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Initials: [Signature] Date: 10/10/20

Notes: _____

Trizma Lot #(s): _____

Login Completion	Yes	No	NA
Receipt Temperature on COC?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Samples received within hold time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NCM Filed?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Log Release checked in TALS?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Initials: [Signature] Date: 10/10/20

Isotope Dilution Summary

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189111-1

Method: 537 (modified) - Fluorinated Alkyl Substances

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Isotope Dilution Recovery (Acceptance Limits)							
		PFBA (25-150)	PFPeA (25-150)	PFHxA (25-150)	C4PFHA (25-150)	PFOA (25-150)	PFNA (25-150)	PFDA (25-150)	PFUnA (25-150)
500-189111-1	SW-M01 (10072020)	62	84	97	105		112	106	108
500-189111-1 - DL	SW-M01 (10072020)					86			
500-189111-2	SW-M02 (10072020)	61	83	98	109		115	108	106
500-189111-2 - DL	SW-M02 (10072020)					86			
500-189111-3	SW-M03 (10072020)	58	77	94	98		109	101	95
500-189111-3 - DL	SW-M03 (10072020)					84			
500-189111-3 MS	SW-M03 (10072020)	63	84	99	108		111	110	118
500-189111-3 MS - DL	SW-M03 (10072020)					93			
500-189111-3 MSD	SW-M03 (10072020)	69	93	111	119		123	122	117
500-189111-3 MSD - DL	SW-M03 (10072020)					96			
500-189111-4	SW-M04 (10072020)	61	83	98	109		112	111	104
500-189111-4 - DL	SW-M04 (10072020)					94			
500-189111-5	SW-M05 (10072020)	70	94	112	120		128	127	109
500-189111-5 - DL	SW-M05 (10072020)					95			
500-189111-6	SW-M06 (10072020)	58	78	92	104		116	109	103
500-189111-6 - DL	SW-M06 (10072020)					81			
500-189111-7	SW-M07 (10072020)	63	84	103	105		111	113	102
500-189111-7 - DL	SW-M07 (10072020)					88			
500-189111-8	SW-M08 (10072020)	49	65	79	83		86	90	79
500-189111-8 - DL	SW-M08 (10072020)					101			
500-189111-9	SW-M09 (10072020)	59	77	91	98		105	95	96
500-189111-9 - DL	SW-M09 (10072020)					86			
500-189111-10	SW-M10 (10072020)	52	71	82	89		97	84	86
500-189111-10 - DL	SW-M10 (10072020)					83			
500-189111-11	DUP-02-10072020	56	75	87	94		101	105	93
500-189111-11 - DL	DUP-02-10072020					75			
LCS 320-420800/2-A	Lab Control Sample	100	107	102	103	102	111	98	106
MB 320-420800/1-A	Method Blank	100	108	104	105	99	109	108	107

Lab Sample ID	Client Sample ID	Percent Isotope Dilution Recovery (Acceptance Limits)							
		PFDoA (25-150)	PFTDA (25-150)	PFHxDA (25-150)	C3PFBS (25-150)	PFHxS (25-150)	PFOS (25-150)	PFOSA (25-150)	d3NMFOS (25-150)
500-189111-1	SW-M01 (10072020)	101	92	79	100	114	111	109	105
500-189111-1 - DL	SW-M01 (10072020)								
500-189111-2	SW-M02 (10072020)	92	78	79	98	111	109	113	96
500-189111-2 - DL	SW-M02 (10072020)								
500-189111-3	SW-M03 (10072020)	99	83	81	91	101	100	99	107
500-189111-3 - DL	SW-M03 (10072020)								
500-189111-3 MS	SW-M03 (10072020)	88	86	88	98	109	108	117	104
500-189111-3 MS - DL	SW-M03 (10072020)								
500-189111-3 MSD	SW-M03 (10072020)	116	102	98	112	122	123	124	113
500-189111-3 MSD - DL	SW-M03 (10072020)								
500-189111-4	SW-M04 (10072020)	96	85	80	104	114	114	115	96
500-189111-4 - DL	SW-M04 (10072020)								
500-189111-5	SW-M05 (10072020)	106	88	91	112	120	120	125	111
500-189111-5 - DL	SW-M05 (10072020)								
500-189111-6	SW-M06 (10072020)	99	76	88	95	106	105	110	96
500-189111-6 - DL	SW-M06 (10072020)								
500-189111-7	SW-M07 (10072020)	93	90	93	102	115	113	118	88
500-189111-7 - DL	SW-M07 (10072020)								

Eurofins TestAmerica, Chicago

Isotope Dilution Summary

Client: ARCADIS U.S., Inc.
 Project/Site: Marinette 30015296.00009

Job ID: 500-189111-1

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

Matrix: Water

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFDoA (25-150)	PFTDA (25-150)	PFHxDA (25-150)	C3PFBS (25-150)	PFHxS (25-150)	PFOS (25-150)	PFOSA (25-150)	d3NMFOS (25-150)
500-189111-8	SW-M08 (10072020)	76	74	75	79	86	86	88	81
500-189111-8 - DL	SW-M08 (10072020)								
500-189111-9	SW-M09 (10072020)	86	78	81	90	100	99	104	90
500-189111-9 - DL	SW-M09 (10072020)								
500-189111-10	SW-M10 (10072020)	88	72	80	82	90	92	98	82
500-189111-10 - DL	SW-M10 (10072020)								
500-189111-11	DUP-02-10072020	101	82	80	93	99	100	103	97
500-189111-11 - DL	DUP-02-10072020								
LCS 320-420800/2-A	Lab Control Sample	102	113	117	102	110	104	104	110
MB 320-420800/1-A	Method Blank	101	103	118	105	111	108	103	109

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	d5NEFOS (25-150)	dMeFOSA (20-150)	dEtFOSA (20-150)	NMFM (10-120)	NEFM (10-120)	M242FTS (25-150)	M262FTS (25-150)	M282FTS (25-150)
500-189111-1	SW-M01 (10072020)	110	64	55	55	47	137		158 *5
500-189111-1 - DL	SW-M01 (10072020)							108	
500-189111-2	SW-M02 (10072020)	102	69	56	57	47	136		163 *5
500-189111-2 - DL	SW-M02 (10072020)							100	
500-189111-3	SW-M03 (10072020)	112	62	51	46	40	124		148
500-189111-3 - DL	SW-M03 (10072020)							106	
500-189111-3 MS	SW-M03 (10072020)	116	67	57	54	44	132		169 *5
500-189111-3 MS - DL	SW-M03 (10072020)							118	
500-189111-3 MSD	SW-M03 (10072020)	120	73	63	55	45	149		180 *5
500-189111-3 MSD - DL	SW-M03 (10072020)							125	
500-189111-4	SW-M04 (10072020)	109	68	58	50	40	134		162 *5
500-189111-4 - DL	SW-M04 (10072020)							114	
500-189111-5	SW-M05 (10072020)	125	75	61	52	48	152 *5		173 *5
500-189111-5 - DL	SW-M05 (10072020)							120	
500-189111-6	SW-M06 (10072020)	103	65	54	54	42	126		151 *5
500-189111-6 - DL	SW-M06 (10072020)							98	
500-189111-7	SW-M07 (10072020)	100	75	59	60	52	148		158 *5
500-189111-7 - DL	SW-M07 (10072020)							103	
500-189111-8	SW-M08 (10072020)	87	52	45	41	37	108		122
500-189111-8 - DL	SW-M08 (10072020)							124	
500-189111-9	SW-M09 (10072020)	101	59	50	46	37	126		137
500-189111-9 - DL	SW-M09 (10072020)							107	
500-189111-10	SW-M10 (10072020)	91	55	47	44	36	115		131
500-189111-10 - DL	SW-M10 (10072020)							95	
500-189111-11	DUP-02-10072020	105	62	54	54	42	125		154 *5
500-189111-11 - DL	DUP-02-10072020							97	
LCS 320-420800/2-A	Lab Control Sample	117	95	73	42	36	113	126	131
MB 320-420800/1-A	Method Blank	119	88	57	37	28	115	123	129

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	HFPODA (25-150)
500-189111-1	SW-M01 (10072020)	105
500-189111-1 - DL	SW-M01 (10072020)	
500-189111-2	SW-M02 (10072020)	111
500-189111-2 - DL	SW-M02 (10072020)	
500-189111-3	SW-M03 (10072020)	100

Isotope Dilution Summary

Client: ARCADIS U.S., Inc.
 Project/Site: Marinette 30015296.00009

Job ID: 500-189111-1

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

Matrix: Water

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	HFPODA (25-150)
500-189111-3 - DL	SW-M03 (10072020)	
500-189111-3 MS	SW-M03 (10072020)	114
500-189111-3 MS - DL	SW-M03 (10072020)	
500-189111-3 MSD	SW-M03 (10072020)	118
500-189111-3 MSD - DL	SW-M03 (10072020)	
500-189111-4	SW-M04 (10072020)	110
500-189111-4 - DL	SW-M04 (10072020)	
500-189111-5	SW-M05 (10072020)	124
500-189111-5 - DL	SW-M05 (10072020)	
500-189111-6	SW-M06 (10072020)	101
500-189111-6 - DL	SW-M06 (10072020)	
500-189111-7	SW-M07 (10072020)	107
500-189111-7 - DL	SW-M07 (10072020)	
500-189111-8	SW-M08 (10072020)	85
500-189111-8 - DL	SW-M08 (10072020)	
500-189111-9	SW-M09 (10072020)	101
500-189111-9 - DL	SW-M09 (10072020)	
500-189111-10	SW-M10 (10072020)	90
500-189111-10 - DL	SW-M10 (10072020)	
500-189111-11	DUP-02-10072020	94
500-189111-11 - DL	DUP-02-10072020	
LCS 320-420800/2-A	Lab Control Sample	105
MB 320-420800/1-A	Method Blank	107

Surrogate Legend

- PFBA = 13C4 PFBA
- PFPeA = 13C5 PFPeA
- PFHxA = 13C2 PFHxA
- C4PFHA = 13C4 PFHpA
- PFOA = 13C4 PFOA
- PFNA = 13C5 PFNA
- PFDA = 13C2 PFDA
- PFUnA = 13C2 PFUnA
- PFDoA = 13C2 PFDoA
- PFTDA = 13C2 PFTeDA
- PFHxDA = 13C2 PFHxDA
- C3PFBS = 13C3 PFBS
- PFHxS = 18O2 PFHxS
- PFOS = 13C4 PFOS
- PFOSA = 13C8 FOSA
- d3NMFOS = d3-NMeFOSAA
- d5NEFOS = d5-NEtFOSAA
- dMeFOSA = d-N-MeFOSA-M
- dEtFOSA = d-N-EtFOSA-M
- NMFM = d7-N-MeFOSE-M
- NEFM = d9-N-EtFOSE-M
- M242FTS = M2-4:2 FTS
- M262FTS = M2-6:2 FTS
- M282FTS = M2-8:2 FTS
- HFPODA = 13C3 HFPO-DA

ANALYTICAL REPORT

Eurofins TestAmerica, Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

Laboratory Job ID: 500-189114-1
Client Project/Site: Marinette 30015296.00009

For:
ARCADIS U.S., Inc.
126 North Jefferson Street
Suite 400
Milwaukee, Wisconsin 53202

Attn: Lisa Rutkowski



Authorized for release by:
10/19/2020 9:40:08 AM

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

LINKS

Review your project
results through
TotalAccess

Have a Question?



Visit us at:

www.eurofinsus.com/Env

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

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

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



Table of Contents

Cover Page	1
Table of Contents	2
Case Narrative	3
Method Summary	4
Sample Summary	5
Client Sample Results	6
Definitions	28
QC Sample Results	29
Chronicle	35
Certification Summary	38
Chain of Custody	39
Receipt Checklists	44
Field Data Sheets	46
Isotope Dilution Summary	47

Case Narrative

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189114-1

Job ID: 500-189114-1

Laboratory: Eurofins TestAmerica, Chicago

Narrative

Job Narrative 500-189114-1

Comments

No additional comments.

Receipt

The samples were received on 10/9/2020 9:40 AM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 4 coolers at receipt time were 2.4° C, 2.6° C, 2.7° C and 2.9° C.

LCMS

Method 537 (modified): The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 320-420981 and analytical batch 320-421385 recovered outside control limits for the following analytes: Perfluorotridecanoic acid (PFTriA).

Method 537 (modified): Results for samples 500-189114-6, 500-189114-9 and 500-189114-10 were reported from the analysis of a diluted extract due to high concentration of the target analyte in the analysis of the undiluted extract. The dilution factor was applied to the labeled internal standard area counts and these area counts were within acceptance limits

Method 537 (modified): The "I" qualifier means the transition mass ratio for the indicated analyte was outside of the established ratio limits. The qualitative identification of the analyte has some degree of uncertainty. However, analyst judgment was used to positively identify the analyte. CCVL 320-422430/2

Method 537 (modified): Results for samples 500-189114-7 and 500-189114-8 were reported from the analysis of a diluted extract due to high concentration of the target analyte in the analysis of the undiluted extract. The dilution factor was applied to the labeled internal standard area counts and these area counts were within acceptance limits.

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

General Chemistry

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

Organic Prep

Method 3535: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 320-420981. Method Code :3535 PFC Matrix: Water

Method 3535: The following samples contain a thin layer of sediments at the bottom of the bottles prior to extraction:500-189114-1, 500-189114-5 and 500-189114-8. Method Code :3535 PFC Matrix: Water preparation batch 320-420981

Method 3535: The following samples contain a floating particulates in the of the bottles prior to extraction:500-189114-2, 500-189114-6, 500-189114-7, 500-189114-9, 500-189114-10 and 500-189114-11. Method Code :3535 PFC Matrix: Water preparation batch 320-420981

Method 3535: During the solid phase extraction process, the following samples contain non-settable particulates which clogged the solid phase extraction column:500-189114-8. Method Code :3535 PFC Matrix: Water preparation batch 320-420981

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

Method Summary

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189114-1

Method	Method Description	Protocol	Laboratory
537 (modified)	Fluorinated Alkyl Substances	EPA	TAL SAC
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL CHI
3535	Solid-Phase Extraction (SPE)	SW846	TAL SAC

Protocol References:

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater"

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

Laboratory References:

TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

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

Sample Summary

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189114-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
500-189114-1	SW-L01 (10072020)	Water	10/07/20 10:00	10/09/20 09:40	
500-189114-2	SW-L02 (10072020)	Water	10/07/20 10:10	10/09/20 09:40	
500-189114-3	SW-L03 (10072020)	Water	10/07/20 10:20	10/09/20 09:40	
500-189114-4	SW-L04 (10072020)	Water	10/07/20 10:30	10/09/20 09:40	
500-189114-5	SW-L05 (10072020)	Water	10/07/20 10:35	10/09/20 09:40	
500-189114-6	SW-L06 (10072020)	Water	10/07/20 10:40	10/09/20 09:40	
500-189114-7	SW-L07 (10072020)	Water	10/07/20 10:50	10/09/20 09:40	
500-189114-8	SW-L08 (10072020)	Water	10/07/20 10:55	10/09/20 09:40	
500-189114-9	SW-L09 (10072020)	Water	10/07/20 11:00	10/09/20 09:40	
500-189114-10	SW-L10 (10072020)	Water	10/07/20 11:05	10/09/20 09:40	
500-189114-11	DUP-01-10072020	Water	10/07/20 00:00	10/09/20 09:40	



Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189114-1

Client Sample ID: SW-L01 (10072020)

Lab Sample ID: 500-189114-1

Date Collected: 10/07/20 10:00

Matrix: Water

Date Received: 10/09/20 09:40

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	23		4.7	2.3	ng/L		10/12/20 12:27	10/13/20 16:18	1
Perfluoropentanoic acid (PFPeA)	43		1.9	0.46	ng/L		10/12/20 12:27	10/13/20 16:18	1
Perfluorohexanoic acid (PFHxA)	35		1.9	0.55	ng/L		10/12/20 12:27	10/13/20 16:18	1
Perfluoroheptanoic acid (PFHpA)	12	B	1.9	0.24	ng/L		10/12/20 12:27	10/13/20 16:18	1
Perfluorooctanoic acid (PFOA)	130		1.9	0.80	ng/L		10/12/20 12:27	10/13/20 16:18	1
Perfluorononanoic acid (PFNA)	6.2		1.9	0.25	ng/L		10/12/20 12:27	10/13/20 16:18	1
Perfluorodecanoic acid (PFDA)	0.64	J	1.9	0.29	ng/L		10/12/20 12:27	10/13/20 16:18	1
Perfluoroundecanoic acid (PFUnA)	<1.9		1.9	1.0	ng/L		10/12/20 12:27	10/13/20 16:18	1
Perfluorododecanoic acid (PFDoA)	<1.9		1.9	0.52	ng/L		10/12/20 12:27	10/13/20 16:18	1
Perfluorotridecanoic acid (PFTriA)	<1.9	*1	1.9	1.2	ng/L		10/12/20 12:27	10/13/20 16:18	1
Perfluorotetradecanoic acid (PFTeA)	<1.9		1.9	0.69	ng/L		10/12/20 12:27	10/13/20 16:18	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<1.9		1.9	0.84	ng/L		10/12/20 12:27	10/13/20 16:18	1
Perfluoro-n-octadecanoic acid (PFODA)	<1.9		1.9	0.89	ng/L		10/12/20 12:27	10/13/20 16:18	1
Perfluorobutanesulfonic acid (PFBS)	1.2	J	1.9	0.19	ng/L		10/12/20 12:27	10/13/20 16:18	1
Perfluoropentanesulfonic acid (PFPeS)	0.45	J	1.9	0.28	ng/L		10/12/20 12:27	10/13/20 16:18	1
Perfluorohexanesulfonic acid (PFHxS)	5.2		1.9	0.54	ng/L		10/12/20 12:27	10/13/20 16:18	1
Perfluoroheptanesulfonic Acid (PFHpS)	<1.9		1.9	0.18	ng/L		10/12/20 12:27	10/13/20 16:18	1
Perfluorooctanesulfonic acid (PFOS)	16		1.9	0.51	ng/L		10/12/20 12:27	10/13/20 16:18	1
Perfluorononanesulfonic acid (PFNS)	<1.9		1.9	0.35	ng/L		10/12/20 12:27	10/13/20 16:18	1
Perfluorodecanesulfonic acid (PFDS)	<1.9		1.9	0.30	ng/L		10/12/20 12:27	10/13/20 16:18	1
Perfluorododecanesulfonic acid (PFDoS)	<1.9		1.9	0.92	ng/L		10/12/20 12:27	10/13/20 16:18	1
Perfluorooctanesulfonamide (FOSA)	3.0		1.9	0.93	ng/L		10/12/20 12:27	10/13/20 16:18	1
NEtFOSA	<1.9		1.9	0.82	ng/L		10/12/20 12:27	10/13/20 16:18	1
NMeFOSA	<1.9		1.9	0.41	ng/L		10/12/20 12:27	10/13/20 16:18	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<4.7		4.7	1.1	ng/L		10/12/20 12:27	10/13/20 16:18	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	1.2	J	4.7	1.2	ng/L		10/12/20 12:27	10/13/20 16:18	1
NMeFOSE	<3.8		3.8	1.3	ng/L		10/12/20 12:27	10/13/20 16:18	1
NEtFOSE	<1.9		1.9	0.80	ng/L		10/12/20 12:27	10/13/20 16:18	1
4:2 FTS	1.8	J	1.9	0.23	ng/L		10/12/20 12:27	10/13/20 16:18	1
6:2 FTS	100		4.7	2.4	ng/L		10/12/20 12:27	10/13/20 16:18	1
8:2 FTS	17		1.9	0.43	ng/L		10/12/20 12:27	10/13/20 16:18	1
10:2 FTS	<1.9		1.9	0.63	ng/L		10/12/20 12:27	10/13/20 16:18	1
DONA	<1.9		1.9	0.38	ng/L		10/12/20 12:27	10/13/20 16:18	1
HFPO-DA (GenX)	<3.8		3.8	1.4	ng/L		10/12/20 12:27	10/13/20 16:18	1
F-53B Major	<1.9		1.9	0.23	ng/L		10/12/20 12:27	10/13/20 16:18	1
F-53B Minor	<1.9		1.9	0.30	ng/L		10/12/20 12:27	10/13/20 16:18	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	70		25 - 150				10/12/20 12:27	10/13/20 16:18	1
13C5 PFPeA	84		25 - 150				10/12/20 12:27	10/13/20 16:18	1
13C2 PFHxA	88		25 - 150				10/12/20 12:27	10/13/20 16:18	1
13C4 PFHpA	93		25 - 150				10/12/20 12:27	10/13/20 16:18	1

Eurofins TestAmerica, Chicago

Client Sample Results

Client: ARCADIS U.S., Inc.
 Project/Site: Marinette 30015296.00009

Job ID: 500-189114-1

Client Sample ID: SW-L01 (10072020)

Lab Sample ID: 500-189114-1

Date Collected: 10/07/20 10:00

Matrix: Water

Date Received: 10/09/20 09:40

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

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C4 PFOA	89		25 - 150	10/12/20 12:27	10/13/20 16:18	1
13C5 PFNA	97		25 - 150	10/12/20 12:27	10/13/20 16:18	1
13C2 PFDA	89		25 - 150	10/12/20 12:27	10/13/20 16:18	1
13C2 PFUnA	87		25 - 150	10/12/20 12:27	10/13/20 16:18	1
13C2 PFDoA	84		25 - 150	10/12/20 12:27	10/13/20 16:18	1
13C2 PFTeDA	80		25 - 150	10/12/20 12:27	10/13/20 16:18	1
13C2 PFHxDA	89		25 - 150	10/12/20 12:27	10/13/20 16:18	1
13C3 PFBS	79		25 - 150	10/12/20 12:27	10/13/20 16:18	1
18O2 PFHxS	88		25 - 150	10/12/20 12:27	10/13/20 16:18	1
13C4 PFOS	84		25 - 150	10/12/20 12:27	10/13/20 16:18	1
13C8 FOSA	90		25 - 150	10/12/20 12:27	10/13/20 16:18	1
d3-NMeFOSAA	80		25 - 150	10/12/20 12:27	10/13/20 16:18	1
d5-NEtFOSAA	100		25 - 150	10/12/20 12:27	10/13/20 16:18	1
d-N-MeFOSA-M	58		20 - 150	10/12/20 12:27	10/13/20 16:18	1
d-N-EtFOSA-M	46		20 - 150	10/12/20 12:27	10/13/20 16:18	1
d7-N-MeFOSE-M	38		10 - 120	10/12/20 12:27	10/13/20 16:18	1
d9-N-EtFOSE-M	33		10 - 120	10/12/20 12:27	10/13/20 16:18	1
M2-4:2 FTS	92		25 - 150	10/12/20 12:27	10/13/20 16:18	1
M2-6:2 FTS	105		25 - 150	10/12/20 12:27	10/13/20 16:18	1
M2-8:2 FTS	112		25 - 150	10/12/20 12:27	10/13/20 16:18	1
13C3 HFPO-DA	88		25 - 150	10/12/20 12:27	10/13/20 16:18	1

General Chemistry

<i>Analyte</i>	<i>Result</i>	<i>Qualifier</i>	<i>RL</i>	<i>MDL</i>	<i>Unit</i>	<i>D</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Total Suspended Solids	56		5.0	1.9	mg/L			10/14/20 12:28	1

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189114-1

Client Sample ID: SW-L02 (10072020)

Lab Sample ID: 500-189114-2

Date Collected: 10/07/20 10:10

Matrix: Water

Date Received: 10/09/20 09:40

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	24		4.6	2.2	ng/L		10/12/20 12:27	10/13/20 16:27	1
Perfluoropentanoic acid (PFPeA)	36		1.8	0.45	ng/L		10/12/20 12:27	10/13/20 16:27	1
Perfluorohexanoic acid (PFHxA)	24		1.8	0.53	ng/L		10/12/20 12:27	10/13/20 16:27	1
Perfluoroheptanoic acid (PFHpA)	6.3	B	1.8	0.23	ng/L		10/12/20 12:27	10/13/20 16:27	1
Perfluorooctanoic acid (PFOA)	74		1.8	0.78	ng/L		10/12/20 12:27	10/13/20 16:27	1
Perfluorononanoic acid (PFNA)	3.1		1.8	0.25	ng/L		10/12/20 12:27	10/13/20 16:27	1
Perfluorodecanoic acid (PFDA)	<1.8		1.8	0.28	ng/L		10/12/20 12:27	10/13/20 16:27	1
Perfluoroundecanoic acid (PFUnA)	<1.8		1.8	1.0	ng/L		10/12/20 12:27	10/13/20 16:27	1
Perfluorododecanoic acid (PFDoA)	<1.8		1.8	0.50	ng/L		10/12/20 12:27	10/13/20 16:27	1
Perfluorotridecanoic acid (PFTriA)	<1.8	*1	1.8	1.2	ng/L		10/12/20 12:27	10/13/20 16:27	1
Perfluorotetradecanoic acid (PFTeA)	<1.8		1.8	0.67	ng/L		10/12/20 12:27	10/13/20 16:27	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<1.8		1.8	0.82	ng/L		10/12/20 12:27	10/13/20 16:27	1
Perfluoro-n-octadecanoic acid (PFODA)	<1.8		1.8	0.86	ng/L		10/12/20 12:27	10/13/20 16:27	1
Perfluorobutanesulfonic acid (PFBS)	1.2	J	1.8	0.18	ng/L		10/12/20 12:27	10/13/20 16:27	1
Perfluoropentanesulfonic acid (PFPeS)	0.28	J	1.8	0.28	ng/L		10/12/20 12:27	10/13/20 16:27	1
Perfluorohexanesulfonic acid (PFHxS)	3.1		1.8	0.52	ng/L		10/12/20 12:27	10/13/20 16:27	1
Perfluoroheptanesulfonic Acid (PFHpS)	<1.8		1.8	0.17	ng/L		10/12/20 12:27	10/13/20 16:27	1
Perfluorooctanesulfonic acid (PFOS)	8.3		1.8	0.50	ng/L		10/12/20 12:27	10/13/20 16:27	1
Perfluorononanesulfonic acid (PFNS)	<1.8		1.8	0.34	ng/L		10/12/20 12:27	10/13/20 16:27	1
Perfluorodecanesulfonic acid (PFDS)	<1.8		1.8	0.29	ng/L		10/12/20 12:27	10/13/20 16:27	1
Perfluorododecanesulfonic acid (PFDoS)	<1.8		1.8	0.89	ng/L		10/12/20 12:27	10/13/20 16:27	1
Perfluorooctanesulfonamide (FOSA)	2.0		1.8	0.90	ng/L		10/12/20 12:27	10/13/20 16:27	1
NEtFOSA	<1.8		1.8	0.80	ng/L		10/12/20 12:27	10/13/20 16:27	1
NMeFOSA	<1.8		1.8	0.39	ng/L		10/12/20 12:27	10/13/20 16:27	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<4.6		4.6	1.1	ng/L		10/12/20 12:27	10/13/20 16:27	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<4.6		4.6	1.2	ng/L		10/12/20 12:27	10/13/20 16:27	1
NMeFOSE	<3.7		3.7	1.3	ng/L		10/12/20 12:27	10/13/20 16:27	1
NEtFOSE	<1.8		1.8	0.78	ng/L		10/12/20 12:27	10/13/20 16:27	1
4:2 FTS	1.0	J	1.8	0.22	ng/L		10/12/20 12:27	10/13/20 16:27	1
6:2 FTS	54		4.6	2.3	ng/L		10/12/20 12:27	10/13/20 16:27	1
8:2 FTS	11		1.8	0.42	ng/L		10/12/20 12:27	10/13/20 16:27	1
10:2 FTS	<1.8		1.8	0.61	ng/L		10/12/20 12:27	10/13/20 16:27	1
DONA	<1.8		1.8	0.37	ng/L		10/12/20 12:27	10/13/20 16:27	1
HFPO-DA (GenX)	<3.7		3.7	1.4	ng/L		10/12/20 12:27	10/13/20 16:27	1
F-53B Major	<1.8		1.8	0.22	ng/L		10/12/20 12:27	10/13/20 16:27	1
F-53B Minor	<1.8		1.8	0.29	ng/L		10/12/20 12:27	10/13/20 16:27	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	76		25 - 150				10/12/20 12:27	10/13/20 16:27	1
13C5 PFPeA	89		25 - 150				10/12/20 12:27	10/13/20 16:27	1
13C2 PFHxA	89		25 - 150				10/12/20 12:27	10/13/20 16:27	1
13C4 PFHpA	93		25 - 150				10/12/20 12:27	10/13/20 16:27	1

Eurofins TestAmerica, Chicago

Client Sample Results

Client: ARCADIS U.S., Inc.
 Project/Site: Marinette 30015296.00009

Job ID: 500-189114-1

Client Sample ID: SW-L02 (10072020)

Lab Sample ID: 500-189114-2

Date Collected: 10/07/20 10:10

Matrix: Water

Date Received: 10/09/20 09:40

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

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C4 PFOA	88		25 - 150	10/12/20 12:27	10/13/20 16:27	1
13C5 PFNA	98		25 - 150	10/12/20 12:27	10/13/20 16:27	1
13C2 PFDA	91		25 - 150	10/12/20 12:27	10/13/20 16:27	1
13C2 PFUnA	91		25 - 150	10/12/20 12:27	10/13/20 16:27	1
13C2 PFDoA	86		25 - 150	10/12/20 12:27	10/13/20 16:27	1
13C2 PFTeDA	92		25 - 150	10/12/20 12:27	10/13/20 16:27	1
13C2 PFHxDA	100		25 - 150	10/12/20 12:27	10/13/20 16:27	1
13C3 PFBS	83		25 - 150	10/12/20 12:27	10/13/20 16:27	1
18O2 PFHxS	91		25 - 150	10/12/20 12:27	10/13/20 16:27	1
13C4 PFOS	90		25 - 150	10/12/20 12:27	10/13/20 16:27	1
13C8 FOSA	96		25 - 150	10/12/20 12:27	10/13/20 16:27	1
d3-NMeFOSAA	77		25 - 150	10/12/20 12:27	10/13/20 16:27	1
d5-NEtFOSAA	87		25 - 150	10/12/20 12:27	10/13/20 16:27	1
d-N-MeFOSA-M	49		20 - 150	10/12/20 12:27	10/13/20 16:27	1
d-N-EtFOSA-M	41		20 - 150	10/12/20 12:27	10/13/20 16:27	1
d7-N-MeFOSE-M	37		10 - 120	10/12/20 12:27	10/13/20 16:27	1
d9-N-EtFOSE-M	31		10 - 120	10/12/20 12:27	10/13/20 16:27	1
M2-4:2 FTS	98		25 - 150	10/12/20 12:27	10/13/20 16:27	1
M2-6:2 FTS	104		25 - 150	10/12/20 12:27	10/13/20 16:27	1
M2-8:2 FTS	101		25 - 150	10/12/20 12:27	10/13/20 16:27	1
13C3 HFPO-DA	90		25 - 150	10/12/20 12:27	10/13/20 16:27	1

General Chemistry

<i>Analyte</i>	<i>Result</i>	<i>Qualifier</i>	<i>RL</i>	<i>MDL</i>	<i>Unit</i>	<i>D</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Total Suspended Solids	<5.0		5.0	1.9	mg/L			10/14/20 12:29	1

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189114-1

Client Sample ID: SW-L03 (10072020)

Lab Sample ID: 500-189114-3

Date Collected: 10/07/20 10:20

Matrix: Water

Date Received: 10/09/20 09:40

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	23		4.5	2.1	ng/L		10/12/20 12:27	10/13/20 16:37	1
Perfluoropentanoic acid (PFPeA)	34		1.8	0.44	ng/L		10/12/20 12:27	10/13/20 16:37	1
Perfluorohexanoic acid (PFHxA)	21		1.8	0.52	ng/L		10/12/20 12:27	10/13/20 16:37	1
Perfluoroheptanoic acid (PFHpA)	4.9	B	1.8	0.22	ng/L		10/12/20 12:27	10/13/20 16:37	1
Perfluorooctanoic acid (PFOA)	49		1.8	0.76	ng/L		10/12/20 12:27	10/13/20 16:37	1
Perfluorononanoic acid (PFNA)	1.5	J	1.8	0.24	ng/L		10/12/20 12:27	10/13/20 16:37	1
Perfluorodecanoic acid (PFDA)	<1.8		1.8	0.28	ng/L		10/12/20 12:27	10/13/20 16:37	1
Perfluoroundecanoic acid (PFUnA)	<1.8		1.8	0.98	ng/L		10/12/20 12:27	10/13/20 16:37	1
Perfluorododecanoic acid (PFDoA)	<1.8		1.8	0.49	ng/L		10/12/20 12:27	10/13/20 16:37	1
Perfluorotridecanoic acid (PFTriA)	<1.8	*1	1.8	1.2	ng/L		10/12/20 12:27	10/13/20 16:37	1
Perfluorotetradecanoic acid (PFTeA)	<1.8		1.8	0.65	ng/L		10/12/20 12:27	10/13/20 16:37	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<1.8		1.8	0.80	ng/L		10/12/20 12:27	10/13/20 16:37	1
Perfluoro-n-octadecanoic acid (PFODA)	<1.8		1.8	0.84	ng/L		10/12/20 12:27	10/13/20 16:37	1
Perfluorobutanesulfonic acid (PFBS)	1.0	J	1.8	0.18	ng/L		10/12/20 12:27	10/13/20 16:37	1
Perfluoropentanesulfonic acid (PFPeS)	<1.8		1.8	0.27	ng/L		10/12/20 12:27	10/13/20 16:37	1
Perfluorohexanesulfonic acid (PFHxS)	2.5		1.8	0.51	ng/L		10/12/20 12:27	10/13/20 16:37	1
Perfluoroheptanesulfonic Acid (PFHpS)	<1.8		1.8	0.17	ng/L		10/12/20 12:27	10/13/20 16:37	1
Perfluorooctanesulfonic acid (PFOS)	3.5		1.8	0.48	ng/L		10/12/20 12:27	10/13/20 16:37	1
Perfluorononanesulfonic acid (PFNS)	<1.8		1.8	0.33	ng/L		10/12/20 12:27	10/13/20 16:37	1
Perfluorodecanesulfonic acid (PFDS)	<1.8		1.8	0.29	ng/L		10/12/20 12:27	10/13/20 16:37	1
Perfluorododecanesulfonic acid (PFDoS)	<1.8		1.8	0.87	ng/L		10/12/20 12:27	10/13/20 16:37	1
Perfluorooctanesulfonamide (FOSA)	1.1	J	1.8	0.88	ng/L		10/12/20 12:27	10/13/20 16:37	1
NEtFOSA	<1.8		1.8	0.78	ng/L		10/12/20 12:27	10/13/20 16:37	1
NMeFOSA	<1.8		1.8	0.38	ng/L		10/12/20 12:27	10/13/20 16:37	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<4.5		4.5	1.1	ng/L		10/12/20 12:27	10/13/20 16:37	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<4.5		4.5	1.2	ng/L		10/12/20 12:27	10/13/20 16:37	1
NMeFOSE	<3.6		3.6	1.3	ng/L		10/12/20 12:27	10/13/20 16:37	1
NEtFOSE	<1.8		1.8	0.76	ng/L		10/12/20 12:27	10/13/20 16:37	1
4:2 FTS	0.74	J	1.8	0.21	ng/L		10/12/20 12:27	10/13/20 16:37	1
6:2 FTS	26		4.5	2.2	ng/L		10/12/20 12:27	10/13/20 16:37	1
8:2 FTS	2.9		1.8	0.41	ng/L		10/12/20 12:27	10/13/20 16:37	1
10:2 FTS	<1.8		1.8	0.60	ng/L		10/12/20 12:27	10/13/20 16:37	1
DONA	<1.8		1.8	0.36	ng/L		10/12/20 12:27	10/13/20 16:37	1
HFPO-DA (GenX)	<3.6		3.6	1.3	ng/L		10/12/20 12:27	10/13/20 16:37	1
F-53B Major	<1.8		1.8	0.21	ng/L		10/12/20 12:27	10/13/20 16:37	1
F-53B Minor	<1.8		1.8	0.29	ng/L		10/12/20 12:27	10/13/20 16:37	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	62		25 - 150				10/12/20 12:27	10/13/20 16:37	1
13C5 PFPeA	71		25 - 150				10/12/20 12:27	10/13/20 16:37	1
13C2 PFHxA	73		25 - 150				10/12/20 12:27	10/13/20 16:37	1
13C4 PFHpA	76		25 - 150				10/12/20 12:27	10/13/20 16:37	1

Eurofins TestAmerica, Chicago

Client Sample Results

Client: ARCADIS U.S., Inc.
 Project/Site: Marinette 30015296.00009

Job ID: 500-189114-1

Client Sample ID: SW-L03 (10072020)

Lab Sample ID: 500-189114-3

Date Collected: 10/07/20 10:20

Matrix: Water

Date Received: 10/09/20 09:40

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

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C4 PFOA	73		25 - 150	10/12/20 12:27	10/13/20 16:37	1
13C5 PFNA	79		25 - 150	10/12/20 12:27	10/13/20 16:37	1
13C2 PFDA	75		25 - 150	10/12/20 12:27	10/13/20 16:37	1
13C2 PFUnA	78		25 - 150	10/12/20 12:27	10/13/20 16:37	1
13C2 PFDoA	79		25 - 150	10/12/20 12:27	10/13/20 16:37	1
13C2 PFTeDA	77		25 - 150	10/12/20 12:27	10/13/20 16:37	1
13C2 PFHxDA	82		25 - 150	10/12/20 12:27	10/13/20 16:37	1
13C3 PFBS	70		25 - 150	10/12/20 12:27	10/13/20 16:37	1
18O2 PFHxS	73		25 - 150	10/12/20 12:27	10/13/20 16:37	1
13C4 PFOS	74		25 - 150	10/12/20 12:27	10/13/20 16:37	1
13C8 FOSA	78		25 - 150	10/12/20 12:27	10/13/20 16:37	1
d3-NMeFOSAA	70		25 - 150	10/12/20 12:27	10/13/20 16:37	1
d5-NEtFOSAA	75		25 - 150	10/12/20 12:27	10/13/20 16:37	1
d-N-MeFOSA-M	42		20 - 150	10/12/20 12:27	10/13/20 16:37	1
d-N-EtFOSA-M	36		20 - 150	10/12/20 12:27	10/13/20 16:37	1
d7-N-MeFOSE-M	26		10 - 120	10/12/20 12:27	10/13/20 16:37	1
d9-N-EtFOSE-M	21		10 - 120	10/12/20 12:27	10/13/20 16:37	1
M2-4:2 FTS	78		25 - 150	10/12/20 12:27	10/13/20 16:37	1
M2-6:2 FTS	87		25 - 150	10/12/20 12:27	10/13/20 16:37	1
M2-8:2 FTS	87		25 - 150	10/12/20 12:27	10/13/20 16:37	1
13C3 HFPO-DA	73		25 - 150	10/12/20 12:27	10/13/20 16:37	1

General Chemistry

<i>Analyte</i>	<i>Result</i>	<i>Qualifier</i>	<i>RL</i>	<i>MDL</i>	<i>Unit</i>	<i>D</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Total Suspended Solids	<5.0		5.0	1.9	mg/L			10/14/20 12:30	1

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189114-1

Client Sample ID: SW-L04 (10072020)

Lab Sample ID: 500-189114-4

Date Collected: 10/07/20 10:30

Matrix: Water

Date Received: 10/09/20 09:40

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	24		4.6	2.2	ng/L		10/12/20 12:27	10/13/20 16:46	1
Perfluoropentanoic acid (PFPeA)	34		1.8	0.45	ng/L		10/12/20 12:27	10/13/20 16:46	1
Perfluorohexanoic acid (PFHxA)	22		1.8	0.54	ng/L		10/12/20 12:27	10/13/20 16:46	1
Perfluoroheptanoic acid (PFHpA)	5.0	B	1.8	0.23	ng/L		10/12/20 12:27	10/13/20 16:46	1
Perfluorooctanoic acid (PFOA)	51		1.8	0.79	ng/L		10/12/20 12:27	10/13/20 16:46	1
Perfluorononanoic acid (PFNA)	1.5	J	1.8	0.25	ng/L		10/12/20 12:27	10/13/20 16:46	1
Perfluorodecanoic acid (PFDA)	<1.8		1.8	0.29	ng/L		10/12/20 12:27	10/13/20 16:46	1
Perfluoroundecanoic acid (PFUnA)	<1.8		1.8	1.0	ng/L		10/12/20 12:27	10/13/20 16:46	1
Perfluorododecanoic acid (PFDoA)	<1.8		1.8	0.51	ng/L		10/12/20 12:27	10/13/20 16:46	1
Perfluorotridecanoic acid (PFTriA)	<1.8	*1	1.8	1.2	ng/L		10/12/20 12:27	10/13/20 16:46	1
Perfluorotetradecanoic acid (PFTeA)	<1.8		1.8	0.67	ng/L		10/12/20 12:27	10/13/20 16:46	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<1.8		1.8	0.82	ng/L		10/12/20 12:27	10/13/20 16:46	1
Perfluoro-n-octadecanoic acid (PFODA)	<1.8		1.8	0.87	ng/L		10/12/20 12:27	10/13/20 16:46	1
Perfluorobutanesulfonic acid (PFBS)	1.1	J	1.8	0.18	ng/L		10/12/20 12:27	10/13/20 16:46	1
Perfluoropentanesulfonic acid (PFPeS)	<1.8		1.8	0.28	ng/L		10/12/20 12:27	10/13/20 16:46	1
Perfluorohexanesulfonic acid (PFHxS)	2.7		1.8	0.53	ng/L		10/12/20 12:27	10/13/20 16:46	1
Perfluoroheptanesulfonic Acid (PFHpS)	<1.8		1.8	0.18	ng/L		10/12/20 12:27	10/13/20 16:46	1
Perfluorooctanesulfonic acid (PFOS)	3.6		1.8	0.50	ng/L		10/12/20 12:27	10/13/20 16:46	1
Perfluorononanesulfonic acid (PFNS)	<1.8		1.8	0.34	ng/L		10/12/20 12:27	10/13/20 16:46	1
Perfluorodecanesulfonic acid (PFDS)	<1.8		1.8	0.30	ng/L		10/12/20 12:27	10/13/20 16:46	1
Perfluorododecanesulfonic acid (PFDoS)	<1.8		1.8	0.90	ng/L		10/12/20 12:27	10/13/20 16:46	1
Perfluorooctanesulfonamide (FOSA)	<1.8		1.8	0.91	ng/L		10/12/20 12:27	10/13/20 16:46	1
NEtFOSA	<1.8		1.8	0.80	ng/L		10/12/20 12:27	10/13/20 16:46	1
NMeFOSA	<1.8		1.8	0.40	ng/L		10/12/20 12:27	10/13/20 16:46	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<4.6		4.6	1.1	ng/L		10/12/20 12:27	10/13/20 16:46	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<4.6		4.6	1.2	ng/L		10/12/20 12:27	10/13/20 16:46	1
NMeFOSE	<3.7		3.7	1.3	ng/L		10/12/20 12:27	10/13/20 16:46	1
NEtFOSE	<1.8		1.8	0.79	ng/L		10/12/20 12:27	10/13/20 16:46	1
4:2 FTS	0.76	J	1.8	0.22	ng/L		10/12/20 12:27	10/13/20 16:46	1
6:2 FTS	23		4.6	2.3	ng/L		10/12/20 12:27	10/13/20 16:46	1
8:2 FTS	2.0		1.8	0.43	ng/L		10/12/20 12:27	10/13/20 16:46	1
10:2 FTS	<1.8		1.8	0.62	ng/L		10/12/20 12:27	10/13/20 16:46	1
DONA	<1.8		1.8	0.37	ng/L		10/12/20 12:27	10/13/20 16:46	1
HFPO-DA (GenX)	<3.7		3.7	1.4	ng/L		10/12/20 12:27	10/13/20 16:46	1
F-53B Major	<1.8		1.8	0.22	ng/L		10/12/20 12:27	10/13/20 16:46	1
F-53B Minor	<1.8		1.8	0.30	ng/L		10/12/20 12:27	10/13/20 16:46	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	64		25 - 150				10/12/20 12:27	10/13/20 16:46	1
13C5 PFPeA	73		25 - 150				10/12/20 12:27	10/13/20 16:46	1
13C2 PFHxA	72		25 - 150				10/12/20 12:27	10/13/20 16:46	1
13C4 PFHpA	75		25 - 150				10/12/20 12:27	10/13/20 16:46	1
13C4 PFOA	70		25 - 150				10/12/20 12:27	10/13/20 16:46	1

Eurofins TestAmerica, Chicago

Client Sample Results

Client: ARCADIS U.S., Inc.
 Project/Site: Marinette 30015296.00009

Job ID: 500-189114-1

Client Sample ID: SW-L04 (10072020)

Lab Sample ID: 500-189114-4

Date Collected: 10/07/20 10:30

Matrix: Water

Date Received: 10/09/20 09:40

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

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C5 PFNA	78		25 - 150	10/12/20 12:27	10/13/20 16:46	1
13C2 PFDA	76		25 - 150	10/12/20 12:27	10/13/20 16:46	1
13C2 PFUnA	76		25 - 150	10/12/20 12:27	10/13/20 16:46	1
13C2 PFDoA	69		25 - 150	10/12/20 12:27	10/13/20 16:46	1
13C2 PFTeDA	80		25 - 150	10/12/20 12:27	10/13/20 16:46	1
13C2 PFHxDA	77		25 - 150	10/12/20 12:27	10/13/20 16:46	1
13C3 PFBS	74		25 - 150	10/12/20 12:27	10/13/20 16:46	1
18O2 PFHxS	77		25 - 150	10/12/20 12:27	10/13/20 16:46	1
13C4 PFOS	76		25 - 150	10/12/20 12:27	10/13/20 16:46	1
13C8 FOSA	77		25 - 150	10/12/20 12:27	10/13/20 16:46	1
d3-NMeFOSAA	72		25 - 150	10/12/20 12:27	10/13/20 16:46	1
d5-NEtFOSAA	83		25 - 150	10/12/20 12:27	10/13/20 16:46	1
d-N-MeFOSA-M	44		20 - 150	10/12/20 12:27	10/13/20 16:46	1
d-N-EtFOSA-M	38		20 - 150	10/12/20 12:27	10/13/20 16:46	1
d7-N-MeFOSE-M	32		10 - 120	10/12/20 12:27	10/13/20 16:46	1
d9-N-EtFOSE-M	32		10 - 120	10/12/20 12:27	10/13/20 16:46	1
M2-4:2 FTS	77		25 - 150	10/12/20 12:27	10/13/20 16:46	1
M2-6:2 FTS	87		25 - 150	10/12/20 12:27	10/13/20 16:46	1
M2-8:2 FTS	89		25 - 150	10/12/20 12:27	10/13/20 16:46	1
13C3 HFPO-DA	72		25 - 150	10/12/20 12:27	10/13/20 16:46	1

General Chemistry

<i>Analyte</i>	<i>Result</i>	<i>Qualifier</i>	<i>RL</i>	<i>MDL</i>	<i>Unit</i>	<i>D</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Total Suspended Solids	<5.0		5.0	1.9	mg/L			10/14/20 12:31	1

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189114-1

Client Sample ID: SW-L05 (10072020)

Lab Sample ID: 500-189114-5

Date Collected: 10/07/20 10:35

Matrix: Water

Date Received: 10/09/20 09:40

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	23		4.5	2.2	ng/L		10/12/20 12:27	10/13/20 16:55	1
Perfluoropentanoic acid (PFPeA)	32		1.8	0.44	ng/L		10/12/20 12:27	10/13/20 16:55	1
Perfluorohexanoic acid (PFHxA)	22		1.8	0.52	ng/L		10/12/20 12:27	10/13/20 16:55	1
Perfluoroheptanoic acid (PFHpA)	4.7	B	1.8	0.23	ng/L		10/12/20 12:27	10/13/20 16:55	1
Perfluorooctanoic acid (PFOA)	45		1.8	0.77	ng/L		10/12/20 12:27	10/13/20 16:55	1
Perfluorononanoic acid (PFNA)	1.1	J	1.8	0.24	ng/L		10/12/20 12:27	10/13/20 16:55	1
Perfluorodecanoic acid (PFDA)	<1.8		1.8	0.28	ng/L		10/12/20 12:27	10/13/20 16:55	1
Perfluoroundecanoic acid (PFUnA)	<1.8		1.8	0.99	ng/L		10/12/20 12:27	10/13/20 16:55	1
Perfluorododecanoic acid (PFDoA)	<1.8		1.8	0.50	ng/L		10/12/20 12:27	10/13/20 16:55	1
Perfluorotridecanoic acid (PFTriA)	<1.8	*1	1.8	1.2	ng/L		10/12/20 12:27	10/13/20 16:55	1
Perfluorotetradecanoic acid (PFTeA)	<1.8		1.8	0.66	ng/L		10/12/20 12:27	10/13/20 16:55	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<1.8		1.8	0.80	ng/L		10/12/20 12:27	10/13/20 16:55	1
Perfluoro-n-octadecanoic acid (PFODA)	<1.8		1.8	0.85	ng/L		10/12/20 12:27	10/13/20 16:55	1
Perfluorobutanesulfonic acid (PFBS)	1.0	J	1.8	0.18	ng/L		10/12/20 12:27	10/13/20 16:55	1
Perfluoropentanesulfonic acid (PFPeS)	<1.8		1.8	0.27	ng/L		10/12/20 12:27	10/13/20 16:55	1
Perfluorohexanesulfonic acid (PFHxS)	2.4		1.8	0.51	ng/L		10/12/20 12:27	10/13/20 16:55	1
Perfluoroheptanesulfonic Acid (PFHpS)	<1.8		1.8	0.17	ng/L		10/12/20 12:27	10/13/20 16:55	1
Perfluorooctanesulfonic acid (PFOS)	2.9		1.8	0.49	ng/L		10/12/20 12:27	10/13/20 16:55	1
Perfluorononanesulfonic acid (PFNS)	<1.8		1.8	0.33	ng/L		10/12/20 12:27	10/13/20 16:55	1
Perfluorodecanesulfonic acid (PFDS)	<1.8		1.8	0.29	ng/L		10/12/20 12:27	10/13/20 16:55	1
Perfluorododecanesulfonic acid (PFDoS)	<1.8		1.8	0.87	ng/L		10/12/20 12:27	10/13/20 16:55	1
Perfluorooctanesulfonamide (FOSA)	0.93	J	1.8	0.88	ng/L		10/12/20 12:27	10/13/20 16:55	1
NEtFOSA	<1.8		1.8	0.78	ng/L		10/12/20 12:27	10/13/20 16:55	1
NMeFOSA	<1.8		1.8	0.39	ng/L		10/12/20 12:27	10/13/20 16:55	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<4.5		4.5	1.1	ng/L		10/12/20 12:27	10/13/20 16:55	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<4.5		4.5	1.2	ng/L		10/12/20 12:27	10/13/20 16:55	1
NMeFOSE	<3.6		3.6	1.3	ng/L		10/12/20 12:27	10/13/20 16:55	1
NEtFOSE	<1.8		1.8	0.77	ng/L		10/12/20 12:27	10/13/20 16:55	1
4:2 FTS	0.70	J	1.8	0.22	ng/L		10/12/20 12:27	10/13/20 16:55	1
6:2 FTS	22		4.5	2.3	ng/L		10/12/20 12:27	10/13/20 16:55	1
8:2 FTS	1.9		1.8	0.41	ng/L		10/12/20 12:27	10/13/20 16:55	1
10:2 FTS	<1.8		1.8	0.60	ng/L		10/12/20 12:27	10/13/20 16:55	1
DONA	<1.8		1.8	0.36	ng/L		10/12/20 12:27	10/13/20 16:55	1
HFPO-DA (GenX)	<3.6		3.6	1.4	ng/L		10/12/20 12:27	10/13/20 16:55	1
F-53B Major	<1.8		1.8	0.22	ng/L		10/12/20 12:27	10/13/20 16:55	1
F-53B Minor	<1.8		1.8	0.29	ng/L		10/12/20 12:27	10/13/20 16:55	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	76		25 - 150				10/12/20 12:27	10/13/20 16:55	1
13C5 PFPeA	88		25 - 150				10/12/20 12:27	10/13/20 16:55	1
13C2 PFHxA	84		25 - 150				10/12/20 12:27	10/13/20 16:55	1
13C4 PFHpA	89		25 - 150				10/12/20 12:27	10/13/20 16:55	1

Eurofins TestAmerica, Chicago

Client Sample Results

Client: ARCADIS U.S., Inc.
 Project/Site: Marinette 30015296.00009

Job ID: 500-189114-1

Client Sample ID: SW-L05 (10072020)

Lab Sample ID: 500-189114-5

Date Collected: 10/07/20 10:35

Matrix: Water

Date Received: 10/09/20 09:40

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFOA	86		25 - 150	10/12/20 12:27	10/13/20 16:55	1
13C5 PFNA	96		25 - 150	10/12/20 12:27	10/13/20 16:55	1
13C2 PFDA	90		25 - 150	10/12/20 12:27	10/13/20 16:55	1
13C2 PFUnA	92		25 - 150	10/12/20 12:27	10/13/20 16:55	1
13C2 PFDoA	84		25 - 150	10/12/20 12:27	10/13/20 16:55	1
13C2 PFTeDA	91		25 - 150	10/12/20 12:27	10/13/20 16:55	1
13C2 PFHxDA	90		25 - 150	10/12/20 12:27	10/13/20 16:55	1
13C3 PFBS	81		25 - 150	10/12/20 12:27	10/13/20 16:55	1
18O2 PFHxS	88		25 - 150	10/12/20 12:27	10/13/20 16:55	1
13C4 PFOS	87		25 - 150	10/12/20 12:27	10/13/20 16:55	1
13C8 FOSA	93		25 - 150	10/12/20 12:27	10/13/20 16:55	1
d3-NMeFOSAA	76		25 - 150	10/12/20 12:27	10/13/20 16:55	1
d5-NEtFOSAA	91		25 - 150	10/12/20 12:27	10/13/20 16:55	1
d-N-MeFOSA-M	48		20 - 150	10/12/20 12:27	10/13/20 16:55	1
d-N-EtFOSA-M	38		20 - 150	10/12/20 12:27	10/13/20 16:55	1
d7-N-MeFOSE-M	31		10 - 120	10/12/20 12:27	10/13/20 16:55	1
d9-N-EtFOSE-M	27		10 - 120	10/12/20 12:27	10/13/20 16:55	1
M2-4:2 FTS	93		25 - 150	10/12/20 12:27	10/13/20 16:55	1
M2-6:2 FTS	105		25 - 150	10/12/20 12:27	10/13/20 16:55	1
M2-8:2 FTS	101		25 - 150	10/12/20 12:27	10/13/20 16:55	1
13C3 HFPO-DA	85		25 - 150	10/12/20 12:27	10/13/20 16:55	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	9.0		5.0	1.9	mg/L			10/14/20 12:32	1

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189114-1

Client Sample ID: SW-L06 (10072020)

Lab Sample ID: 500-189114-6

Date Collected: 10/07/20 10:40

Matrix: Water

Date Received: 10/09/20 09:40

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	65		4.6	2.2	ng/L		10/12/20 12:27	10/13/20 17:04	1
Perfluoropentanoic acid (PFPeA)	190		1.8	0.45	ng/L		10/12/20 12:27	10/13/20 17:04	1
Perfluorohexanoic acid (PFHxA)	220		1.8	0.53	ng/L		10/12/20 12:27	10/13/20 17:04	1
Perfluoroheptanoic acid (PFHpA)	89	B	1.8	0.23	ng/L		10/12/20 12:27	10/13/20 17:04	1
Perfluorononanoic acid (PFNA)	82		1.8	0.25	ng/L		10/12/20 12:27	10/13/20 17:04	1
Perfluorodecanoic acid (PFDA)	8.9		1.8	0.29	ng/L		10/12/20 12:27	10/13/20 17:04	1
Perfluoroundecanoic acid (PFUnA)	<1.8		1.8	1.0	ng/L		10/12/20 12:27	10/13/20 17:04	1
Perfluorododecanoic acid (PFDoA)	<1.8		1.8	0.51	ng/L		10/12/20 12:27	10/13/20 17:04	1
Perfluorotridecanoic acid (PFTriA)	<1.8	*1	1.8	1.2	ng/L		10/12/20 12:27	10/13/20 17:04	1
Perfluorotetradecanoic acid (PFTeA)	<1.8		1.8	0.67	ng/L		10/12/20 12:27	10/13/20 17:04	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<1.8		1.8	0.82	ng/L		10/12/20 12:27	10/13/20 17:04	1
Perfluoro-n-octadecanoic acid (PFODA)	<1.8		1.8	0.87	ng/L		10/12/20 12:27	10/13/20 17:04	1
Perfluorobutanesulfonic acid (PFBS)	4.8		1.8	0.18	ng/L		10/12/20 12:27	10/13/20 17:04	1
Perfluoropentanesulfonic acid (PFPeS)	3.4		1.8	0.28	ng/L		10/12/20 12:27	10/13/20 17:04	1
Perfluorohexanesulfonic acid (PFHxS)	45		1.8	0.53	ng/L		10/12/20 12:27	10/13/20 17:04	1
Perfluoroheptanesulfonic Acid (PFHpS)	5.1		1.8	0.18	ng/L		10/12/20 12:27	10/13/20 17:04	1
Perfluorooctanesulfonic acid (PFOS)	300		1.8	0.50	ng/L		10/12/20 12:27	10/13/20 17:04	1
Perfluorononanesulfonic acid (PFNS)	<1.8		1.8	0.34	ng/L		10/12/20 12:27	10/13/20 17:04	1
Perfluorodecanesulfonic acid (PFDS)	<1.8		1.8	0.29	ng/L		10/12/20 12:27	10/13/20 17:04	1
Perfluorododecanesulfonic acid (PFDoS)	<1.8		1.8	0.89	ng/L		10/12/20 12:27	10/13/20 17:04	1
Perfluorooctanesulfonamide (FOSA)	40		1.8	0.90	ng/L		10/12/20 12:27	10/13/20 17:04	1
NEtFOSA	<1.8		1.8	0.80	ng/L		10/12/20 12:27	10/13/20 17:04	1
NMeFOSA	<1.8		1.8	0.40	ng/L		10/12/20 12:27	10/13/20 17:04	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<4.6		4.6	1.1	ng/L		10/12/20 12:27	10/13/20 17:04	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	6.8		4.6	1.2	ng/L		10/12/20 12:27	10/13/20 17:04	1
NMeFOSE	<3.7		3.7	1.3	ng/L		10/12/20 12:27	10/13/20 17:04	1
NEtFOSE	<1.8		1.8	0.78	ng/L		10/12/20 12:27	10/13/20 17:04	1
4:2 FTS	16		1.8	0.22	ng/L		10/12/20 12:27	10/13/20 17:04	1
10:2 FTS	<1.8		1.8	0.62	ng/L		10/12/20 12:27	10/13/20 17:04	1
DONA	<1.8		1.8	0.37	ng/L		10/12/20 12:27	10/13/20 17:04	1
HFPO-DA (GenX)	<3.7		3.7	1.4	ng/L		10/12/20 12:27	10/13/20 17:04	1
F-53B Major	<1.8		1.8	0.22	ng/L		10/12/20 12:27	10/13/20 17:04	1
F-53B Minor	<1.8		1.8	0.29	ng/L		10/12/20 12:27	10/13/20 17:04	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	47		25 - 150				10/12/20 12:27	10/13/20 17:04	1
13C5 PFPeA	62		25 - 150				10/12/20 12:27	10/13/20 17:04	1
13C2 PFHxA	73		25 - 150				10/12/20 12:27	10/13/20 17:04	1
13C4 PFHpA	80		25 - 150				10/12/20 12:27	10/13/20 17:04	1
13C5 PFNA	87		25 - 150				10/12/20 12:27	10/13/20 17:04	1
13C2 PFDA	82		25 - 150				10/12/20 12:27	10/13/20 17:04	1
13C2 PFUnA	88		25 - 150				10/12/20 12:27	10/13/20 17:04	1

Eurofins TestAmerica, Chicago

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189114-1

Client Sample ID: SW-L06 (10072020)

Lab Sample ID: 500-189114-6

Date Collected: 10/07/20 10:40

Matrix: Water

Date Received: 10/09/20 09:40

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

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C2 PFDoA	90		25 - 150	10/12/20 12:27	10/13/20 17:04	1
13C2 PFTeDA	84		25 - 150	10/12/20 12:27	10/13/20 17:04	1
13C2 PFHxDA	83		25 - 150	10/12/20 12:27	10/13/20 17:04	1
13C3 PFBS	79		25 - 150	10/12/20 12:27	10/13/20 17:04	1
18O2 PFHxS	92		25 - 150	10/12/20 12:27	10/13/20 17:04	1
13C4 PFOS	91		25 - 150	10/12/20 12:27	10/13/20 17:04	1
13C8 FOSA	85		25 - 150	10/12/20 12:27	10/13/20 17:04	1
d3-NMeFOSAA	73		25 - 150	10/12/20 12:27	10/13/20 17:04	1
d5-NEtFOSAA	87		25 - 150	10/12/20 12:27	10/13/20 17:04	1
d-N-MeFOSA-M	45		20 - 150	10/12/20 12:27	10/13/20 17:04	1
d-N-EtFOSA-M	38		20 - 150	10/12/20 12:27	10/13/20 17:04	1
d7-N-MeFOSE-M	34		10 - 120	10/12/20 12:27	10/13/20 17:04	1
d9-N-EtFOSE-M	30		10 - 120	10/12/20 12:27	10/13/20 17:04	1
M2-4:2 FTS	93		25 - 150	10/12/20 12:27	10/13/20 17:04	1
13C3 HFPO-DA	76		25 - 150	10/12/20 12:27	10/13/20 17:04	1

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

<i>Analyte</i>	<i>Result</i>	<i>Qualifier</i>	<i>RL</i>	<i>MDL</i>	<i>Unit</i>	<i>D</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Perfluorooctanoic acid (PFOA)	1400		18	7.8	ng/L		10/12/20 12:27	10/15/20 01:56	10
6:2 FTS	1400		46	23	ng/L		10/12/20 12:27	10/15/20 01:56	10
8:2 FTS	390		18	4.2	ng/L		10/12/20 12:27	10/15/20 01:56	10

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C4 PFOA	65		25 - 150	10/12/20 12:27	10/15/20 01:56	10
M2-6:2 FTS	78		25 - 150	10/12/20 12:27	10/15/20 01:56	10
M2-8:2 FTS	78		25 - 150	10/12/20 12:27	10/15/20 01:56	10

General Chemistry

<i>Analyte</i>	<i>Result</i>	<i>Qualifier</i>	<i>RL</i>	<i>MDL</i>	<i>Unit</i>	<i>D</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Total Suspended Solids	4.0	J	5.0	1.9	mg/L			10/14/20 12:33	1

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189114-1

Client Sample ID: SW-L07 (10072020)

Lab Sample ID: 500-189114-7

Date Collected: 10/07/20 10:50

Matrix: Water

Date Received: 10/09/20 09:40

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	66		4.6	2.2	ng/L		10/12/20 12:27	10/13/20 17:13	1
Perfluoropentanoic acid (PFPeA)	200		1.9	0.45	ng/L		10/12/20 12:27	10/13/20 17:13	1
Perfluorohexanoic acid (PFHxA)	220		1.9	0.54	ng/L		10/12/20 12:27	10/13/20 17:13	1
Perfluoroheptanoic acid (PFHpA)	86	B	1.9	0.23	ng/L		10/12/20 12:27	10/13/20 17:13	1
Perfluorononanoic acid (PFNA)	48		1.9	0.25	ng/L		10/12/20 12:27	10/13/20 17:13	1
Perfluorodecanoic acid (PFDA)	3.8		1.9	0.29	ng/L		10/12/20 12:27	10/13/20 17:13	1
Perfluoroundecanoic acid (PFUnA)	<1.9		1.9	1.0	ng/L		10/12/20 12:27	10/13/20 17:13	1
Perfluorododecanoic acid (PFDoA)	<1.9		1.9	0.51	ng/L		10/12/20 12:27	10/13/20 17:13	1
Perfluorotridecanoic acid (PFTriA)	<1.9	*1	1.9	1.2	ng/L		10/12/20 12:27	10/13/20 17:13	1
Perfluorotetradecanoic acid (PFTeA)	<1.9		1.9	0.68	ng/L		10/12/20 12:27	10/13/20 17:13	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<1.9		1.9	0.82	ng/L		10/12/20 12:27	10/13/20 17:13	1
Perfluoro-n-octadecanoic acid (PFODA)	<1.9		1.9	0.87	ng/L		10/12/20 12:27	10/13/20 17:13	1
Perfluorobutanesulfonic acid (PFBS)	4.4		1.9	0.19	ng/L		10/12/20 12:27	10/13/20 17:13	1
Perfluoropentanesulfonic acid (PFPeS)	3.8		1.9	0.28	ng/L		10/12/20 12:27	10/13/20 17:13	1
Perfluorohexanesulfonic acid (PFHxS)	47		1.9	0.53	ng/L		10/12/20 12:27	10/13/20 17:13	1
Perfluoroheptanesulfonic Acid (PFHpS)	3.6		1.9	0.18	ng/L		10/12/20 12:27	10/13/20 17:13	1
Perfluorooctanesulfonic acid (PFOS)	150		1.9	0.50	ng/L		10/12/20 12:27	10/13/20 17:13	1
Perfluorononanesulfonic acid (PFNS)	<1.9		1.9	0.34	ng/L		10/12/20 12:27	10/13/20 17:13	1
Perfluorodecanesulfonic acid (PFDS)	<1.9		1.9	0.30	ng/L		10/12/20 12:27	10/13/20 17:13	1
Perfluorododecanesulfonic acid (PFDoS)	<1.9		1.9	0.90	ng/L		10/12/20 12:27	10/13/20 17:13	1
Perfluorooctanesulfonamide (FOSA)	21		1.9	0.91	ng/L		10/12/20 12:27	10/13/20 17:13	1
NEtFOSA	<1.9		1.9	0.81	ng/L		10/12/20 12:27	10/13/20 17:13	1
NMeFOSA	<1.9		1.9	0.40	ng/L		10/12/20 12:27	10/13/20 17:13	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<4.6		4.6	1.1	ng/L		10/12/20 12:27	10/13/20 17:13	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	3.1	J	4.6	1.2	ng/L		10/12/20 12:27	10/13/20 17:13	1
NMeFOSE	<3.7		3.7	1.3	ng/L		10/12/20 12:27	10/13/20 17:13	1
NEtFOSE	<1.9		1.9	0.79	ng/L		10/12/20 12:27	10/13/20 17:13	1
4:2 FTS	17		1.9	0.22	ng/L		10/12/20 12:27	10/13/20 17:13	1
8:2 FTS	160		1.9	0.43	ng/L		10/12/20 12:27	10/13/20 17:13	1
10:2 FTS	<1.9		1.9	0.62	ng/L		10/12/20 12:27	10/13/20 17:13	1
DONA	<1.9		1.9	0.37	ng/L		10/12/20 12:27	10/13/20 17:13	1
HFPO-DA (GenX)	<3.7		3.7	1.4	ng/L		10/12/20 12:27	10/13/20 17:13	1
F-53B Major	<1.9		1.9	0.22	ng/L		10/12/20 12:27	10/13/20 17:13	1
F-53B Minor	<1.9		1.9	0.30	ng/L		10/12/20 12:27	10/13/20 17:13	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	46		25 - 150				10/12/20 12:27	10/13/20 17:13	1
13C5 PFPeA	63		25 - 150				10/12/20 12:27	10/13/20 17:13	1
13C2 PFHxA	75		25 - 150				10/12/20 12:27	10/13/20 17:13	1
13C4 PFHpA	83		25 - 150				10/12/20 12:27	10/13/20 17:13	1
13C5 PFNA	92		25 - 150				10/12/20 12:27	10/13/20 17:13	1
13C2 PFDA	87		25 - 150				10/12/20 12:27	10/13/20 17:13	1

Eurofins TestAmerica, Chicago

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189114-1

Client Sample ID: SW-L07 (10072020)

Lab Sample ID: 500-189114-7

Date Collected: 10/07/20 10:50

Matrix: Water

Date Received: 10/09/20 09:40

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

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C2 PFUnA	81		25 - 150	10/12/20 12:27	10/13/20 17:13	1
13C2 PFDoA	84		25 - 150	10/12/20 12:27	10/13/20 17:13	1
13C2 PFTeDA	82		25 - 150	10/12/20 12:27	10/13/20 17:13	1
13C2 PFHxDA	77		25 - 150	10/12/20 12:27	10/13/20 17:13	1
13C3 PFBS	76		25 - 150	10/12/20 12:27	10/13/20 17:13	1
18O2 PFHxS	85		25 - 150	10/12/20 12:27	10/13/20 17:13	1
13C4 PFOS	87		25 - 150	10/12/20 12:27	10/13/20 17:13	1
13C8 FOSA	85		25 - 150	10/12/20 12:27	10/13/20 17:13	1
d3-NMeFOSAA	79		25 - 150	10/12/20 12:27	10/13/20 17:13	1
d5-NEtFOSAA	88		25 - 150	10/12/20 12:27	10/13/20 17:13	1
d-N-MeFOSA-M	46		20 - 150	10/12/20 12:27	10/13/20 17:13	1
d-N-EtFOSA-M	40		20 - 150	10/12/20 12:27	10/13/20 17:13	1
d7-N-MeFOSE-M	36		10 - 120	10/12/20 12:27	10/13/20 17:13	1
d9-N-EtFOSE-M	31		10 - 120	10/12/20 12:27	10/13/20 17:13	1
M2-4:2 FTS	95		25 - 150	10/12/20 12:27	10/13/20 17:13	1
M2-8:2 FTS	117		25 - 150	10/12/20 12:27	10/13/20 17:13	1
13C3 HFPO-DA	77		25 - 150	10/12/20 12:27	10/13/20 17:13	1

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

<i>Analyte</i>	<i>Result</i>	<i>Qualifier</i>	<i>RL</i>	<i>MDL</i>	<i>Unit</i>	<i>D</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Perfluorooctanoic acid (PFOA)	1200		19	7.9	ng/L		10/12/20 12:27	10/16/20 13:09	10
6:2 FTS	1200		46	23	ng/L		10/12/20 12:27	10/16/20 13:09	10

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C4 PFOA	102		25 - 150	10/12/20 12:27	10/16/20 13:09	10
M2-6:2 FTS	116		25 - 150	10/12/20 12:27	10/16/20 13:09	10

General Chemistry

<i>Analyte</i>	<i>Result</i>	<i>Qualifier</i>	<i>RL</i>	<i>MDL</i>	<i>Unit</i>	<i>D</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Total Suspended Solids	3.5	J	5.0	1.9	mg/L			10/14/20 12:34	1

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189114-1

Client Sample ID: SW-L08 (10072020)

Lab Sample ID: 500-189114-8

Date Collected: 10/07/20 10:55

Matrix: Water

Date Received: 10/09/20 09:40

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	65		4.7	2.3	ng/L		10/12/20 12:27	10/13/20 17:22	1
Perfluoropentanoic acid (PFPeA)	190		1.9	0.46	ng/L		10/12/20 12:27	10/13/20 17:22	1
Perfluorohexanoic acid (PFHxA)	220		1.9	0.55	ng/L		10/12/20 12:27	10/13/20 17:22	1
Perfluoroheptanoic acid (PFHpA)	85	B	1.9	0.24	ng/L		10/12/20 12:27	10/13/20 17:22	1
Perfluorononanoic acid (PFNA)	67		1.9	0.25	ng/L		10/12/20 12:27	10/13/20 17:22	1
Perfluorodecanoic acid (PFDA)	7.1		1.9	0.29	ng/L		10/12/20 12:27	10/13/20 17:22	1
Perfluoroundecanoic acid (PFUnA)	<1.9		1.9	1.0	ng/L		10/12/20 12:27	10/13/20 17:22	1
Perfluorododecanoic acid (PFDoA)	<1.9		1.9	0.52	ng/L		10/12/20 12:27	10/13/20 17:22	1
Perfluorotridecanoic acid (PFTriA)	<1.9	*1	1.9	1.2	ng/L		10/12/20 12:27	10/13/20 17:22	1
Perfluorotetradecanoic acid (PFTeA)	<1.9		1.9	0.69	ng/L		10/12/20 12:27	10/13/20 17:22	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<1.9		1.9	0.84	ng/L		10/12/20 12:27	10/13/20 17:22	1
Perfluoro-n-octadecanoic acid (PFODA)	<1.9		1.9	0.89	ng/L		10/12/20 12:27	10/13/20 17:22	1
Perfluorobutanesulfonic acid (PFBS)	4.1		1.9	0.19	ng/L		10/12/20 12:27	10/13/20 17:22	1
Perfluoropentanesulfonic acid (PFPeS)	3.7		1.9	0.28	ng/L		10/12/20 12:27	10/13/20 17:22	1
Perfluorohexanesulfonic acid (PFHxS)	47		1.9	0.54	ng/L		10/12/20 12:27	10/13/20 17:22	1
Perfluoroheptanesulfonic Acid (PFHpS)	4.2		1.9	0.18	ng/L		10/12/20 12:27	10/13/20 17:22	1
Perfluorooctanesulfonic acid (PFOS)	250		1.9	0.51	ng/L		10/12/20 12:27	10/13/20 17:22	1
Perfluorononanesulfonic acid (PFNS)	<1.9		1.9	0.35	ng/L		10/12/20 12:27	10/13/20 17:22	1
Perfluorodecanesulfonic acid (PFDS)	<1.9		1.9	0.30	ng/L		10/12/20 12:27	10/13/20 17:22	1
Perfluorododecanesulfonic acid (PFDoS)	<1.9		1.9	0.91	ng/L		10/12/20 12:27	10/13/20 17:22	1
Perfluorooctanesulfonamide (FOSA)	32		1.9	0.92	ng/L		10/12/20 12:27	10/13/20 17:22	1
NEtFOSA	<1.9		1.9	0.82	ng/L		10/12/20 12:27	10/13/20 17:22	1
NMeFOSA	<1.9		1.9	0.41	ng/L		10/12/20 12:27	10/13/20 17:22	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<4.7		4.7	1.1	ng/L		10/12/20 12:27	10/13/20 17:22	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	6.7		4.7	1.2	ng/L		10/12/20 12:27	10/13/20 17:22	1
NMeFOSE	<3.8		3.8	1.3	ng/L		10/12/20 12:27	10/13/20 17:22	1
NEtFOSE	<1.9		1.9	0.80	ng/L		10/12/20 12:27	10/13/20 17:22	1
4:2 FTS	17		1.9	0.23	ng/L		10/12/20 12:27	10/13/20 17:22	1
8:2 FTS	290		1.9	0.43	ng/L		10/12/20 12:27	10/13/20 17:22	1
10:2 FTS	<1.9		1.9	0.63	ng/L		10/12/20 12:27	10/13/20 17:22	1
DONA	<1.9		1.9	0.38	ng/L		10/12/20 12:27	10/13/20 17:22	1
HFPO-DA (GenX)	<3.8		3.8	1.4	ng/L		10/12/20 12:27	10/13/20 17:22	1
F-53B Major	<1.9		1.9	0.23	ng/L		10/12/20 12:27	10/13/20 17:22	1
F-53B Minor	<1.9		1.9	0.30	ng/L		10/12/20 12:27	10/13/20 17:22	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	54		25 - 150				10/12/20 12:27	10/13/20 17:22	1
13C5 PFPeA	72		25 - 150				10/12/20 12:27	10/13/20 17:22	1
13C2 PFHxA	83		25 - 150				10/12/20 12:27	10/13/20 17:22	1
13C4 PFHpA	91		25 - 150				10/12/20 12:27	10/13/20 17:22	1
13C5 PFNA	100		25 - 150				10/12/20 12:27	10/13/20 17:22	1
13C2 PFDA	93		25 - 150				10/12/20 12:27	10/13/20 17:22	1

Eurofins TestAmerica, Chicago

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189114-1

Client Sample ID: SW-L08 (10072020)

Lab Sample ID: 500-189114-8

Date Collected: 10/07/20 10:55

Matrix: Water

Date Received: 10/09/20 09:40

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFUnA	92		25 - 150	10/12/20 12:27	10/13/20 17:22	1
13C2 PFDoA	80		25 - 150	10/12/20 12:27	10/13/20 17:22	1
13C2 PFTeDA	89		25 - 150	10/12/20 12:27	10/13/20 17:22	1
13C2 PFHxDA	91		25 - 150	10/12/20 12:27	10/13/20 17:22	1
13C3 PFBS	80		25 - 150	10/12/20 12:27	10/13/20 17:22	1
18O2 PFHxS	89		25 - 150	10/12/20 12:27	10/13/20 17:22	1
13C4 PFOS	88		25 - 150	10/12/20 12:27	10/13/20 17:22	1
13C8 FOSA	92		25 - 150	10/12/20 12:27	10/13/20 17:22	1
d3-NMeFOSAA	85		25 - 150	10/12/20 12:27	10/13/20 17:22	1
d5-NEtFOSAA	95		25 - 150	10/12/20 12:27	10/13/20 17:22	1
d-N-MeFOSA-M	52		20 - 150	10/12/20 12:27	10/13/20 17:22	1
d-N-EtFOSA-M	43		20 - 150	10/12/20 12:27	10/13/20 17:22	1
d7-N-MeFOSE-M	35		10 - 120	10/12/20 12:27	10/13/20 17:22	1
d9-N-EtFOSE-M	30		10 - 120	10/12/20 12:27	10/13/20 17:22	1
M2-4:2 FTS	108		25 - 150	10/12/20 12:27	10/13/20 17:22	1
M2-8:2 FTS	132		25 - 150	10/12/20 12:27	10/13/20 17:22	1
13C3 HFPO-DA	86		25 - 150	10/12/20 12:27	10/13/20 17:22	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanoic acid (PFOA)	1200		19	8.0	ng/L		10/12/20 12:27	10/16/20 13:18	10
6:2 FTS	1200		47	24	ng/L		10/12/20 12:27	10/16/20 13:18	10

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFOA	104		25 - 150	10/12/20 12:27	10/16/20 13:18	10
M2-6:2 FTS	119		25 - 150	10/12/20 12:27	10/16/20 13:18	10

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	15		5.0	1.9	mg/L			10/14/20 12:35	1

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189114-1

Client Sample ID: SW-L09 (10072020)

Lab Sample ID: 500-189114-9

Date Collected: 10/07/20 11:00

Matrix: Water

Date Received: 10/09/20 09:40

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	67		4.7	2.3	ng/L		10/12/20 12:27	10/13/20 17:31	1
Perfluoropentanoic acid (PFPeA)	200		1.9	0.46	ng/L		10/12/20 12:27	10/13/20 17:31	1
Perfluorohexanoic acid (PFHxA)	230		1.9	0.55	ng/L		10/12/20 12:27	10/13/20 17:31	1
Perfluoroheptanoic acid (PFHpA)	91	B	1.9	0.24	ng/L		10/12/20 12:27	10/13/20 17:31	1
Perfluorononanoic acid (PFNA)	51		1.9	0.26	ng/L		10/12/20 12:27	10/13/20 17:31	1
Perfluorodecanoic acid (PFDA)	4.1		1.9	0.29	ng/L		10/12/20 12:27	10/13/20 17:31	1
Perfluoroundecanoic acid (PFUnA)	<1.9		1.9	1.0	ng/L		10/12/20 12:27	10/13/20 17:31	1
Perfluorododecanoic acid (PFDoA)	<1.9		1.9	0.52	ng/L		10/12/20 12:27	10/13/20 17:31	1
Perfluorotridecanoic acid (PFTriA)	<1.9	*1	1.9	1.2	ng/L		10/12/20 12:27	10/13/20 17:31	1
Perfluorotetradecanoic acid (PFTeA)	<1.9		1.9	0.69	ng/L		10/12/20 12:27	10/13/20 17:31	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<1.9		1.9	0.84	ng/L		10/12/20 12:27	10/13/20 17:31	1
Perfluoro-n-octadecanoic acid (PFODA)	<1.9		1.9	0.89	ng/L		10/12/20 12:27	10/13/20 17:31	1
Perfluorobutanesulfonic acid (PFBS)	4.6		1.9	0.19	ng/L		10/12/20 12:27	10/13/20 17:31	1
Perfluoropentanesulfonic acid (PFPeS)	3.8		1.9	0.28	ng/L		10/12/20 12:27	10/13/20 17:31	1
Perfluorohexanesulfonic acid (PFHxS)	48		1.9	0.54	ng/L		10/12/20 12:27	10/13/20 17:31	1
Perfluoroheptanesulfonic Acid (PFHpS)	3.7		1.9	0.18	ng/L		10/12/20 12:27	10/13/20 17:31	1
Perfluorooctanesulfonic acid (PFOS)	160		1.9	0.51	ng/L		10/12/20 12:27	10/13/20 17:31	1
Perfluorononanesulfonic acid (PFNS)	<1.9		1.9	0.35	ng/L		10/12/20 12:27	10/13/20 17:31	1
Perfluorodecanesulfonic acid (PFDS)	<1.9		1.9	0.30	ng/L		10/12/20 12:27	10/13/20 17:31	1
Perfluorododecanesulfonic acid (PFDoS)	<1.9		1.9	0.92	ng/L		10/12/20 12:27	10/13/20 17:31	1
Perfluorooctanesulfonamide (FOSA)	22		1.9	0.93	ng/L		10/12/20 12:27	10/13/20 17:31	1
NEtFOSA	<1.9		1.9	0.82	ng/L		10/12/20 12:27	10/13/20 17:31	1
NMeFOSA	<1.9		1.9	0.41	ng/L		10/12/20 12:27	10/13/20 17:31	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<4.7		4.7	1.1	ng/L		10/12/20 12:27	10/13/20 17:31	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	3.4	J	4.7	1.2	ng/L		10/12/20 12:27	10/13/20 17:31	1
NMeFOSE	<3.8		3.8	1.3	ng/L		10/12/20 12:27	10/13/20 17:31	1
NEtFOSE	<1.9		1.9	0.80	ng/L		10/12/20 12:27	10/13/20 17:31	1
4:2 FTS	17		1.9	0.23	ng/L		10/12/20 12:27	10/13/20 17:31	1
8:2 FTS	170		1.9	0.44	ng/L		10/12/20 12:27	10/13/20 17:31	1
10:2 FTS	<1.9		1.9	0.63	ng/L		10/12/20 12:27	10/13/20 17:31	1
DONA	<1.9		1.9	0.38	ng/L		10/12/20 12:27	10/13/20 17:31	1
HFPO-DA (GenX)	<3.8		3.8	1.4	ng/L		10/12/20 12:27	10/13/20 17:31	1
F-53B Major	<1.9		1.9	0.23	ng/L		10/12/20 12:27	10/13/20 17:31	1
F-53B Minor	<1.9		1.9	0.30	ng/L		10/12/20 12:27	10/13/20 17:31	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	58		25 - 150				10/12/20 12:27	10/13/20 17:31	1
13C5 PFPeA	79		25 - 150				10/12/20 12:27	10/13/20 17:31	1
13C2 PFHxA	95		25 - 150				10/12/20 12:27	10/13/20 17:31	1
13C4 PFHpA	103		25 - 150				10/12/20 12:27	10/13/20 17:31	1
13C5 PFNA	112		25 - 150				10/12/20 12:27	10/13/20 17:31	1
13C2 PFDA	105		25 - 150				10/12/20 12:27	10/13/20 17:31	1

Eurofins TestAmerica, Chicago

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189114-1

Client Sample ID: SW-L09 (10072020)

Lab Sample ID: 500-189114-9

Date Collected: 10/07/20 11:00

Matrix: Water

Date Received: 10/09/20 09:40

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFUnA	108		25 - 150	10/12/20 12:27	10/13/20 17:31	1
13C2 PFDoA	100		25 - 150	10/12/20 12:27	10/13/20 17:31	1
13C2 PFTeDA	99		25 - 150	10/12/20 12:27	10/13/20 17:31	1
13C2 PFHxDA	108		25 - 150	10/12/20 12:27	10/13/20 17:31	1
13C3 PFBS	92		25 - 150	10/12/20 12:27	10/13/20 17:31	1
18O2 PFHxS	103		25 - 150	10/12/20 12:27	10/13/20 17:31	1
13C4 PFOS	108		25 - 150	10/12/20 12:27	10/13/20 17:31	1
13C8 FOSA	112		25 - 150	10/12/20 12:27	10/13/20 17:31	1
d3-NMeFOSAA	85		25 - 150	10/12/20 12:27	10/13/20 17:31	1
d5-NEtFOSAA	104		25 - 150	10/12/20 12:27	10/13/20 17:31	1
d-N-MeFOSA-M	61		20 - 150	10/12/20 12:27	10/13/20 17:31	1
d-N-EtFOSA-M	52		20 - 150	10/12/20 12:27	10/13/20 17:31	1
d7-N-MeFOSE-M	52		10 - 120	10/12/20 12:27	10/13/20 17:31	1
d9-N-EtFOSE-M	44		10 - 120	10/12/20 12:27	10/13/20 17:31	1
M2-4:2 FTS	126		25 - 150	10/12/20 12:27	10/13/20 17:31	1
M2-8:2 FTS	149		25 - 150	10/12/20 12:27	10/13/20 17:31	1
13C3 HFPO-DA	99		25 - 150	10/12/20 12:27	10/13/20 17:31	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanoic acid (PFOA)	1300		19	8.0	ng/L		10/12/20 12:27	10/15/20 02:23	10
6:2 FTS	1300		47	24	ng/L		10/12/20 12:27	10/15/20 02:23	10
Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
13C4 PFOA	91		25 - 150	10/12/20 12:27	10/15/20 02:23	10			
M2-6:2 FTS	106		25 - 150	10/12/20 12:27	10/15/20 02:23	10			

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	7.5		5.0	1.9	mg/L			10/14/20 12:36	1

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189114-1

Client Sample ID: SW-L10 (10072020)

Lab Sample ID: 500-189114-10

Date Collected: 10/07/20 11:05

Matrix: Water

Date Received: 10/09/20 09:40

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	67		4.8	2.3	ng/L		10/12/20 12:27	10/13/20 17:59	1
Perfluoropentanoic acid (PFPeA)	200		1.9	0.47	ng/L		10/12/20 12:27	10/13/20 17:59	1
Perfluorohexanoic acid (PFHxA)	230		1.9	0.56	ng/L		10/12/20 12:27	10/13/20 17:59	1
Perfluoroheptanoic acid (PFHpA)	91	B	1.9	0.24	ng/L		10/12/20 12:27	10/13/20 17:59	1
Perfluorononanoic acid (PFNA)	52		1.9	0.26	ng/L		10/12/20 12:27	10/13/20 17:59	1
Perfluorodecanoic acid (PFDA)	3.9		1.9	0.30	ng/L		10/12/20 12:27	10/13/20 17:59	1
Perfluoroundecanoic acid (PFUnA)	<1.9		1.9	1.1	ng/L		10/12/20 12:27	10/13/20 17:59	1
Perfluorododecanoic acid (PFDoA)	<1.9		1.9	0.53	ng/L		10/12/20 12:27	10/13/20 17:59	1
Perfluorotridecanoic acid (PFTriA)	<1.9	*1	1.9	1.3	ng/L		10/12/20 12:27	10/13/20 17:59	1
Perfluorotetradecanoic acid (PFTeA)	<1.9		1.9	0.71	ng/L		10/12/20 12:27	10/13/20 17:59	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<1.9		1.9	0.86	ng/L		10/12/20 12:27	10/13/20 17:59	1
Perfluoro-n-octadecanoic acid (PFODA)	<1.9		1.9	0.91	ng/L		10/12/20 12:27	10/13/20 17:59	1
Perfluorobutanesulfonic acid (PFBS)	4.6		1.9	0.19	ng/L		10/12/20 12:27	10/13/20 17:59	1
Perfluoropentanesulfonic acid (PFPeS)	4.0		1.9	0.29	ng/L		10/12/20 12:27	10/13/20 17:59	1
Perfluorohexanesulfonic acid (PFHxS)	45		1.9	0.55	ng/L		10/12/20 12:27	10/13/20 17:59	1
Perfluoroheptanesulfonic Acid (PFHpS)	3.6		1.9	0.18	ng/L		10/12/20 12:27	10/13/20 17:59	1
Perfluorooctanesulfonic acid (PFOS)	160		1.9	0.52	ng/L		10/12/20 12:27	10/13/20 17:59	1
Perfluorononanesulfonic acid (PFNS)	<1.9		1.9	0.36	ng/L		10/12/20 12:27	10/13/20 17:59	1
Perfluorodecanesulfonic acid (PFDS)	<1.9		1.9	0.31	ng/L		10/12/20 12:27	10/13/20 17:59	1
Perfluorododecanesulfonic acid (PFDoS)	<1.9		1.9	0.94	ng/L		10/12/20 12:27	10/13/20 17:59	1
Perfluorooctanesulfonamide (FOSA)	22		1.9	0.95	ng/L		10/12/20 12:27	10/13/20 17:59	1
NEtFOSA	<1.9		1.9	0.84	ng/L		10/12/20 12:27	10/13/20 17:59	1
NMeFOSA	<1.9		1.9	0.42	ng/L		10/12/20 12:27	10/13/20 17:59	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<4.8		4.8	1.2	ng/L		10/12/20 12:27	10/13/20 17:59	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.2	J	4.8	1.3	ng/L		10/12/20 12:27	10/13/20 17:59	1
NMeFOSE	<3.9		3.9	1.4	ng/L		10/12/20 12:27	10/13/20 17:59	1
NEtFOSE	<1.9		1.9	0.82	ng/L		10/12/20 12:27	10/13/20 17:59	1
4:2 FTS	18		1.9	0.23	ng/L		10/12/20 12:27	10/13/20 17:59	1
8:2 FTS	170		1.9	0.44	ng/L		10/12/20 12:27	10/13/20 17:59	1
10:2 FTS	<1.9		1.9	0.65	ng/L		10/12/20 12:27	10/13/20 17:59	1
DONA	<1.9		1.9	0.39	ng/L		10/12/20 12:27	10/13/20 17:59	1
HFPO-DA (GenX)	<3.9		3.9	1.5	ng/L		10/12/20 12:27	10/13/20 17:59	1
F-53B Major	<1.9		1.9	0.23	ng/L		10/12/20 12:27	10/13/20 17:59	1
F-53B Minor	<1.9		1.9	0.31	ng/L		10/12/20 12:27	10/13/20 17:59	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	60		25 - 150				10/12/20 12:27	10/13/20 17:59	1
13C5 PFPeA	78		25 - 150				10/12/20 12:27	10/13/20 17:59	1
13C2 PFHxA	92		25 - 150				10/12/20 12:27	10/13/20 17:59	1
13C4 PFHpA	99		25 - 150				10/12/20 12:27	10/13/20 17:59	1
13C5 PFNA	105		25 - 150				10/12/20 12:27	10/13/20 17:59	1
13C2 PFDA	105		25 - 150				10/12/20 12:27	10/13/20 17:59	1

Eurofins TestAmerica, Chicago

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189114-1

Client Sample ID: SW-L10 (10072020)

Lab Sample ID: 500-189114-10

Date Collected: 10/07/20 11:05

Matrix: Water

Date Received: 10/09/20 09:40

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

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C2 PFUnA	105		25 - 150	10/12/20 12:27	10/13/20 17:59	1
13C2 PFDoA	109		25 - 150	10/12/20 12:27	10/13/20 17:59	1
13C2 PFTeDA	101		25 - 150	10/12/20 12:27	10/13/20 17:59	1
13C2 PFHxDA	105		25 - 150	10/12/20 12:27	10/13/20 17:59	1
13C3 PFBS	87		25 - 150	10/12/20 12:27	10/13/20 17:59	1
18O2 PFHxS	103		25 - 150	10/12/20 12:27	10/13/20 17:59	1
13C4 PFOS	101		25 - 150	10/12/20 12:27	10/13/20 17:59	1
13C8 FOSA	104		25 - 150	10/12/20 12:27	10/13/20 17:59	1
d3-NMeFOSAA	90		25 - 150	10/12/20 12:27	10/13/20 17:59	1
d5-NEtFOSAA	97		25 - 150	10/12/20 12:27	10/13/20 17:59	1
d-N-MeFOSA-M	55		20 - 150	10/12/20 12:27	10/13/20 17:59	1
d-N-EtFOSA-M	44		20 - 150	10/12/20 12:27	10/13/20 17:59	1
d7-N-MeFOSE-M	40		10 - 120	10/12/20 12:27	10/13/20 17:59	1
d9-N-EtFOSE-M	34		10 - 120	10/12/20 12:27	10/13/20 17:59	1
M2-4:2 FTS	118		25 - 150	10/12/20 12:27	10/13/20 17:59	1
M2-8:2 FTS	139		25 - 150	10/12/20 12:27	10/13/20 17:59	1
13C3 HFPO-DA	95		25 - 150	10/12/20 12:27	10/13/20 17:59	1

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

<i>Analyte</i>	<i>Result</i>	<i>Qualifier</i>	<i>RL</i>	<i>MDL</i>	<i>Unit</i>	<i>D</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Perfluorooctanoic acid (PFOA)	1200		19	8.2	ng/L		10/12/20 12:27	10/15/20 02:32	10
6:2 FTS	1200		48	24	ng/L		10/12/20 12:27	10/15/20 02:32	10

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C4 PFOA	91		25 - 150	10/12/20 12:27	10/15/20 02:32	10
M2-6:2 FTS	104		25 - 150	10/12/20 12:27	10/15/20 02:32	10

General Chemistry

<i>Analyte</i>	<i>Result</i>	<i>Qualifier</i>	<i>RL</i>	<i>MDL</i>	<i>Unit</i>	<i>D</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Total Suspended Solids	4.5	J	5.0	1.9	mg/L			10/14/20 12:37	1

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189114-1

Client Sample ID: DUP-01-10072020

Lab Sample ID: 500-189114-11

Date Collected: 10/07/20 00:00

Matrix: Water

Date Received: 10/09/20 09:40

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	23		4.7	2.3	ng/L		10/12/20 12:27	10/16/20 13:00	1
Perfluoropentanoic acid (PFPeA)	36		1.9	0.46	ng/L		10/12/20 12:27	10/16/20 13:00	1
Perfluorohexanoic acid (PFHxA)	24		1.9	0.55	ng/L		10/12/20 12:27	10/16/20 13:00	1
Perfluoroheptanoic acid (PFHpA)	6.0	B	1.9	0.24	ng/L		10/12/20 12:27	10/16/20 13:00	1
Perfluorooctanoic acid (PFOA)	71		1.9	0.80	ng/L		10/12/20 12:27	10/16/20 13:00	1
Perfluorononanoic acid (PFNA)	3.4		1.9	0.26	ng/L		10/12/20 12:27	10/16/20 13:00	1
Perfluorodecanoic acid (PFDA)	<1.9		1.9	0.29	ng/L		10/12/20 12:27	10/16/20 13:00	1
Perfluoroundecanoic acid (PFUnA)	<1.9		1.9	1.0	ng/L		10/12/20 12:27	10/16/20 13:00	1
Perfluorododecanoic acid (PFDoA)	<1.9		1.9	0.52	ng/L		10/12/20 12:27	10/16/20 13:00	1
Perfluorotridecanoic acid (PFTriA)	<1.9	*1	1.9	1.2	ng/L		10/12/20 12:27	10/16/20 13:00	1
Perfluorotetradecanoic acid (PFTeA)	<1.9		1.9	0.69	ng/L		10/12/20 12:27	10/16/20 13:00	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<1.9		1.9	0.84	ng/L		10/12/20 12:27	10/16/20 13:00	1
Perfluoro-n-octadecanoic acid (PFODA)	<1.9		1.9	0.89	ng/L		10/12/20 12:27	10/16/20 13:00	1
Perfluorobutanesulfonic acid (PFBS)	1.0	J	1.9	0.19	ng/L		10/12/20 12:27	10/16/20 13:00	1
Perfluoropentanesulfonic acid (PFPeS)	<1.9		1.9	0.28	ng/L		10/12/20 12:27	10/16/20 13:00	1
Perfluorohexanesulfonic acid (PFHxS)	2.9		1.9	0.54	ng/L		10/12/20 12:27	10/16/20 13:00	1
Perfluoroheptanesulfonic Acid (PFHpS)	<1.9		1.9	0.18	ng/L		10/12/20 12:27	10/16/20 13:00	1
Perfluorooctanesulfonic acid (PFOS)	9.5		1.9	0.51	ng/L		10/12/20 12:27	10/16/20 13:00	1
Perfluorononanesulfonic acid (PFNS)	<1.9		1.9	0.35	ng/L		10/12/20 12:27	10/16/20 13:00	1
Perfluorodecanesulfonic acid (PFDS)	<1.9		1.9	0.30	ng/L		10/12/20 12:27	10/16/20 13:00	1
Perfluorododecanesulfonic acid (PFDoS)	<1.9		1.9	0.92	ng/L		10/12/20 12:27	10/16/20 13:00	1
Perfluorooctanesulfonamide (FOSA)	1.8	J	1.9	0.93	ng/L		10/12/20 12:27	10/16/20 13:00	1
NEtFOSA	<1.9		1.9	0.82	ng/L		10/12/20 12:27	10/16/20 13:00	1
NMeFOSA	<1.9		1.9	0.41	ng/L		10/12/20 12:27	10/16/20 13:00	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<4.7		4.7	1.1	ng/L		10/12/20 12:27	10/16/20 13:00	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<4.7		4.7	1.2	ng/L		10/12/20 12:27	10/16/20 13:00	1
NMeFOSE	<3.8		3.8	1.3	ng/L		10/12/20 12:27	10/16/20 13:00	1
NEtFOSE	<1.9		1.9	0.80	ng/L		10/12/20 12:27	10/16/20 13:00	1
4:2 FTS	0.86	J	1.9	0.23	ng/L		10/12/20 12:27	10/16/20 13:00	1
6:2 FTS	47		4.7	2.4	ng/L		10/12/20 12:27	10/16/20 13:00	1
8:2 FTS	13		1.9	0.43	ng/L		10/12/20 12:27	10/16/20 13:00	1
10:2 FTS	<1.9		1.9	0.63	ng/L		10/12/20 12:27	10/16/20 13:00	1
DONA	<1.9		1.9	0.38	ng/L		10/12/20 12:27	10/16/20 13:00	1
HFPO-DA (GenX)	<3.8		3.8	1.4	ng/L		10/12/20 12:27	10/16/20 13:00	1
F-53B Major	<1.9		1.9	0.23	ng/L		10/12/20 12:27	10/16/20 13:00	1
F-53B Minor	<1.9		1.9	0.30	ng/L		10/12/20 12:27	10/16/20 13:00	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	94		25 - 150				10/12/20 12:27	10/16/20 13:00	1
13C5 PFPeA	99		25 - 150				10/12/20 12:27	10/16/20 13:00	1
13C2 PFHxA	99		25 - 150				10/12/20 12:27	10/16/20 13:00	1
13C4 PFHpA	101		25 - 150				10/12/20 12:27	10/16/20 13:00	1

Eurofins TestAmerica, Chicago

Client Sample Results

Client: ARCADIS U.S., Inc.
 Project/Site: Marinette 30015296.00009

Job ID: 500-189114-1

Client Sample ID: DUP-01-10072020

Lab Sample ID: 500-189114-11

Date Collected: 10/07/20 00:00

Matrix: Water

Date Received: 10/09/20 09:40

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

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C4 PFOA	104		25 - 150	10/12/20 12:27	10/16/20 13:00	1
13C5 PFNA	100		25 - 150	10/12/20 12:27	10/16/20 13:00	1
13C2 PFDA	102		25 - 150	10/12/20 12:27	10/16/20 13:00	1
13C2 PFUnA	80		25 - 150	10/12/20 12:27	10/16/20 13:00	1
13C2 PFDoA	83		25 - 150	10/12/20 12:27	10/16/20 13:00	1
13C2 PFTeDA	83		25 - 150	10/12/20 12:27	10/16/20 13:00	1
13C2 PFHxDA	75		25 - 150	10/12/20 12:27	10/16/20 13:00	1
13C3 PFBS	100		25 - 150	10/12/20 12:27	10/16/20 13:00	1
18O2 PFHxS	105		25 - 150	10/12/20 12:27	10/16/20 13:00	1
13C4 PFOS	106		25 - 150	10/12/20 12:27	10/16/20 13:00	1
13C8 FOSA	106		25 - 150	10/12/20 12:27	10/16/20 13:00	1
d3-NMeFOSAA	92		25 - 150	10/12/20 12:27	10/16/20 13:00	1
d5-NEtFOSAA	100		25 - 150	10/12/20 12:27	10/16/20 13:00	1
d-N-MeFOSA-M	66		20 - 150	10/12/20 12:27	10/16/20 13:00	1
d-N-EtFOSA-M	53		20 - 150	10/12/20 12:27	10/16/20 13:00	1
d7-N-MeFOSE-M	36		10 - 120	10/12/20 12:27	10/16/20 13:00	1
d9-N-EtFOSE-M	30		10 - 120	10/12/20 12:27	10/16/20 13:00	1
M2-4:2 FTS	112		25 - 150	10/12/20 12:27	10/16/20 13:00	1
M2-6:2 FTS	120		25 - 150	10/12/20 12:27	10/16/20 13:00	1
M2-8:2 FTS	116		25 - 150	10/12/20 12:27	10/16/20 13:00	1
13C3 HFPO-DA	98		25 - 150	10/12/20 12:27	10/16/20 13:00	1

General Chemistry

<i>Analyte</i>	<i>Result</i>	<i>Qualifier</i>	<i>RL</i>	<i>MDL</i>	<i>Unit</i>	<i>D</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Total Suspended Solids	3.5	J	5.0	1.9	mg/L			10/14/20 12:38	1

Definitions/Glossary

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189114-1

Qualifiers

LCMS

Qualifier	Qualifier Description
*1	LCS/LCSD RPD exceeds control limits.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
F5	Duplicate RPD exceeds limit, and one or both sample results are less than 5 times RL.
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.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189114-1

Method: 537 (modified) - Fluorinated Alkyl Substances

Lab Sample ID: MB 320-420981/1-A
Matrix: Water
Analysis Batch: 421385

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 420981

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Perfluorobutanoic acid (PFBA)	<5.0		5.0	2.4	ng/L		10/12/20 12:27	10/13/20 14:20	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	0.49	ng/L		10/12/20 12:27	10/13/20 14:20	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	0.58	ng/L		10/12/20 12:27	10/13/20 14:20	1
Perfluoroheptanoic acid (PFHpA)	0.581	J	2.0	0.25	ng/L		10/12/20 12:27	10/13/20 14:20	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	0.85	ng/L		10/12/20 12:27	10/13/20 14:20	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	0.27	ng/L		10/12/20 12:27	10/13/20 14:20	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	0.31	ng/L		10/12/20 12:27	10/13/20 14:20	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	1.1	ng/L		10/12/20 12:27	10/13/20 14:20	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	0.55	ng/L		10/12/20 12:27	10/13/20 14:20	1
Perfluorotridecanoic acid (PFTriA)	<2.0		2.0	1.3	ng/L		10/12/20 12:27	10/13/20 14:20	1
Perfluorotetradecanoic acid (PFTeA)	<2.0		2.0	0.73	ng/L		10/12/20 12:27	10/13/20 14:20	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<2.0		2.0	0.89	ng/L		10/12/20 12:27	10/13/20 14:20	1
Perfluoro-n-octadecanoic acid (PFODA)	<2.0		2.0	0.94	ng/L		10/12/20 12:27	10/13/20 14:20	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	0.20	ng/L		10/12/20 12:27	10/13/20 14:20	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	0.30	ng/L		10/12/20 12:27	10/13/20 14:20	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	0.57	ng/L		10/12/20 12:27	10/13/20 14:20	1
Perfluoroheptanesulfonic Acid (PFHpS)	<2.0		2.0	0.19	ng/L		10/12/20 12:27	10/13/20 14:20	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	0.54	ng/L		10/12/20 12:27	10/13/20 14:20	1
Perfluorononanesulfonic acid (PFNS)	<2.0		2.0	0.37	ng/L		10/12/20 12:27	10/13/20 14:20	1
Perfluorodecanesulfonic acid (PFDS)	<2.0		2.0	0.32	ng/L		10/12/20 12:27	10/13/20 14:20	1
Perfluorododecanesulfonic acid (PFDoS)	<2.0		2.0	0.97	ng/L		10/12/20 12:27	10/13/20 14:20	1
Perfluorooctanesulfonamide (FOSA)	<2.0		2.0	0.98	ng/L		10/12/20 12:27	10/13/20 14:20	1
NEtFOSA	<2.0		2.0	0.87	ng/L		10/12/20 12:27	10/13/20 14:20	1
NMeFOSA	<2.0		2.0	0.43	ng/L		10/12/20 12:27	10/13/20 14:20	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<5.0		5.0	1.2	ng/L		10/12/20 12:27	10/13/20 14:20	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<5.0		5.0	1.3	ng/L		10/12/20 12:27	10/13/20 14:20	1
NMeFOSE	<4.0		4.0	1.4	ng/L		10/12/20 12:27	10/13/20 14:20	1
NEtFOSE	<2.0		2.0	0.85	ng/L		10/12/20 12:27	10/13/20 14:20	1
4:2 FTS	<2.0		2.0	0.24	ng/L		10/12/20 12:27	10/13/20 14:20	1
6:2 FTS	<5.0		5.0	2.5	ng/L		10/12/20 12:27	10/13/20 14:20	1
8:2 FTS	<2.0		2.0	0.46	ng/L		10/12/20 12:27	10/13/20 14:20	1
10:2 FTS	<2.0		2.0	0.67	ng/L		10/12/20 12:27	10/13/20 14:20	1
DONA	<2.0		2.0	0.40	ng/L		10/12/20 12:27	10/13/20 14:20	1
HFPO-DA (GenX)	<4.0		4.0	1.5	ng/L		10/12/20 12:27	10/13/20 14:20	1
F-53B Major	<2.0		2.0	0.24	ng/L		10/12/20 12:27	10/13/20 14:20	1
F-53B Minor	<2.0		2.0	0.32	ng/L		10/12/20 12:27	10/13/20 14:20	1
	MB	MB					Prepared	Analyzed	Dil Fac
Isotope Dilution	%Recovery	Qualifier	Limits						
13C4 PFBA	94		25 - 150				10/12/20 12:27	10/13/20 14:20	1
13C5 PFPeA	100		25 - 150				10/12/20 12:27	10/13/20 14:20	1
13C2 PFHxA	93		25 - 150				10/12/20 12:27	10/13/20 14:20	1
13C4 PFHpA	96		25 - 150				10/12/20 12:27	10/13/20 14:20	1
13C4 PFOA	93		25 - 150				10/12/20 12:27	10/13/20 14:20	1

Eurofins TestAmerica, Chicago

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189114-1

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

Lab Sample ID: MB 320-420981/1-A
Matrix: Water
Analysis Batch: 421385

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 420981

Isotope Dilution	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
13C5 PFNA	104		25 - 150	10/12/20 12:27	10/13/20 14:20	1
13C2 PFDA	97		25 - 150	10/12/20 12:27	10/13/20 14:20	1
13C2 PFUnA	95		25 - 150	10/12/20 12:27	10/13/20 14:20	1
13C2 PFDoA	92		25 - 150	10/12/20 12:27	10/13/20 14:20	1
13C2 PFTeDA	101		25 - 150	10/12/20 12:27	10/13/20 14:20	1
13C2 PFHxDA	113		25 - 150	10/12/20 12:27	10/13/20 14:20	1
13C3 PFBS	94		25 - 150	10/12/20 12:27	10/13/20 14:20	1
18O2 PFHxS	99		25 - 150	10/12/20 12:27	10/13/20 14:20	1
13C4 PFOS	100		25 - 150	10/12/20 12:27	10/13/20 14:20	1
13C8 FOSA	97		25 - 150	10/12/20 12:27	10/13/20 14:20	1
d3-NMeFOSAA	89		25 - 150	10/12/20 12:27	10/13/20 14:20	1
d5-NEtFOSAA	93		25 - 150	10/12/20 12:27	10/13/20 14:20	1
d-N-MeFOSA-M	80		20 - 150	10/12/20 12:27	10/13/20 14:20	1
d-N-EtFOSA-M	48		20 - 150	10/12/20 12:27	10/13/20 14:20	1
d7-N-MeFOSE-M	27		10 - 120	10/12/20 12:27	10/13/20 14:20	1
d9-N-EtFOSE-M	21		10 - 120	10/12/20 12:27	10/13/20 14:20	1
M2-4:2 FTS	99		25 - 150	10/12/20 12:27	10/13/20 14:20	1
M2-6:2 FTS	109		25 - 150	10/12/20 12:27	10/13/20 14:20	1
M2-8:2 FTS	107		25 - 150	10/12/20 12:27	10/13/20 14:20	1
13C3 HFPO-DA	93		25 - 150	10/12/20 12:27	10/13/20 14:20	1

Lab Sample ID: LCS 320-420981/2-A
Matrix: Water
Analysis Batch: 421385

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 420981

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.	Limits
Perfluoropentanoic acid (PFPeA)	40.0	35.4		ng/L		88	71 - 131	
Perfluorohexanoic acid (PFHxA)	40.0	39.6		ng/L		99	73 - 133	
Perfluoroheptanoic acid (PFHpA)	40.0	34.8		ng/L		87	72 - 132	
Perfluorooctanoic acid (PFOA)	40.0	39.4		ng/L		98	70 - 130	
Perfluorononanoic acid (PFNA)	40.0	36.6		ng/L		92	75 - 135	
Perfluorodecanoic acid (PFDA)	40.0	38.8		ng/L		97	76 - 136	
Perfluoroundecanoic acid (PFUnA)	40.0	39.6		ng/L		99	68 - 128	
Perfluorododecanoic acid (PFDoA)	40.0	43.9		ng/L		110	71 - 131	
Perfluorotridecanoic acid (PFTriA)	40.0	35.8		ng/L		90	71 - 131	
Perfluorotetradecanoic acid (PFTeA)	40.0	39.8		ng/L		99	70 - 130	
Perfluoro-n-hexadecanoic acid (PFHxDA)	40.0	40.1		ng/L		100	76 - 136	
Perfluoro-n-octadecanoic acid (PFODA)	40.0	40.0		ng/L		100	58 - 145	
Perfluorobutanesulfonic acid (PFBS)	35.4	36.5		ng/L		103	67 - 127	
Perfluoropentanesulfonic acid (PFPeS)	37.5	38.5		ng/L		103	66 - 126	
Perfluorohexanesulfonic acid (PFHxS)	36.4	33.0		ng/L		91	59 - 119	

Eurofins TestAmerica, Chicago

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189114-1

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

Lab Sample ID: LCS 320-420981/2-A
Matrix: Water
Analysis Batch: 421385

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 420981

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluoroheptanesulfonic Acid (PFHpS)	38.1	38.2		ng/L		100	76 - 136
Perfluorooctanesulfonic acid (PFOS)	37.1	37.3		ng/L		100	70 - 130
Perfluorononanesulfonic acid (PFNS)	38.4	38.5		ng/L		100	75 - 135
Perfluorodecanesulfonic acid (PFDS)	38.6	37.4		ng/L		97	71 - 131
Perfluorododecanesulfonic acid (PFDoS)	38.7	39.8		ng/L		103	67 - 127
Perfluorooctanesulfonamide (FOSA)	40.0	36.9		ng/L		92	73 - 133
NMeFOSA	40.0	41.4		ng/L		103	67 - 154
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	36.6		ng/L		92	76 - 136
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	35.5		ng/L		89	76 - 136
NMeFOSE	40.0	39.8		ng/L		99	70 - 130
NEtFOSE	40.0	35.0		ng/L		87	71 - 131
4:2 FTS	37.4	34.0		ng/L		91	79 - 139
6:2 FTS	37.9	33.0		ng/L		87	59 - 175
8:2 FTS	38.3	37.4		ng/L		98	75 - 135
10:2 FTS	38.6	48.1		ng/L		125	64 - 142
DONA	37.7	35.0		ng/L		93	79 - 139
HFPO-DA (GenX)	40.0	39.1		ng/L		98	51 - 173
F-53B Major	37.3	33.9		ng/L		91	75 - 135
F-53B Minor	37.7	36.1		ng/L		96	54 - 114

Isotope Dilution	LCS LCS		Limits
	%Recovery	Qualifier	
13C4 PFBA	95		25 - 150
13C5 PFPeA	103		25 - 150
13C2 PFHxA	96		25 - 150
13C4 PFHpA	102		25 - 150
13C4 PFOA	95		25 - 150
13C5 PFNA	106		25 - 150
13C2 PFDA	104		25 - 150
13C2 PFUnA	107		25 - 150
13C2 PFDoA	107		25 - 150
13C2 PFTeDA	109		25 - 150
13C2 PFHxDA	118		25 - 150
13C3 PFBS	95		25 - 150
18O2 PFHxS	100		25 - 150
13C4 PFOS	102		25 - 150
13C8 FOSA	104		25 - 150
d3-NMeFOSAA	98		25 - 150
d5-NEtFOSAA	113		25 - 150
d-N-MeFOSA-M	82		20 - 150
d-N-EtFOSA-M	47		20 - 150
d7-N-MeFOSE-M	23		10 - 120
d9-N-EtFOSE-M	17		10 - 120
M2-4:2 FTS	103		25 - 150

Eurofins TestAmerica, Chicago

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189114-1

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

Lab Sample ID: LCS 320-420981/2-A
Matrix: Water
Analysis Batch: 421385

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 420981

Isotope Dilution	LCS		Limits
	%Recovery	Qualifier	
M2-6:2 FTS	110		25 - 150
M2-8:2 FTS	109		25 - 150
13C3 HFPO-DA	99		25 - 150

Lab Sample ID: LCSD 320-420981/3-A
Matrix: Water
Analysis Batch: 421385

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 420981

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	%Rec. RPD	
									Limit	Limit
Perfluorobutanoic acid (PFBA)	40.0	44.5		ng/L		111	76 - 136	12		30
Perfluoropentanoic acid (PFPeA)	40.0	38.6		ng/L		96	71 - 131	9		30
Perfluorohexanoic acid (PFHxA)	40.0	44.9		ng/L		112	73 - 133	13		30
Perfluoroheptanoic acid (PFHpA)	40.0	40.6		ng/L		102	72 - 132	15		30
Perfluorooctanoic acid (PFOA)	40.0	42.2		ng/L		106	70 - 130	7		30
Perfluorononanoic acid (PFNA)	40.0	42.7		ng/L		107	75 - 135	15		30
Perfluorodecanoic acid (PFDA)	40.0	43.9		ng/L		110	76 - 136	12		30
Perfluoroundecanoic acid (PFUnA)	40.0	45.5		ng/L		114	68 - 128	14		30
Perfluorododecanoic acid (PFDoA)	40.0	44.6		ng/L		112	71 - 131	2		30
Perfluorotridecanoic acid (PFTriA)	40.0	51.3	*1	ng/L		128	71 - 131	36		30
Perfluorotetradecanoic acid (PFTeA)	40.0	37.5		ng/L		94	70 - 130	6		30
Perfluoro-n-hexadecanoic acid (PFHxDA)	40.0	38.6		ng/L		96	76 - 136	4		30
Perfluoro-n-octadecanoic acid (PFODA)	40.0	40.9		ng/L		102	58 - 145	2		30
Perfluorobutanesulfonic acid (PFBS)	35.4	39.6		ng/L		112	67 - 127	8		30
Perfluoropentanesulfonic acid (PFPeS)	37.5	41.5		ng/L		110	66 - 126	7		30
Perfluorohexanesulfonic acid (PFHxS)	36.4	35.3		ng/L		97	59 - 119	7		30
Perfluoroheptanesulfonic Acid (PFHpS)	38.1	45.3		ng/L		119	76 - 136	17		30
Perfluorooctanesulfonic acid (PFOS)	37.1	41.8		ng/L		112	70 - 130	11		30
Perfluorononanesulfonic acid (PFNS)	38.4	41.8		ng/L		109	75 - 135	8		30
Perfluorodecanesulfonic acid (PFDS)	38.6	42.9		ng/L		111	71 - 131	14		30
Perfluorododecanesulfonic acid (PFDoS)	38.7	45.1		ng/L		116	67 - 127	13		30
Perfluorooctanesulfonamide (FOSA)	40.0	40.5		ng/L		101	73 - 133	9		30
NMeFOSA	40.0	46.7		ng/L		117	67 - 154	12		30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	40.8		ng/L		102	76 - 136	11		30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	42.8		ng/L		107	76 - 136	19		30
NMeFOSE	40.0	38.8		ng/L		97	70 - 130	3		30
NEtFOSE	40.0	45.7		ng/L		114	71 - 131	27		30

Eurofins TestAmerica, Chicago

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189114-1

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

Lab Sample ID: LCSD 320-420981/3-A
Matrix: Water
Analysis Batch: 421385

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 420981

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4:2 FTS	37.4	39.7		ng/L		106	79 - 139	16	30
6:2 FTS	37.9	37.5		ng/L		99	59 - 175	13	30
8:2 FTS	38.3	39.7		ng/L		104	75 - 135	6	30
10:2 FTS	38.6	42.6		ng/L		111	64 - 142	12	30
DONA	37.7	40.5		ng/L		107	79 - 139	15	30
HFPO-DA (GenX)	40.0	43.0		ng/L		107	51 - 173	9	30
F-53B Major	37.3	40.6		ng/L		109	75 - 135	18	30
F-53B Minor	37.7	43.0		ng/L		114	54 - 114	18	30

Isotope Dilution	LCSD %Recovery	LCSD Qualifier	LCSD Limits
13C4 PFBA	86		25 - 150
13C5 PFPeA	92		25 - 150
13C2 PFHxA	85		25 - 150
13C4 PFHpA	87		25 - 150
13C4 PFOA	88		25 - 150
13C5 PFNA	95		25 - 150
13C2 PFDA	92		25 - 150
13C2 PFUnA	92		25 - 150
13C2 PFDoA	86		25 - 150
13C2 PFTeDA	107		25 - 150
13C2 PFHxDA	115		25 - 150
13C3 PFBS	84		25 - 150
18O2 PFHxS	94		25 - 150
13C4 PFOS	87		25 - 150
13C8 FOSA	91		25 - 150
d3-NMeFOSAA	87		25 - 150
d5-NEtFOSAA	91		25 - 150
d-N-MeFOSA-M	66		20 - 150
d-N-EtFOSA-M	43		20 - 150
d7-N-MeFOSE-M	22		10 - 120
d9-N-EtFOSE-M	18		10 - 120
M2-4:2 FTS	89		25 - 150
M2-6:2 FTS	101		25 - 150
M2-8:2 FTS	100		25 - 150
13C3 HFPO-DA	87		25 - 150

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 500-566524/1
Matrix: Water
Analysis Batch: 566524

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	<5.0		5.0	1.9	mg/L			10/14/20 12:15	1

QC Sample Results

Client: ARCADIS U.S., Inc.
 Project/Site: Marinette 30015296.00009

Job ID: 500-189114-1

Method: SM 2540D - Solids, Total Suspended (TSS) (Continued)

Lab Sample ID: LCS 500-566524/2
Matrix: Water
Analysis Batch: 566524

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	200	185		mg/L		93	80 - 120

Lab Sample ID: 500-189114-11 DU
Matrix: Water
Analysis Batch: 566524

Client Sample ID: DUP-01-10072020
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Suspended Solids	3.5	J	3.00	J F5	mg/L		15	5



Lab Chronicle

Client: ARCADIS U.S., Inc.
 Project/Site: Marinette 30015296.00009

Job ID: 500-189114-1

Client Sample ID: SW-L01 (10072020)

Lab Sample ID: 500-189114-1

Date Collected: 10/07/20 10:00

Matrix: Water

Date Received: 10/09/20 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			420981	10/12/20 12:27	LA	TAL SAC
Total/NA	Analysis	537 (modified)		1	421385	10/13/20 16:18	RS1	TAL SAC
Total/NA	Analysis	SM 2540D		1	566524	(Start) 10/14/20 12:28 (End) 10/14/20 12:29	SMO	TAL CHI

Client Sample ID: SW-L02 (10072020)

Lab Sample ID: 500-189114-2

Date Collected: 10/07/20 10:10

Matrix: Water

Date Received: 10/09/20 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			420981	10/12/20 12:27	LA	TAL SAC
Total/NA	Analysis	537 (modified)		1	421385	10/13/20 16:27	RS1	TAL SAC
Total/NA	Analysis	SM 2540D		1	566524	(Start) 10/14/20 12:29 (End) 10/14/20 12:30	SMO	TAL CHI

Client Sample ID: SW-L03 (10072020)

Lab Sample ID: 500-189114-3

Date Collected: 10/07/20 10:20

Matrix: Water

Date Received: 10/09/20 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			420981	10/12/20 12:27	LA	TAL SAC
Total/NA	Analysis	537 (modified)		1	421385	10/13/20 16:37	RS1	TAL SAC
Total/NA	Analysis	SM 2540D		1	566524	(Start) 10/14/20 12:30 (End) 10/14/20 12:31	SMO	TAL CHI

Client Sample ID: SW-L04 (10072020)

Lab Sample ID: 500-189114-4

Date Collected: 10/07/20 10:30

Matrix: Water

Date Received: 10/09/20 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			420981	10/12/20 12:27	LA	TAL SAC
Total/NA	Analysis	537 (modified)		1	421385	10/13/20 16:46	RS1	TAL SAC
Total/NA	Analysis	SM 2540D		1	566524	(Start) 10/14/20 12:31 (End) 10/14/20 12:32	SMO	TAL CHI

Client Sample ID: SW-L05 (10072020)

Lab Sample ID: 500-189114-5

Date Collected: 10/07/20 10:35

Matrix: Water

Date Received: 10/09/20 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			420981	10/12/20 12:27	LA	TAL SAC
Total/NA	Analysis	537 (modified)		1	421385	10/13/20 16:55	RS1	TAL SAC

Eurofins TestAmerica, Chicago

Lab Chronicle

Client: ARCADIS U.S., Inc.
 Project/Site: Marinette 30015296.00009

Job ID: 500-189114-1

Client Sample ID: SW-L05 (10072020)

Lab Sample ID: 500-189114-5

Date Collected: 10/07/20 10:35

Matrix: Water

Date Received: 10/09/20 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2540D		1	566524		SMO	TAL CHI

Client Sample ID: SW-L06 (10072020)

Lab Sample ID: 500-189114-6

Date Collected: 10/07/20 10:40

Matrix: Water

Date Received: 10/09/20 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			420981	10/12/20 12:27	LA	TAL SAC
Total/NA	Analysis	537 (modified)		1	421385	10/13/20 17:04	RS1	TAL SAC
Total/NA	Prep	3535	DL		420981	10/12/20 12:27	LA	TAL SAC
Total/NA	Analysis	537 (modified)	DL	10	421974	10/15/20 01:56	MYV	TAL SAC
Total/NA	Analysis	SM 2540D		1	566524		SMO	TAL CHI
					(Start)	10/14/20 12:33		
					(End)	10/14/20 12:34		

Client Sample ID: SW-L07 (10072020)

Lab Sample ID: 500-189114-7

Date Collected: 10/07/20 10:50

Matrix: Water

Date Received: 10/09/20 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			420981	10/12/20 12:27	LA	TAL SAC
Total/NA	Analysis	537 (modified)		1	421385	10/13/20 17:13	RS1	TAL SAC
Total/NA	Prep	3535	DL		420981	10/12/20 12:27	LA	TAL SAC
Total/NA	Analysis	537 (modified)	DL	10	422430	10/16/20 13:09	YH	TAL SAC
Total/NA	Analysis	SM 2540D		1	566524		SMO	TAL CHI
					(Start)	10/14/20 12:34		
					(End)	10/14/20 12:35		

Client Sample ID: SW-L08 (10072020)

Lab Sample ID: 500-189114-8

Date Collected: 10/07/20 10:55

Matrix: Water

Date Received: 10/09/20 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			420981	10/12/20 12:27	LA	TAL SAC
Total/NA	Analysis	537 (modified)		1	421385	10/13/20 17:22	RS1	TAL SAC
Total/NA	Prep	3535	DL		420981	10/12/20 12:27	LA	TAL SAC
Total/NA	Analysis	537 (modified)	DL	10	422430	10/16/20 13:18	YH	TAL SAC
Total/NA	Analysis	SM 2540D		1	566524		SMO	TAL CHI
					(Start)	10/14/20 12:35		
					(End)	10/14/20 12:36		

Lab Chronicle

Client: ARCADIS U.S., Inc.
 Project/Site: Marinette 30015296.00009

Job ID: 500-189114-1

Client Sample ID: SW-L09 (10072020)

Lab Sample ID: 500-189114-9

Date Collected: 10/07/20 11:00

Matrix: Water

Date Received: 10/09/20 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			420981	10/12/20 12:27	LA	TAL SAC
Total/NA	Analysis	537 (modified)		1	421385	10/13/20 17:31	RS1	TAL SAC
Total/NA	Prep	3535	DL		420981	10/12/20 12:27	LA	TAL SAC
Total/NA	Analysis	537 (modified)	DL	10	421974	10/15/20 02:23	MYV	TAL SAC
Total/NA	Analysis	SM 2540D		1	566524		SMO	TAL CHI
					(Start)	10/14/20 12:36		
					(End)	10/14/20 12:37		

Client Sample ID: SW-L10 (10072020)

Lab Sample ID: 500-189114-10

Date Collected: 10/07/20 11:05

Matrix: Water

Date Received: 10/09/20 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			420981	10/12/20 12:27	LA	TAL SAC
Total/NA	Analysis	537 (modified)		1	421385	10/13/20 17:59	RS1	TAL SAC
Total/NA	Prep	3535	DL		420981	10/12/20 12:27	LA	TAL SAC
Total/NA	Analysis	537 (modified)	DL	10	421974	10/15/20 02:32	MYV	TAL SAC
Total/NA	Analysis	SM 2540D		1	566524		SMO	TAL CHI
					(Start)	10/14/20 12:37		
					(End)	10/14/20 12:38		

Client Sample ID: DUP-01-10072020

Lab Sample ID: 500-189114-11

Date Collected: 10/07/20 00:00

Matrix: Water

Date Received: 10/09/20 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			420981	10/12/20 12:27	LA	TAL SAC
Total/NA	Analysis	537 (modified)		1	422430	10/16/20 13:00	YH	TAL SAC
Total/NA	Analysis	SM 2540D		1	566524		SMO	TAL CHI
					(Start)	10/14/20 12:38		
					(End)	10/14/20 12:39		

Laboratory References:

TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

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

Accreditation/Certification Summary

Client: ARCADIS U.S., Inc.
 Project/Site: Marinette 30015296.00009

Job ID: 500-189114-1

Laboratory: Eurofins TestAmerica, Chicago

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

Authority	Program	Identification Number	Expiration Date
Wisconsin	State	999580010	08-31-21

Laboratory: Eurofins TestAmerica, Sacramento

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	17-020	01-20-21
ANAB	Dept. of Defense ELAP	L2468	01-20-21
ANAB	Dept. of Energy	L2468.01	01-20-21
ANAB	ISO/IEC 17025	L2468	01-20-21
Arizona	State	AZ0708	08-11-21
Arkansas DEQ	State	88-0691	06-17-21
California	State	2897	01-31-22
Colorado	State	CA0004	08-31-21
Connecticut	State	PH-0691	06-30-21
Florida	NELAP	E87570	06-30-21
Georgia	State	4040	01-30-21
Hawaii	State	<cert No.>	01-29-21
Illinois	NELAP	200060	03-17-21
Kansas	NELAP	E-10375	10-31-20
Louisiana	NELAP	01944	06-30-21
Maine	State	CA00004	04-14-22
Michigan	State	9947	08-03-23
Nevada	State	CA000442021-1	07-31-21
New Hampshire	NELAP	2997	04-18-21
New Jersey	NELAP	CA005	06-30-21
New York	NELAP	11666	04-01-21
Oregon	NELAP	4040	01-29-21
Pennsylvania	NELAP	68-01272	03-31-21
Texas	NELAP	T104704399-19-13	06-01-21
US Fish & Wildlife	US Federal Programs	58448	07-31-21
USDA	US Federal Programs	P330-18-00239	07-31-21
Utah	NELAP	CA000442019-01	02-28-21
Vermont	State	VT-4040	04-16-21
Virginia	NELAP	460278	03-14-21
Washington	State	C581	05-05-21
West Virginia (DW)	State	9930C	12-31-20
Wisconsin	State	998204680	08-31-21
Wyoming	State Program	8TMS-L	01-28-19 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins TestAmerica, Chicago

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

Chain of Custody Record



Environmental Testing Solutions

Client Information		Sampler <i>Amy Siefker</i>	Lab PM Fredrick, Sandie	Carrier Tracking No(s)	COC No 500-85814-38797 1																								
Client Contact Elizabeth Hover		Phone	E-Mail sandra.fredrick@eurofinset.com		Page Page 1 of 1																								
Company ARCADIS U.S., Inc.		Analysis Requested			Job # <i>500-189114</i>																								
Address 126 North Jefferson Street Suite 400		Due Date Requested:	<table border="1"> <tr> <td>Field Filtered Sample (Yes or No)</td> <td>Perform MS/MSD (Yes or No)</td> <td>25400 - TSS</td> <td>PFAS_IDA - PFAS, Extended List (36 Analytes)</td> <td rowspan="5">Total Number of Containers</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> </table>			Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	25400 - TSS	PFAS_IDA - PFAS, Extended List (36 Analytes)	Total Number of Containers																			
Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	25400 - TSS				PFAS_IDA - PFAS, Extended List (36 Analytes)	Total Number of Containers																						
City Milwaukee		TAT Requested (days): <i>Standard</i>	Preservation Codes:																										
State, Zip WI, 53202		PO # 30015296.00009	<table border="0"> <tr> <td>A - HCL</td> <td>M - Hexane</td> </tr> <tr> <td>B - NaOH</td> <td>N - None</td> </tr> <tr> <td>C - Zn Acetate</td> <td>G - AsNaO2</td> </tr> <tr> <td>D - Nitric Acid</td> <td>P - Na2O4S</td> </tr> <tr> <td>E - NaHSO4</td> <td>Q - Na2SO3</td> </tr> <tr> <td>F - MeOH</td> <td>R - Na2S2O3</td> </tr> <tr> <td>G - Amchlor</td> <td>S - H2SO4</td> </tr> <tr> <td>H - Ascorbic Acid</td> <td>T - TSP Dodecahydrate</td> </tr> <tr> <td>I - Ice</td> <td>U - Acetone</td> </tr> <tr> <td>J - DI Water</td> <td>V - MCAA</td> </tr> <tr> <td>K - EDTA</td> <td>W - pH 4-5</td> </tr> <tr> <td>L - EDA</td> <td>Z - other (specify)</td> </tr> </table>			A - HCL	M - Hexane	B - NaOH	N - None	C - Zn Acetate	G - AsNaO2	D - Nitric Acid	P - Na2O4S	E - NaHSO4	Q - Na2SO3	F - MeOH	R - Na2S2O3	G - Amchlor	S - H2SO4	H - Ascorbic Acid	T - TSP Dodecahydrate	I - Ice	U - Acetone	J - DI Water	V - MCAA	K - EDTA	W - pH 4-5	L - EDA	Z - other (specify)
A - HCL	M - Hexane																												
B - NaOH	N - None																												
C - Zn Acetate	G - AsNaO2																												
D - Nitric Acid	P - Na2O4S																												
E - NaHSO4	Q - Na2SO3																												
F - MeOH	R - Na2S2O3																												
G - Amchlor	S - H2SO4																												
H - Ascorbic Acid	T - TSP Dodecahydrate																												
I - Ice	U - Acetone																												
J - DI Water	V - MCAA																												
K - EDTA	W - pH 4-5																												
L - EDA	Z - other (specify)																												
Email Elizabeth.Hover@arcadis.com		WO #	Other:																										
Project Name Marinette 30015296 00009		Project # 50017363																											
Site <i>Marinette, WI</i>		SSOW#																											
Sample Identification		Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=wasteroil, BT=Tissue, Air/Air)	Preservation Code:	Special Instructions/Note:																						
		<table border="1"> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>																											
<i>SW-L01 (10072020)</i>		<i>10/7/20</i>	<i>1000</i>	<i>G</i>	<i>Water</i>	<i>N N X X</i>																							
<i>SW-L02 (10072020)</i>			<i>1010</i>		<i>Water</i>																								
<i>SW-L03 (10072020)</i>			<i>1020</i>		<i>Water</i>																								
<i>SW-L04 (10072020)</i>			<i>1030</i>		<i>Water</i>																								
<i>SW-L05 (10072020)</i>			<i>1035</i>		<i>Water</i>																								
<i>SW-L06 (10072020)</i>			<i>1040</i>		<i>Water</i>																								
<i>SW-L07 (10072020)</i>			<i>1050</i>		<i>Water</i>																								
<i>SW-L08 (10072020)</i>			<i>1055</i>		<i>Water</i>																								
<i>SW-L09 (10072020)</i>			<i>1100</i>		<i>Water</i>																								
<i>SW-L10 (10072020)</i>			<i>1105</i>		<i>Water</i>																								
<i>DUP-01 - 10072020</i>			<i>—</i>		<i>Water</i>		<i>Duplicate</i>																						
Possible Hazard Identification				Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)																									
<input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological				<input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months																									
Deliverable Requested. I, II, III, IV, Other (specify)				Special Instructions/QC Requirements:																									
Empty Kit Relinquished by:		Date:	Time:	Method of Shipment:																									
Relinquished by <i>Amy Siefker</i>		Date/Time <i>10/8/20 / 1700</i>	Company <i>Arcadis</i>	Received by <i>Shirley Scott</i>		Date/Time <i>10/9/20 0940</i>	Company <i>TA QTL</i>																						
Relinquished by		Date/Time	Company	Received by		Date/Time	Company																						
Relinquished by		Date/Time	Company	Received by		Date/Time	Company																						
Custody Seals Intact ↓ Yes Δ No	Custody Seal No.			Cooler Temperature(s) °C and Other Remarks <i>21.6 → 21.9, 11.4 → 24, 1.7 → 2.7</i>																									

10-9-2020

ORIGIN ID:RRLA (262) 202-5955
GUEST: JEREMY HAMLIN
COUNTRY INN & SUITES
2020 OLD PESHTIGO RD

SHIP DATE: 28FEB20
ACTWGT: 25.00 LB MAN
CAD: 525155/CAFE3211

MARINETTE, WI 54143
UNITED STATES US

TO

TESTAMERICA CHICAGO
2417 BOND STREET

UNIVERSITY PARK IL 60484-3

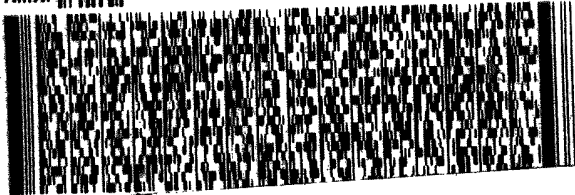
(708) 634-6200
INU:
PO:

REF:

DEPT:

500-189114 Wayb

RMA: III III III III



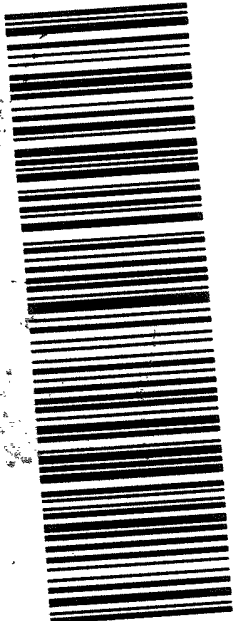
FedEx
Express



811180800100

FRI - 09 OCT 10:30A
PRIORITY OVERNIGHT
60484
IL-US ORD
EXP 09/21

FedEx
TRK# 7125 4942 1544
0221
NA JOTA



8179495 10/08 55B12/RETE/3765

48qt

ORIGIN ID:RRLA (262) 202-5955
GUEST: JEREMY HAMLIN
COUNTRY INN & SUITES
2020 OLD PESHTIGO RD

SHIP DATE: 06MAR20
ACTWGT: 25.00 LB MAN
CAD: 525155/CAFE3211

MARINETTE, WI 54143
UNITED STATES US

TO

TESTAMERICA CHICAGO
2417 BOND STREET

UNIVERSITY PARK IL 60484-3101

(708) 634-6200
INU:
PO:

REF:

DEPT:

RMA: III III III III

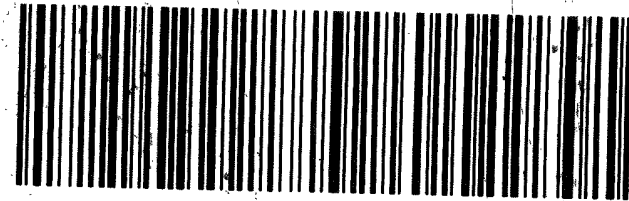
FedEx

TRK# 7125 4942 2161
0221

FRI - 09 OCT 10:30A
PRIORITY OVERNIGHT

NA JOTA

60484
IL-US ORD



48qt

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

ORIGIN ID:RRLA (262) 202-5955
GUEST: JEREMY HAMLIN
COUNTRY INN & SUITES
2020 OLD PESHTIGO RD

SHIP DATE: 06MAR20
ACTWGT: 25.00 LB MAN
CAD: 525155/CAFE3211

MARINETTE, WI 54143
UNITED STATES US

ORIGIN ID:RRLA (262) 202-5955
GUEST: JEREMY HAMLIN
COUNTRY INN & SUITES
2020 OLD PESHTIGO RD

SHIP DATE: 06MAR20
ACTWGT: 25.00 LB MAN
CAD: 525155/CAFE3211

MARINETTE, WI 54143
UNITED STATES US

TO

TESTAMERICA CHICAGO
2417 BOND STREET

UNIVERSITY PARK IL 60484-3101

(708) 634-6200

REF:

DEPT:

RMA: 01111111

FedEx
TRK# 7125 4942 2117
0221

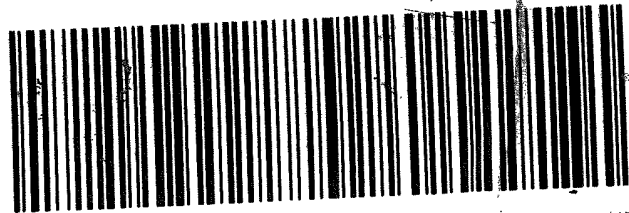
FRI - 09 OCT 10:30A
PRIORITY OVERNIGHT

NA JOTA

60484

IL-US ORD

EXP 09/21



16gt

TO

TESTAMERICA CHICAGO
2417 BOND STREET

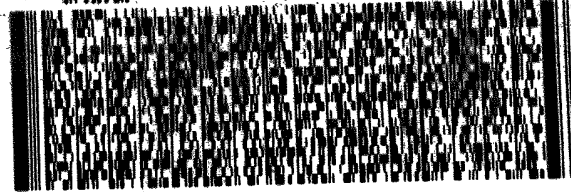
UNIVERSITY PARK IL 60484-3101

(708) 634-6200

REF:

DEPT:

RMA: 01111111



RETURNS MON-SAT

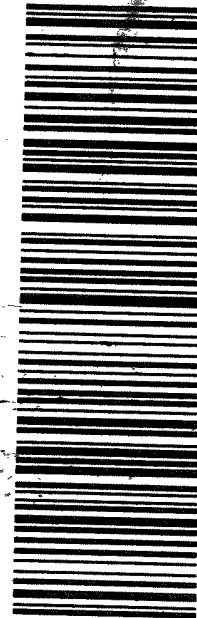
FedEx
TRK# 7125 4942 2128
0221

FRI - 09 OCT 10:30A
PRIORITY OVERNIGHT

NA JOTA

60484
IL-US ORD

EXP 09/21



0179495 10/08 66B.J2/AR7E/B766

ST 22
RT 519
5 10:30 A
2128
10.00

48gt

Eurofins TestAmerica, Chicago

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

Chain of Custody Record



Environment Testing
America

Client Information (Sub Contract Lab)		Sampler:	Lab PM: Fredrick, Sandie	Carrier Tracking No(s):	COC No: 500-140774.1
Client Contact: Shipping/Receiving		Phone:	E-Mail: sandra.fredrick@eurofinset.com	State of Origin: Wisconsin	Page: Page 1 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State Program - Wisconsin			Job #: 500-189114-1
Address: 880 Riverside Parkway,		Due Date Requested: 10/21/2020	Analysis Requested		Preservation Codes: A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5 L - EDA Z - other (specify)
City: West Sacramento		TAT Requested (days):			
State, Zip: CA, 95605		PO #:	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Total Number of containers
Phone: 916-373-5600(Tel) 916-372-1059(Fax)		WO #:			
Email:		Project #: 50017363	PFC_IDA/3335_PFC_PFA_S, Extended List (36 Analytes)		
Project Name: Marinette 30015296.00009		SSOW#:			
Site:					
Sample Identification - Client ID (Lab ID)		Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)
		Preservation Code:			
SW-L01 (10072020) (500-189114-1)		10/7/20	10:00 Central	Water	X
SW-L02 (10072020) (500-189114-2)		10/7/20	10:10 Central	Water	X
SW-L03 (10072020) (500-189114-3)		10/7/20	10:20 Central	Water	X
SW-L04 (10072020) (500-189114-4)		10/7/20	10:30 Central	Water	X
SW-L05 (10072020) (500-189114-5)		10/7/20	10:35 Central	Water	X
SW-L06 (10072020) (500-189114-6)		10/7/20	10:40 Central	Water	X
SW-L07 (10072020) (500-189114-7)		10/7/20	10:50 Central	Water	X
SW-L08 (10072020) (500-189114-8)		10/7/20	10:55 Central	Water	X
SW-L09 (10072020) (500-189114-9)		10/7/20	11:00 Central	Water	X
<p>Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.</p>					
Possible Hazard Identification			Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)		
Unconfirmed			<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months		
Deliverable Requested: I, II, III, IV, Other (specify)		Primary Deliverable Rank: 2	Special Instructions/QC Requirements:		
Empty Kit Relinquished by:		Date:	Time:	Method of Shipment:	
Relinquished by: <i>[Signature]</i>		Date/Time: 10/9/20 1700	Company: TA	Received by: <i>[Signature]</i>	
Relinquished by:		Date/Time:	Company:	Received by:	
Relinquished by:		Date/Time:	Company:	Received by:	
Custody Seals Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No: 1346705		Cooler Temperature(s) °C and Other Remarks: 06:2.4 COPA:1.9	

Page 42 of 49

10/19/2020



Eurofins TestAmerica, Chicago

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

Chain of Custody Record



Environment Testing
America

Client Information (Sub Contract Lab)			Sampler: Fredrick, Sandie	Lab PM: Fredrick, Sandie	Carrier Tracking No(s):	COC No: 500-140774.2
Client Contact: Shipping/Receiving			Phone:	E-Mail: sandra.fredrick@eurofinset.com	State of Origin: Wisconsin	Page: Page 2 of 2
Company: TestAmerica Laboratories, Inc.			Accreditations Required (See note): State Program - Wisconsin			Job #: 500-189114-1
Address: 880 Riverside Parkway, City: West Sacramento State, Zip: CA, 95605 Phone: 916-373-5600(Tel) 916-372-1059(Fax) Email:			Due Date Requested: 10/21/2020 TAT Requested (days): PO #: WO #: Project #: 50017363 SSOW#:			Analysis Requested
Project Name: Marinette 30015296.00009 Site:			Preservation Codes: A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5 L - EDA Z - other (specify) Other:			
Sample Identification - Client ID (Lab ID)		Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Total Number of containers
Preservation Code:				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
SW-L10 (10072020) (500-189114-10)		10/7/20	11:05 Central	Water		2
DUP-01-10072020 (500-189114-11)		10/7/20	Central	Water		2
Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.						
Possible Hazard Identification				Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)		
Unconfirmed				<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months		
Deliverable Requested: I, II, III, IV, Other (specify)		Primary Deliverable Rank: 2		Special Instructions/QC Requirements:		
Empty Kit Relinquished by:		Date:	Time:	Method of Shipment:		
Relinquished by: <i>[Signature]</i>		Date/Time: 10/19/20 1700	Company: TA	Received by: <i>[Signature]</i>		Date/Time: 10/10/20 09:05
Relinquished by:		Date/Time:	Company:	Received by:		Date/Time:
Relinquished by:		Date/Time:	Company:	Received by:		Date/Time:
Custody Seals Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 03°C CORR?				

Page 43 of 49

10/19/2020



Login Sample Receipt Checklist

Client: ARCADIS U.S., Inc.

Job Number: 500-189114-1

Login Number: 189114

List Source: Eurofins TestAmerica, Chicago

List Number: 1

Creator: Scott, Sherri L

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are 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.	True	
Cooler Temperature is recorded.	True	2.6,2.9,2.4,2.7
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: ARCADIS U.S., Inc.

Job Number: 500-189114-1

Login Number: 189114

List Number: 2

Creator: Saephan, Kae C

List Source: Eurofins TestAmerica, Sacramento

List Creation: 10/10/20 12:28 PM

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	1346765
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	ob: 2.4c corr: 1.9c
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



500-189114 Field Sheet

Tracking #: 189344497454

Job: _____

SO / PO / FO / ~~SAT~~ / 2-Day / Ground / UPS / CDO / Courier
GSO / OnTrac / Goldstreak / USPS / Other _____

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

Therm. ID: AK-5 Corr. Factor: (+/-) 0.5 °C

Ice Wet Gel _____ Other _____

Cooler Custody Seal: 1346765

Cooler ID: 1 OF 2

Temp Observed: 2.4 °C Corrected: 1.9 °C
From: Temp Blank Sample

Opening/Processing The Shipment	Yes	No	NA
Cooler compromised/tampered with?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Cooler Temperature is acceptable?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Initials: AS Date: 10/10/20

Unpacking/Labeling The Samples	Yes	No	NA
CoC is complete w/o discrepancies?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Samples compromised/tampered with?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Sample containers have legible labels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample custody seal?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Containers are not broken or leaking?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample date/times are provided?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Appropriate containers are used?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample bottles are completely filled?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample preservatives verified?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Samples w/o discrepancies?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Zero headspace?*	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Alkalinity has no headspace?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Perchlorate has headspace? (Methods 314, 331, 6850)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Multiphasic samples are not present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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

Initials: AS Date: 10/10/20

Notes: _____

Trizma Lot #(s): _____

Login Completion	Yes	No	NA
Receipt Temperature on COC?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Samples received within hold time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NCM Filed?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Log Release checked in TALS?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Initials: AS Date: 10/10/20

Isotope Dilution Summary

Client: ARCADIS U.S., Inc.
 Project/Site: Marinette 30015296.00009

Job ID: 500-189114-1

Method: 537 (modified) - Fluorinated Alkyl Substances

Matrix: Water

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFBA (25-150)	PFPeA (25-150)	PFHxA (25-150)	C4PFHA (25-150)	PFOA (25-150)	PFNA (25-150)	PFDA (25-150)	PFUnA (25-150)
500-189114-1	SW-L01 (10072020)	70	84	88	93	89	97	89	87
500-189114-2	SW-L02 (10072020)	76	89	89	93	88	98	91	91
500-189114-3	SW-L03 (10072020)	62	71	73	76	73	79	75	78
500-189114-4	SW-L04 (10072020)	64	73	72	75	70	78	76	76
500-189114-5	SW-L05 (10072020)	76	88	84	89	86	96	90	92
500-189114-6	SW-L06 (10072020)	47	62	73	80		87	82	88
500-189114-6 - DL	SW-L06 (10072020)					65			
500-189114-7	SW-L07 (10072020)	46	63	75	83		92	87	81
500-189114-7 - DL	SW-L07 (10072020)					102			
500-189114-8	SW-L08 (10072020)	54	72	83	91		100	93	92
500-189114-8 - DL	SW-L08 (10072020)					104			
500-189114-9	SW-L09 (10072020)	58	79	95	103		112	105	108
500-189114-9 - DL	SW-L09 (10072020)					91			
500-189114-10	SW-L10 (10072020)	60	78	92	99		105	105	105
500-189114-10 - DL	SW-L10 (10072020)					91			
500-189114-11	DUP-01-10072020	94	99	99	101	104	100	102	80
LCS 320-420981/2-A	Lab Control Sample	95	103	96	102	95	106	104	107
LCSD 320-420981/3-A	Lab Control Sample Dup	86	92	85	87	88	95	92	92
MB 320-420981/1-A	Method Blank	94	100	93	96	93	104	97	95

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFDaA (25-150)	PFTDA (25-150)	PFHxDA (25-150)	C3PFBS (25-150)	PFHxS (25-150)	PFOS (25-150)	PFOSA (25-150)	d3NMFOS (25-150)
500-189114-1	SW-L01 (10072020)	84	80	89	79	88	84	90	80
500-189114-2	SW-L02 (10072020)	86	92	100	83	91	90	96	77
500-189114-3	SW-L03 (10072020)	79	77	82	70	73	74	78	70
500-189114-4	SW-L04 (10072020)	69	80	77	74	77	76	77	72
500-189114-5	SW-L05 (10072020)	84	91	90	81	88	87	93	76
500-189114-6	SW-L06 (10072020)	90	84	83	79	92	91	85	73
500-189114-6 - DL	SW-L06 (10072020)								
500-189114-7	SW-L07 (10072020)	84	82	77	76	85	87	85	79
500-189114-7 - DL	SW-L07 (10072020)								
500-189114-8	SW-L08 (10072020)	80	89	91	80	89	88	92	85
500-189114-8 - DL	SW-L08 (10072020)								
500-189114-9	SW-L09 (10072020)	100	99	108	92	103	108	112	85
500-189114-9 - DL	SW-L09 (10072020)								
500-189114-10	SW-L10 (10072020)	109	101	105	87	103	101	104	90
500-189114-10 - DL	SW-L10 (10072020)								
500-189114-11	DUP-01-10072020	83	83	75	100	105	106	106	92
LCS 320-420981/2-A	Lab Control Sample	107	109	118	95	100	102	104	98
LCSD 320-420981/3-A	Lab Control Sample Dup	86	107	115	84	94	87	91	87
MB 320-420981/1-A	Method Blank	92	101	113	94	99	100	97	89

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	d5NEFOS (25-150)	dMeFOSA (20-150)	dEtFOSA (20-150)	NMFM (10-120)	NEFM (10-120)	M242FTS (25-150)	M262FTS (25-150)	M282FTS (25-150)
500-189114-1	SW-L01 (10072020)	100	58	46	38	33	92	105	112
500-189114-2	SW-L02 (10072020)	87	49	41	37	31	98	104	101
500-189114-3	SW-L03 (10072020)	75	42	36	26	21	78	87	87
500-189114-4	SW-L04 (10072020)	83	44	38	32	32	77	87	89
500-189114-5	SW-L05 (10072020)	91	48	38	31	27	93	105	101

Eurofins TestAmerica, Chicago

Isotope Dilution Summary

Client: ARCADIS U.S., Inc.
 Project/Site: Marinette 30015296.00009

Job ID: 500-189114-1

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

Matrix: Water

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	Percent Isotope Dilution Recovery (Acceptance Limits)							
		d5NEFOS (25-150)	dMeFOSA (20-150)	dEtFOSA (20-150)	NMFM (10-120)	NEFM (10-120)	M242FTS (25-150)	M262FTS (25-150)	M282FTS (25-150)
500-189114-6	SW-L06 (10072020)	87	45	38	34	30	93		
500-189114-6 - DL	SW-L06 (10072020)							78	78
500-189114-7	SW-L07 (10072020)	88	46	40	36	31	95		117
500-189114-7 - DL	SW-L07 (10072020)							116	
500-189114-8	SW-L08 (10072020)	95	52	43	35	30	108		132
500-189114-8 - DL	SW-L08 (10072020)							119	
500-189114-9	SW-L09 (10072020)	104	61	52	52	44	126		149
500-189114-9 - DL	SW-L09 (10072020)							106	
500-189114-10	SW-L10 (10072020)	97	55	44	40	34	118		139
500-189114-10 - DL	SW-L10 (10072020)							104	
500-189114-11	DUP-01-10072020	100	66	53	36	30	112	120	116
LCS 320-420981/2-A	Lab Control Sample	113	82	47	23	17	103	110	109
LCSD 320-420981/3-A	Lab Control Sample Dup	91	66	43	22	18	89	101	100
MB 320-420981/1-A	Method Blank	93	80	48	27	21	99	109	107

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	HFPODA
		(25-150)
500-189114-1	SW-L01 (10072020)	88
500-189114-2	SW-L02 (10072020)	90
500-189114-3	SW-L03 (10072020)	73
500-189114-4	SW-L04 (10072020)	72
500-189114-5	SW-L05 (10072020)	85
500-189114-6	SW-L06 (10072020)	76
500-189114-6 - DL	SW-L06 (10072020)	
500-189114-7	SW-L07 (10072020)	77
500-189114-7 - DL	SW-L07 (10072020)	
500-189114-8	SW-L08 (10072020)	86
500-189114-8 - DL	SW-L08 (10072020)	
500-189114-9	SW-L09 (10072020)	99
500-189114-9 - DL	SW-L09 (10072020)	
500-189114-10	SW-L10 (10072020)	95
500-189114-10 - DL	SW-L10 (10072020)	
500-189114-11	DUP-01-10072020	98
LCS 320-420981/2-A	Lab Control Sample	99
LCSD 320-420981/3-A	Lab Control Sample Dup	87
MB 320-420981/1-A	Method Blank	93

Surrogate Legend

- PFBA = 13C4 PFBA
- PFPeA = 13C5 PFPeA
- PFHxA = 13C2 PFHxA
- C4PFHA = 13C4 PFHpA
- PFOA = 13C4 PFOA
- PFNA = 13C5 PFNA
- PFDA = 13C2 PFDA
- PFUnA = 13C2 PFUnA
- PFDaA = 13C2 PFDaA
- PFTDA = 13C2 PFTeDA
- PFHxDA = 13C2 PFHxDA
- C3PFBS = 13C3 PFBS

Isotope Dilution Summary

Client: ARCADIS U.S., Inc.

Project/Site: Marinette 30015296.00009

Job ID: 500-189114-1

PFHxS = 18O2 PFHxS
PFOS = 13C4 PFOS
PFOSA = 13C8 FOSA
d3NMFOS = d3-NMeFOSAA
d5NEFOS = d5-NEtFOSAA
dMeFOSA = d-N-MeFOSA-M
dEtFOSA = d-N-EtFOSA-M
NMFm = d7-N-MeFOSE-M
NEFM = d9-N-EtFOSE-M
M242FTS = M2-4:2 FTS
M262FTS = M2-6:2 FTS
M282FTS = M2-8:2 FTS
HFPODA = 13C3 HFPO-DA

1

2

3

4

5

6

7

8

9

10

11

12

13

14

ANALYTICAL REPORT

Eurofins TestAmerica, Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

Laboratory Job ID: 500-189112-1
Client Project/Site: Marinette 30015296.00009

For:
ARCADIS U.S., Inc.
126 North Jefferson Street
Suite 400
Milwaukee, Wisconsin 53202

Attn: Lisa Rutkowski



Authorized for release by:
10/19/2020 9:37:43 AM

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

LINKS

Review your project
results through
TotalAccess

Have a Question?



Visit us at:

www.eurofinsus.com/Env

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

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

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



Table of Contents

Cover Page	1
Table of Contents	2
Case Narrative	3
Method Summary	4
Sample Summary	5
Client Sample Results	6
Definitions	32
QC Sample Results	33
Chronicle	41
Certification Summary	45
Chain of Custody	46
Receipt Checklists	52
Field Data Sheets	54
Isotope Dilution Summary	56

Case Narrative

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189112-1

Job ID: 500-189112-1

Laboratory: Eurofins TestAmerica, Chicago

Narrative

Job Narrative 500-189112-1

Comments

No additional comments.

Receipt

The samples were received on 10/9/2020 9:40 AM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 4 coolers at receipt time were 2.4° C, 2.6° C, 2.7° C and 2.9° C.

LCMS

Method 537 (modified): Isotope Dilution Analyte (IDA) recovery is above the method recommended limit for M2-4:2 FTS and M2-8:2 FTS for the following samples: 500-189112-1, 500-189112-2 and 500-189112-3. Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries.

Method 537 (modified): Isotope Dilution Analyte (IDA) recovery is above the method recommended limit for several for the following samples: 500-189112-4, 500-189112-5 and 500-189112-7. Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries.

Method 537 (modified): Isotope Dilution Analyte (IDA) recovery is above the method recommended limit for M2-6:2 FTS and M2-8:2 FTS for the following samples: 500-189112-6 and 500-189112-10[MSD]. Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries.

Method 537 (modified): Isotope Dilution Analyte (IDA) recovery is above the method recommended limit for M2-6:2 FTS for the following samples: 500-189112-10 and 500-189112-10[MS]. Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries.

Method 537 (modified): Results for samples 500-189112-1, 500-189112-2 and 500-189112-3 were reported from the analysis of a diluted extract due to high concentration of the target analyte in the analysis of the undiluted extract. The dilution factor was applied to the labeled internal standard area counts and these area counts were within acceptance limits

Method 537 (modified): Results for samples 500-189112-4 and 500-189112-11 were reported from the analysis of a diluted extract due to high concentration of the target analyte in the analysis of the undiluted extract. The dilution factor was applied to the labeled internal standard area counts and these area counts were not within acceptance limits. The ISTD is not used to quantitate target analytes; therefore, there is no impact to the data.

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

General Chemistry

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

Organic Prep

Method 3535: The following samples were beige prior to extraction: 500-189112-1, 500-189112-2, 500-189112-3, 500-189112-4, 500-189112-5, 500-189112-6, 500-189112-7, 500-189112-8, 500-189112-9, 500-189112-10, 500-189112-10[MS], 500-189112-10[MSD], 500-189112-11 and 500-189112-13 3535 PFC Water 320-420804

Method 3535: Elevated reporting limits are provided for the following sample due to insufficient sample provided for preparation: 500-189112-12. 3535 PFC Water 320-420804

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

Method Summary

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189112-1

Method	Method Description	Protocol	Laboratory
537 (modified)	Fluorinated Alkyl Substances	EPA	TAL SAC
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL CHI
3535	Solid-Phase Extraction (SPE)	SW846	TAL SAC

Protocol References:

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater"

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

Laboratory References:

TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

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

Sample Summary

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189112-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
500-189112-1	SW-U01 (10072020)	Water	10/07/20 14:35	10/09/20 09:40	
500-189112-2	SW-U02 (10072020)	Water	10/07/20 14:40	10/09/20 09:40	
500-189112-3	SW-U03 (10072020)	Water	10/07/20 14:45	10/09/20 09:40	
500-189112-4	SW-U04 (10072020)	Water	10/07/20 14:55	10/09/20 09:40	
500-189112-5	SW-U05 (10072020)	Water	10/07/20 15:10	10/09/20 09:40	
500-189112-6	SW-U06 (10072020)	Water	10/07/20 15:15	10/09/20 09:40	
500-189112-7	SW-U07 (10072020)	Water	10/07/20 15:25	10/09/20 09:40	
500-189112-8	SW-U08 (10072020)	Water	10/07/20 15:30	10/09/20 09:40	
500-189112-9	SW-U09 (10072020)	Water	10/07/20 15:45	10/09/20 09:40	
500-189112-10	SW-U10 (10072020)	Water	10/07/20 16:00	10/09/20 09:40	
500-189112-11	DUP-03-10072020	Water	10/07/20 00:00	10/09/20 09:40	
500-189112-12	Field Blank-10-07-2020	Water	10/07/20 12:00	10/09/20 09:40	
500-189112-13	SW-39	Water	10/07/20 15:20	10/09/20 09:40	

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189112-1

Client Sample ID: SW-U01 (10072020)

Lab Sample ID: 500-189112-1

Date Collected: 10/07/20 14:35

Matrix: Water

Date Received: 10/09/20 09:40

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	65		4.6	2.2	ng/L		10/11/20 19:23	10/12/20 11:57	1
Perfluoropentanoic acid (PFPeA)	200		1.8	0.45	ng/L		10/11/20 19:23	10/12/20 11:57	1
Perfluorohexanoic acid (PFHxA)	170		1.8	0.53	ng/L		10/11/20 19:23	10/12/20 11:57	1
Perfluoroheptanoic acid (PFHpA)	77		1.8	0.23	ng/L		10/11/20 19:23	10/12/20 11:57	1
Perfluorononanoic acid (PFNA)	42		1.8	0.25	ng/L		10/11/20 19:23	10/12/20 11:57	1
Perfluorodecanoic acid (PFDA)	4.0		1.8	0.29	ng/L		10/11/20 19:23	10/12/20 11:57	1
Perfluoroundecanoic acid (PFUnA)	<1.8		1.8	1.0	ng/L		10/11/20 19:23	10/12/20 11:57	1
Perfluorododecanoic acid (PFDoA)	<1.8		1.8	0.51	ng/L		10/11/20 19:23	10/12/20 11:57	1
Perfluorotridecanoic acid (PFTriA)	<1.8		1.8	1.2	ng/L		10/11/20 19:23	10/12/20 11:57	1
Perfluorotetradecanoic acid (PFTeA)	<1.8		1.8	0.67	ng/L		10/11/20 19:23	10/12/20 11:57	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<1.8		1.8	0.82	ng/L		10/11/20 19:23	10/12/20 11:57	1
Perfluoro-n-octadecanoic acid (PFODA)	<1.8		1.8	0.86	ng/L		10/11/20 19:23	10/12/20 11:57	1
Perfluorobutanesulfonic acid (PFBS)	3.3		1.8	0.18	ng/L		10/11/20 19:23	10/12/20 11:57	1
Perfluoropentanesulfonic acid (PFPeS)	2.8		1.8	0.28	ng/L		10/11/20 19:23	10/12/20 11:57	1
Perfluorohexanesulfonic acid (PFHxS)	39		1.8	0.52	ng/L		10/11/20 19:23	10/12/20 11:57	1
Perfluoroheptanesulfonic Acid (PFHpS)	5.1		1.8	0.17	ng/L		10/11/20 19:23	10/12/20 11:57	1
Perfluorooctanesulfonic acid (PFOS)	240		1.8	0.50	ng/L		10/11/20 19:23	10/12/20 11:57	1
Perfluorononanesulfonic acid (PFNS)	<1.8		1.8	0.34	ng/L		10/11/20 19:23	10/12/20 11:57	1
Perfluorodecanesulfonic acid (PFDS)	<1.8		1.8	0.29	ng/L		10/11/20 19:23	10/12/20 11:57	1
Perfluorododecanesulfonic acid (PFDoS)	<1.8		1.8	0.89	ng/L		10/11/20 19:23	10/12/20 11:57	1
Perfluorooctanesulfonamide (FOSA)	1.8		1.8	0.90	ng/L		10/11/20 19:23	10/12/20 11:57	1
NEtFOSA	<1.8		1.8	0.80	ng/L		10/11/20 19:23	10/12/20 11:57	1
NMeFOSA	<1.8		1.8	0.40	ng/L		10/11/20 19:23	10/12/20 11:57	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<4.6		4.6	1.1	ng/L		10/11/20 19:23	10/12/20 11:57	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<4.6		4.6	1.2	ng/L		10/11/20 19:23	10/12/20 11:57	1
NMeFOSE	<3.7		3.7	1.3	ng/L		10/11/20 19:23	10/12/20 11:57	1
NEtFOSE	<1.8		1.8	0.78	ng/L		10/11/20 19:23	10/12/20 11:57	1
4:2 FTS	13		1.8	0.22	ng/L		10/11/20 19:23	10/12/20 11:57	1
8:2 FTS	160		1.8	0.42	ng/L		10/11/20 19:23	10/12/20 11:57	1
10:2 FTS	<1.8		1.8	0.62	ng/L		10/11/20 19:23	10/12/20 11:57	1
DONA	<1.8		1.8	0.37	ng/L		10/11/20 19:23	10/12/20 11:57	1
HFPO-DA (GenX)	<3.7		3.7	1.4	ng/L		10/11/20 19:23	10/12/20 11:57	1
F-53B Major	<1.8		1.8	0.22	ng/L		10/11/20 19:23	10/12/20 11:57	1
F-53B Minor	<1.8		1.8	0.29	ng/L		10/11/20 19:23	10/12/20 11:57	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	50		25 - 150				10/11/20 19:23	10/12/20 11:57	1
13C5 PFPeA	67		25 - 150				10/11/20 19:23	10/12/20 11:57	1
13C2 PFHxA	82		25 - 150				10/11/20 19:23	10/12/20 11:57	1
13C4 PFHpA	92		25 - 150				10/11/20 19:23	10/12/20 11:57	1
13C5 PFNA	90		25 - 150				10/11/20 19:23	10/12/20 11:57	1
13C2 PFDA	98		25 - 150				10/11/20 19:23	10/12/20 11:57	1

Eurofins TestAmerica, Chicago

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189112-1

Client Sample ID: SW-U01 (10072020)

Lab Sample ID: 500-189112-1

Date Collected: 10/07/20 14:35

Matrix: Water

Date Received: 10/09/20 09:40

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

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C2 PFUnA	96		25 - 150	10/11/20 19:23	10/12/20 11:57	1
13C2 PFDoA	72		25 - 150	10/11/20 19:23	10/12/20 11:57	1
13C2 PFTeDA	73		25 - 150	10/11/20 19:23	10/12/20 11:57	1
13C2 PFHxDA	64		25 - 150	10/11/20 19:23	10/12/20 11:57	1
13C3 PFBS	91		25 - 150	10/11/20 19:23	10/12/20 11:57	1
18O2 PFHxS	100		25 - 150	10/11/20 19:23	10/12/20 11:57	1
13C4 PFOS	99		25 - 150	10/11/20 19:23	10/12/20 11:57	1
13C8 FOSA	94		25 - 150	10/11/20 19:23	10/12/20 11:57	1
d3-NMeFOSAA	99		25 - 150	10/11/20 19:23	10/12/20 11:57	1
d5-NEtFOSAA	109		25 - 150	10/11/20 19:23	10/12/20 11:57	1
d-N-MeFOSA-M	56		20 - 150	10/11/20 19:23	10/12/20 11:57	1
d-N-EtFOSA-M	43		20 - 150	10/11/20 19:23	10/12/20 11:57	1
d7-N-MeFOSE-M	41		10 - 120	10/11/20 19:23	10/12/20 11:57	1
d9-N-EtFOSE-M	43		10 - 120	10/11/20 19:23	10/12/20 11:57	1
M2-4:2 FTS	165	*5	25 - 150	10/11/20 19:23	10/12/20 11:57	1
M2-8:2 FTS	158	*5	25 - 150	10/11/20 19:23	10/12/20 11:57	1
13C3 HFPO-DA	90		25 - 150	10/11/20 19:23	10/12/20 11:57	1

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

<i>Analyte</i>	<i>Result</i>	<i>Qualifier</i>	<i>RL</i>	<i>MDL</i>	<i>Unit</i>	<i>D</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Perfluorooctanoic acid (PFOA)	460		18	7.8	ng/L		10/11/20 19:23	10/13/20 15:09	10
6:2 FTS	1500		46	23	ng/L		10/11/20 19:23	10/13/20 15:09	10
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>			
13C4 PFOA	83		25 - 150	10/11/20 19:23	10/13/20 15:09	10			
M2-6:2 FTS	116		25 - 150	10/11/20 19:23	10/13/20 15:09	10			

General Chemistry

<i>Analyte</i>	<i>Result</i>	<i>Qualifier</i>	<i>RL</i>	<i>MDL</i>	<i>Unit</i>	<i>D</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Total Suspended Solids	3.0	J	5.0	1.9	mg/L			10/13/20 15:43	1

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189112-1

Client Sample ID: SW-U02 (10072020)

Lab Sample ID: 500-189112-2

Date Collected: 10/07/20 14:40

Matrix: Water

Date Received: 10/09/20 09:40

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	63		4.6	2.2	ng/L		10/11/20 19:23	10/12/20 12:06	1
Perfluoropentanoic acid (PFPeA)	190		1.8	0.45	ng/L		10/11/20 19:23	10/12/20 12:06	1
Perfluorohexanoic acid (PFHxA)	160		1.8	0.53	ng/L		10/11/20 19:23	10/12/20 12:06	1
Perfluoroheptanoic acid (PFHpA)	77		1.8	0.23	ng/L		10/11/20 19:23	10/12/20 12:06	1
Perfluorooctanoic acid (PFOA)	340		1.8	0.78	ng/L		10/11/20 19:23	10/12/20 12:06	1
Perfluorononanoic acid (PFNA)	22		1.8	0.25	ng/L		10/11/20 19:23	10/12/20 12:06	1
Perfluorodecanoic acid (PFDA)	3.0		1.8	0.28	ng/L		10/11/20 19:23	10/12/20 12:06	1
Perfluoroundecanoic acid (PFUnA)	<1.8		1.8	1.0	ng/L		10/11/20 19:23	10/12/20 12:06	1
Perfluorododecanoic acid (PFDoA)	<1.8		1.8	0.50	ng/L		10/11/20 19:23	10/12/20 12:06	1
Perfluorotridecanoic acid (PFTriA)	<1.8		1.8	1.2	ng/L		10/11/20 19:23	10/12/20 12:06	1
Perfluorotetradecanoic acid (PFTeA)	<1.8		1.8	0.67	ng/L		10/11/20 19:23	10/12/20 12:06	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	0.88	J B	1.8	0.82	ng/L		10/11/20 19:23	10/12/20 12:06	1
Perfluoro-n-octadecanoic acid (PFODA)	<1.8		1.8	0.86	ng/L		10/11/20 19:23	10/12/20 12:06	1
Perfluorobutanesulfonic acid (PFBS)	3.3		1.8	0.18	ng/L		10/11/20 19:23	10/12/20 12:06	1
Perfluoropentanesulfonic acid (PFPeS)	2.7		1.8	0.28	ng/L		10/11/20 19:23	10/12/20 12:06	1
Perfluorohexanesulfonic acid (PFHxS)	37		1.8	0.52	ng/L		10/11/20 19:23	10/12/20 12:06	1
Perfluoroheptanesulfonic Acid (PFHpS)	4.1		1.8	0.17	ng/L		10/11/20 19:23	10/12/20 12:06	1
Perfluorooctanesulfonic acid (PFOS)	170		1.8	0.50	ng/L		10/11/20 19:23	10/12/20 12:06	1
Perfluorononanesulfonic acid (PFNS)	<1.8		1.8	0.34	ng/L		10/11/20 19:23	10/12/20 12:06	1
Perfluorodecanesulfonic acid (PFDS)	<1.8		1.8	0.29	ng/L		10/11/20 19:23	10/12/20 12:06	1
Perfluorododecanesulfonic acid (PFDoS)	<1.8		1.8	0.89	ng/L		10/11/20 19:23	10/12/20 12:06	1
Perfluorooctanesulfonamide (FOSA)	1.4	J	1.8	0.90	ng/L		10/11/20 19:23	10/12/20 12:06	1
NEtFOSA	<1.8		1.8	0.80	ng/L		10/11/20 19:23	10/12/20 12:06	1
NMeFOSA	<1.8		1.8	0.39	ng/L		10/11/20 19:23	10/12/20 12:06	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<4.6		4.6	1.1	ng/L		10/11/20 19:23	10/12/20 12:06	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<4.6		4.6	1.2	ng/L		10/11/20 19:23	10/12/20 12:06	1
NMeFOSE	<3.7		3.7	1.3	ng/L		10/11/20 19:23	10/12/20 12:06	1
NEtFOSE	<1.8		1.8	0.78	ng/L		10/11/20 19:23	10/12/20 12:06	1
4:2 FTS	12		1.8	0.22	ng/L		10/11/20 19:23	10/12/20 12:06	1
8:2 FTS	110		1.8	0.42	ng/L		10/11/20 19:23	10/12/20 12:06	1
10:2 FTS	<1.8		1.8	0.62	ng/L		10/11/20 19:23	10/12/20 12:06	1
DONA	<1.8		1.8	0.37	ng/L		10/11/20 19:23	10/12/20 12:06	1
HFPO-DA (GenX)	<3.7		3.7	1.4	ng/L		10/11/20 19:23	10/12/20 12:06	1
F-53B Major	<1.8		1.8	0.22	ng/L		10/11/20 19:23	10/12/20 12:06	1
F-53B Minor	<1.8		1.8	0.29	ng/L		10/11/20 19:23	10/12/20 12:06	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	51		25 - 150				10/11/20 19:23	10/12/20 12:06	1
13C5 PFPeA	70		25 - 150				10/11/20 19:23	10/12/20 12:06	1
13C2 PFHxA	80		25 - 150				10/11/20 19:23	10/12/20 12:06	1
13C4 PFHpA	94		25 - 150				10/11/20 19:23	10/12/20 12:06	1
13C4 PFOA	99		25 - 150				10/11/20 19:23	10/12/20 12:06	1

Eurofins TestAmerica, Chicago

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189112-1

Client Sample ID: SW-U02 (10072020)

Lab Sample ID: 500-189112-2

Date Collected: 10/07/20 14:40

Matrix: Water

Date Received: 10/09/20 09:40

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

<u>Isotope Dilution</u>	<u>%Recovery</u>	<u>Qualifier</u>	<u>Limits</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Dil Fac</u>
13C5 PFNA	106		25 - 150	10/11/20 19:23	10/12/20 12:06	1
13C2 PFDA	101		25 - 150	10/11/20 19:23	10/12/20 12:06	1
13C2 PFUnA	102		25 - 150	10/11/20 19:23	10/12/20 12:06	1
13C2 PFDoA	89		25 - 150	10/11/20 19:23	10/12/20 12:06	1
13C2 PFTeDA	69		25 - 150	10/11/20 19:23	10/12/20 12:06	1
13C2 PFHxDA	69		25 - 150	10/11/20 19:23	10/12/20 12:06	1
13C3 PFBS	94		25 - 150	10/11/20 19:23	10/12/20 12:06	1
18O2 PFHxS	107		25 - 150	10/11/20 19:23	10/12/20 12:06	1
13C4 PFOS	107		25 - 150	10/11/20 19:23	10/12/20 12:06	1
13C8 FOSA	99		25 - 150	10/11/20 19:23	10/12/20 12:06	1
d3-NMeFOSAA	106		25 - 150	10/11/20 19:23	10/12/20 12:06	1
d5-NEtFOSAA	115		25 - 150	10/11/20 19:23	10/12/20 12:06	1
d-N-MeFOSA-M	58		20 - 150	10/11/20 19:23	10/12/20 12:06	1
d-N-EtFOSA-M	44		20 - 150	10/11/20 19:23	10/12/20 12:06	1
d7-N-MeFOSE-M	42		10 - 120	10/11/20 19:23	10/12/20 12:06	1
d9-N-EtFOSE-M	41		10 - 120	10/11/20 19:23	10/12/20 12:06	1
M2-4:2 FTS	172	*5	25 - 150	10/11/20 19:23	10/12/20 12:06	1
M2-8:2 FTS	176	*5	25 - 150	10/11/20 19:23	10/12/20 12:06	1
13C3 HFPO-DA	88		25 - 150	10/11/20 19:23	10/12/20 12:06	1

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

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>RL</u>	<u>MDL</u>	<u>Unit</u>	<u>D</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Dil Fac</u>
6:2 FTS	1300		46	23	ng/L		10/11/20 19:23	10/13/20 15:18	10
<u>Isotope Dilution</u>	<u>%Recovery</u>	<u>Qualifier</u>	<u>Limits</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Dil Fac</u>			
M2-6:2 FTS	108		25 - 150	10/11/20 19:23	10/13/20 15:18	10			

General Chemistry

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>RL</u>	<u>MDL</u>	<u>Unit</u>	<u>D</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Dil Fac</u>
Total Suspended Solids	3.5	J	5.0	1.9	mg/L			10/13/20 15:44	1

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189112-1

Client Sample ID: SW-U03 (10072020)

Lab Sample ID: 500-189112-3

Date Collected: 10/07/20 14:45

Matrix: Water

Date Received: 10/09/20 09:40

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	48		4.8	2.3	ng/L		10/11/20 19:23	10/12/20 12:15	1
Perfluoropentanoic acid (PFPeA)	130		1.9	0.47	ng/L		10/11/20 19:23	10/12/20 12:15	1
Perfluorohexanoic acid (PFHxA)	110		1.9	0.56	ng/L		10/11/20 19:23	10/12/20 12:15	1
Perfluoroheptanoic acid (PFHpA)	61		1.9	0.24	ng/L		10/11/20 19:23	10/12/20 12:15	1
Perfluorooctanoic acid (PFOA)	320		1.9	0.82	ng/L		10/11/20 19:23	10/12/20 12:15	1
Perfluorononanoic acid (PFNA)	8.2		1.9	0.26	ng/L		10/11/20 19:23	10/12/20 12:15	1
Perfluorodecanoic acid (PFDA)	0.84	J	1.9	0.30	ng/L		10/11/20 19:23	10/12/20 12:15	1
Perfluoroundecanoic acid (PFUnA)	<1.9		1.9	1.1	ng/L		10/11/20 19:23	10/12/20 12:15	1
Perfluorododecanoic acid (PFDoA)	<1.9		1.9	0.53	ng/L		10/11/20 19:23	10/12/20 12:15	1
Perfluorotridecanoic acid (PFTriA)	<1.9		1.9	1.3	ng/L		10/11/20 19:23	10/12/20 12:15	1
Perfluorotetradecanoic acid (PFTeA)	<1.9		1.9	0.71	ng/L		10/11/20 19:23	10/12/20 12:15	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	0.88	J B	1.9	0.86	ng/L		10/11/20 19:23	10/12/20 12:15	1
Perfluoro-n-octadecanoic acid (PFODA)	<1.9		1.9	0.91	ng/L		10/11/20 19:23	10/12/20 12:15	1
Perfluorobutanesulfonic acid (PFBS)	3.2		1.9	0.19	ng/L		10/11/20 19:23	10/12/20 12:15	1
Perfluoropentanesulfonic acid (PFPeS)	2.5		1.9	0.29	ng/L		10/11/20 19:23	10/12/20 12:15	1
Perfluorohexanesulfonic acid (PFHxS)	35		1.9	0.55	ng/L		10/11/20 19:23	10/12/20 12:15	1
Perfluoroheptanesulfonic Acid (PFHpS)	4.1		1.9	0.18	ng/L		10/11/20 19:23	10/12/20 12:15	1
Perfluorooctanesulfonic acid (PFOS)	140		1.9	0.52	ng/L		10/11/20 19:23	10/12/20 12:15	1
Perfluorononanesulfonic acid (PFNS)	<1.9		1.9	0.36	ng/L		10/11/20 19:23	10/12/20 12:15	1
Perfluorodecanesulfonic acid (PFDS)	<1.9		1.9	0.31	ng/L		10/11/20 19:23	10/12/20 12:15	1
Perfluorododecanesulfonic acid (PFDoS)	<1.9		1.9	0.94	ng/L		10/11/20 19:23	10/12/20 12:15	1
Perfluorooctanesulfonamide (FOSA)	<1.9		1.9	0.95	ng/L		10/11/20 19:23	10/12/20 12:15	1
NEtFOSA	<1.9		1.9	0.84	ng/L		10/11/20 19:23	10/12/20 12:15	1
NMeFOSA	<1.9		1.9	0.42	ng/L		10/11/20 19:23	10/12/20 12:15	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<4.8		4.8	1.2	ng/L		10/11/20 19:23	10/12/20 12:15	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<4.8		4.8	1.3	ng/L		10/11/20 19:23	10/12/20 12:15	1
NMeFOSE	<3.9		3.9	1.4	ng/L		10/11/20 19:23	10/12/20 12:15	1
NEtFOSE	<1.9		1.9	0.82	ng/L		10/11/20 19:23	10/12/20 12:15	1
4:2 FTS	4.9		1.9	0.23	ng/L		10/11/20 19:23	10/12/20 12:15	1
8:2 FTS	29		1.9	0.45	ng/L		10/11/20 19:23	10/12/20 12:15	1
10:2 FTS	<1.9		1.9	0.65	ng/L		10/11/20 19:23	10/12/20 12:15	1
DONA	<1.9		1.9	0.39	ng/L		10/11/20 19:23	10/12/20 12:15	1
HFPO-DA (GenX)	<3.9		3.9	1.5	ng/L		10/11/20 19:23	10/12/20 12:15	1
F-53B Major	<1.9		1.9	0.23	ng/L		10/11/20 19:23	10/12/20 12:15	1
F-53B Minor	<1.9		1.9	0.31	ng/L		10/11/20 19:23	10/12/20 12:15	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	54		25 - 150				10/11/20 19:23	10/12/20 12:15	1
13C5 PFPeA	75		25 - 150				10/11/20 19:23	10/12/20 12:15	1
13C2 PFHxA	88		25 - 150				10/11/20 19:23	10/12/20 12:15	1
13C4 PFHpA	97		25 - 150				10/11/20 19:23	10/12/20 12:15	1
13C4 PFOA	95		25 - 150				10/11/20 19:23	10/12/20 12:15	1
13C5 PFNA	121		25 - 150				10/11/20 19:23	10/12/20 12:15	1

Eurofins TestAmerica, Chicago

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189112-1

Client Sample ID: SW-U03 (10072020)

Lab Sample ID: 500-189112-3

Date Collected: 10/07/20 14:45

Matrix: Water

Date Received: 10/09/20 09:40

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFDA	108		25 - 150	10/11/20 19:23	10/12/20 12:15	1
13C2 PFUnA	124		25 - 150	10/11/20 19:23	10/12/20 12:15	1
13C2 PFDoA	101		25 - 150	10/11/20 19:23	10/12/20 12:15	1
13C2 PFTeDA	84		25 - 150	10/11/20 19:23	10/12/20 12:15	1
13C2 PFHxDA	76		25 - 150	10/11/20 19:23	10/12/20 12:15	1
13C3 PFBS	103		25 - 150	10/11/20 19:23	10/12/20 12:15	1
18O2 PFHxS	114		25 - 150	10/11/20 19:23	10/12/20 12:15	1
13C4 PFOS	114		25 - 150	10/11/20 19:23	10/12/20 12:15	1
13C8 FOSA	103		25 - 150	10/11/20 19:23	10/12/20 12:15	1
d3-NMeFOSAA	110		25 - 150	10/11/20 19:23	10/12/20 12:15	1
d5-NEtFOSAA	121		25 - 150	10/11/20 19:23	10/12/20 12:15	1
d-N-MeFOSA-M	58		20 - 150	10/11/20 19:23	10/12/20 12:15	1
d-N-EtFOSA-M	49		20 - 150	10/11/20 19:23	10/12/20 12:15	1
d7-N-MeFOSE-M	49		10 - 120	10/11/20 19:23	10/12/20 12:15	1
d9-N-EtFOSE-M	42		10 - 120	10/11/20 19:23	10/12/20 12:15	1
M2-4:2 FTS	191	*5	25 - 150	10/11/20 19:23	10/12/20 12:15	1
M2-8:2 FTS	193	*5	25 - 150	10/11/20 19:23	10/12/20 12:15	1
13C3 HFPO-DA	99		25 - 150	10/11/20 19:23	10/12/20 12:15	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
6:2 FTS	530		48	24	ng/L		10/11/20 19:23	10/13/20 15:28	10
Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
M2-6:2 FTS	123		25 - 150	10/11/20 19:23	10/13/20 15:28	10			

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	3.5	J	5.0	1.9	mg/L			10/13/20 15:45	1

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189112-1

Client Sample ID: SW-U04 (10072020)

Lab Sample ID: 500-189112-4

Date Collected: 10/07/20 14:55

Matrix: Water

Date Received: 10/09/20 09:40

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	41		5.0	2.4	ng/L		10/11/20 19:23	10/12/20 12:24	1
Perfluoropentanoic acid (PFPeA)	97		2.0	0.49	ng/L		10/11/20 19:23	10/12/20 12:24	1
Perfluorohexanoic acid (PFHxA)	86		2.0	0.58	ng/L		10/11/20 19:23	10/12/20 12:24	1
Perfluoroheptanoic acid (PFHpA)	47		2.0	0.25	ng/L		10/11/20 19:23	10/12/20 12:24	1
Perfluorooctanoic acid (PFOA)	250		2.0	0.85	ng/L		10/11/20 19:23	10/12/20 12:24	1
Perfluorononanoic acid (PFNA)	12		2.0	0.27	ng/L		10/11/20 19:23	10/12/20 12:24	1
Perfluorodecanoic acid (PFDA)	2.2		2.0	0.31	ng/L		10/11/20 19:23	10/12/20 12:24	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	1.1	ng/L		10/11/20 19:23	10/12/20 12:24	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	0.55	ng/L		10/11/20 19:23	10/12/20 12:24	1
Perfluorotridecanoic acid (PFTriA)	<2.0		2.0	1.3	ng/L		10/11/20 19:23	10/12/20 12:24	1
Perfluorotetradecanoic acid (PFTeA)	<2.0		2.0	0.73	ng/L		10/11/20 19:23	10/12/20 12:24	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	0.91	J B	2.0	0.89	ng/L		10/11/20 19:23	10/12/20 12:24	1
Perfluoro-n-octadecanoic acid (PFODA)	<2.0		2.0	0.94	ng/L		10/11/20 19:23	10/12/20 12:24	1
Perfluorobutanesulfonic acid (PFBS)	3.1		2.0	0.20	ng/L		10/11/20 19:23	10/12/20 12:24	1
Perfluoropentanesulfonic acid (PFPeS)	2.6		2.0	0.30	ng/L		10/11/20 19:23	10/12/20 12:24	1
Perfluorohexanesulfonic acid (PFHxS)	39		2.0	0.57	ng/L		10/11/20 19:23	10/12/20 12:24	1
Perfluoroheptanesulfonic Acid (PFHpS)	6.8		2.0	0.19	ng/L		10/11/20 19:23	10/12/20 12:24	1
Perfluorononanesulfonic acid (PFNS)	<2.0		2.0	0.37	ng/L		10/11/20 19:23	10/12/20 12:24	1
Perfluorodecanesulfonic acid (PFDS)	<2.0		2.0	0.32	ng/L		10/11/20 19:23	10/12/20 12:24	1
Perfluorododecanesulfonic acid (PFDoS)	<2.0		2.0	0.96	ng/L		10/11/20 19:23	10/12/20 12:24	1
Perfluorooctanesulfonamide (FOSA)	<2.0		2.0	0.97	ng/L		10/11/20 19:23	10/12/20 12:24	1
NEtFOSA	<2.0		2.0	0.87	ng/L		10/11/20 19:23	10/12/20 12:24	1
NMeFOSA	<2.0		2.0	0.43	ng/L		10/11/20 19:23	10/12/20 12:24	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<5.0		5.0	1.2	ng/L		10/11/20 19:23	10/12/20 12:24	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<5.0		5.0	1.3	ng/L		10/11/20 19:23	10/12/20 12:24	1
NMeFOSE	<4.0		4.0	1.4	ng/L		10/11/20 19:23	10/12/20 12:24	1
NEtFOSE	<2.0		2.0	0.85	ng/L		10/11/20 19:23	10/12/20 12:24	1
4:2 FTS	2.3		2.0	0.24	ng/L		10/11/20 19:23	10/12/20 12:24	1
6:2 FTS	240		5.0	2.5	ng/L		10/11/20 19:23	10/12/20 12:24	1
8:2 FTS	45		2.0	0.46	ng/L		10/11/20 19:23	10/12/20 12:24	1
10:2 FTS	<2.0		2.0	0.67	ng/L		10/11/20 19:23	10/12/20 12:24	1
DONA	<2.0		2.0	0.40	ng/L		10/11/20 19:23	10/12/20 12:24	1
HFPO-DA (GenX)	<4.0		4.0	1.5	ng/L		10/11/20 19:23	10/12/20 12:24	1
F-53B Major	<2.0		2.0	0.24	ng/L		10/11/20 19:23	10/12/20 12:24	1
F-53B Minor	<2.0		2.0	0.32	ng/L		10/11/20 19:23	10/12/20 12:24	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	47		25 - 150				10/11/20 19:23	10/12/20 12:24	1
13C5 PFPeA	64		25 - 150				10/11/20 19:23	10/12/20 12:24	1
13C2 PFHxA	72		25 - 150				10/11/20 19:23	10/12/20 12:24	1
13C4 PFHpA	87		25 - 150				10/11/20 19:23	10/12/20 12:24	1
13C4 PFOA	93		25 - 150				10/11/20 19:23	10/12/20 12:24	1
13C5 PFNA	95		25 - 150				10/11/20 19:23	10/12/20 12:24	1

Eurofins TestAmerica, Chicago

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189112-1

Client Sample ID: SW-U04 (10072020)

Lab Sample ID: 500-189112-4

Date Collected: 10/07/20 14:55

Matrix: Water

Date Received: 10/09/20 09:40

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

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C2 PFDA	91		25 - 150	10/11/20 19:23	10/12/20 12:24	1
13C2 PFUnA	97		25 - 150	10/11/20 19:23	10/12/20 12:24	1
13C2 PFDoA	92		25 - 150	10/11/20 19:23	10/12/20 12:24	1
13C2 PFTeDA	74		25 - 150	10/11/20 19:23	10/12/20 12:24	1
13C2 PFHxDA	63		25 - 150	10/11/20 19:23	10/12/20 12:24	1
13C3 PFBS	85		25 - 150	10/11/20 19:23	10/12/20 12:24	1
18O2 PFHxS	91		25 - 150	10/11/20 19:23	10/12/20 12:24	1
13C8 FOSA	88		25 - 150	10/11/20 19:23	10/12/20 12:24	1
d3-NMeFOSAA	95		25 - 150	10/11/20 19:23	10/12/20 12:24	1
d5-NEtFOSAA	104		25 - 150	10/11/20 19:23	10/12/20 12:24	1
d-N-MeFOSA-M	49		20 - 150	10/11/20 19:23	10/12/20 12:24	1
d-N-EtFOSA-M	40		20 - 150	10/11/20 19:23	10/12/20 12:24	1
d7-N-MeFOSE-M	37		10 - 120	10/11/20 19:23	10/12/20 12:24	1
d9-N-EtFOSE-M	36		10 - 120	10/11/20 19:23	10/12/20 12:24	1
M2-4:2 FTS	153	*5	25 - 150	10/11/20 19:23	10/12/20 12:24	1
M2-6:2 FTS	151	*5	25 - 150	10/11/20 19:23	10/12/20 12:24	1
M2-8:2 FTS	176	*5	25 - 150	10/11/20 19:23	10/12/20 12:24	1
13C3 HFPO-DA	84		25 - 150	10/11/20 19:23	10/12/20 12:24	1

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

<i>Analyte</i>	<i>Result</i>	<i>Qualifier</i>	<i>RL</i>	<i>MDL</i>	<i>Unit</i>	<i>D</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Perfluorooctanesulfonic acid (PFOS)	360		20	5.4	ng/L		10/11/20 19:23	10/13/20 15:37	10
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>			
13C4 PFOS	87		25 - 150	10/11/20 19:23	10/13/20 15:37	10			

General Chemistry

<i>Analyte</i>	<i>Result</i>	<i>Qualifier</i>	<i>RL</i>	<i>MDL</i>	<i>Unit</i>	<i>D</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Total Suspended Solids	3.0	J	5.0	1.9	mg/L			10/13/20 15:46	1

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189112-1

Client Sample ID: SW-U05 (10072020)

Lab Sample ID: 500-189112-5

Date Collected: 10/07/20 15:10

Matrix: Water

Date Received: 10/09/20 09:40

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	34		4.5	2.2	ng/L		10/11/20 19:23	10/12/20 12:34	1
Perfluoropentanoic acid (PFPeA)	68		1.8	0.44	ng/L		10/11/20 19:23	10/12/20 12:34	1
Perfluorohexanoic acid (PFHxA)	54		1.8	0.52	ng/L		10/11/20 19:23	10/12/20 12:34	1
Perfluoroheptanoic acid (PFHpA)	35		1.8	0.23	ng/L		10/11/20 19:23	10/12/20 12:34	1
Perfluorooctanoic acid (PFOA)	120		1.8	0.77	ng/L		10/11/20 19:23	10/12/20 12:34	1
Perfluorononanoic acid (PFNA)	6.1		1.8	0.24	ng/L		10/11/20 19:23	10/12/20 12:34	1
Perfluorodecanoic acid (PFDA)	0.63	J	1.8	0.28	ng/L		10/11/20 19:23	10/12/20 12:34	1
Perfluoroundecanoic acid (PFUnA)	<1.8		1.8	0.99	ng/L		10/11/20 19:23	10/12/20 12:34	1
Perfluorododecanoic acid (PFDoA)	<1.8		1.8	0.50	ng/L		10/11/20 19:23	10/12/20 12:34	1
Perfluorotridecanoic acid (PFTriA)	<1.8		1.8	1.2	ng/L		10/11/20 19:23	10/12/20 12:34	1
Perfluorotetradecanoic acid (PFTeA)	<1.8		1.8	0.66	ng/L		10/11/20 19:23	10/12/20 12:34	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<1.8		1.8	0.80	ng/L		10/11/20 19:23	10/12/20 12:34	1
Perfluoro-n-octadecanoic acid (PFODA)	<1.8		1.8	0.85	ng/L		10/11/20 19:23	10/12/20 12:34	1
Perfluorobutanesulfonic acid (PFBS)	3.2		1.8	0.18	ng/L		10/11/20 19:23	10/12/20 12:34	1
Perfluoropentanesulfonic acid (PFPeS)	2.6		1.8	0.27	ng/L		10/11/20 19:23	10/12/20 12:34	1
Perfluorohexanesulfonic acid (PFHxS)	37		1.8	0.52	ng/L		10/11/20 19:23	10/12/20 12:34	1
Perfluoroheptanesulfonic Acid (PFHpS)	5.1		1.8	0.17	ng/L		10/11/20 19:23	10/12/20 12:34	1
Perfluorooctanesulfonic acid (PFOS)	200		1.8	0.49	ng/L		10/11/20 19:23	10/12/20 12:34	1
Perfluorononanesulfonic acid (PFNS)	<1.8		1.8	0.33	ng/L		10/11/20 19:23	10/12/20 12:34	1
Perfluorodecanesulfonic acid (PFDS)	<1.8		1.8	0.29	ng/L		10/11/20 19:23	10/12/20 12:34	1
Perfluorododecanesulfonic acid (PFDoS)	<1.8		1.8	0.88	ng/L		10/11/20 19:23	10/12/20 12:34	1
Perfluorooctanesulfonamide (FOSA)	<1.8		1.8	0.89	ng/L		10/11/20 19:23	10/12/20 12:34	1
NEtFOSA	<1.8		1.8	0.79	ng/L		10/11/20 19:23	10/12/20 12:34	1
NMeFOSA	<1.8		1.8	0.39	ng/L		10/11/20 19:23	10/12/20 12:34	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<4.5		4.5	1.1	ng/L		10/11/20 19:23	10/12/20 12:34	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<4.5		4.5	1.2	ng/L		10/11/20 19:23	10/12/20 12:34	1
NMeFOSE	<3.6		3.6	1.3	ng/L		10/11/20 19:23	10/12/20 12:34	1
NEtFOSE	<1.8		1.8	0.77	ng/L		10/11/20 19:23	10/12/20 12:34	1
4:2 FTS	1.2	J	1.8	0.22	ng/L		10/11/20 19:23	10/12/20 12:34	1
6:2 FTS	46		4.5	2.3	ng/L		10/11/20 19:23	10/12/20 12:34	1
8:2 FTS	4.2		1.8	0.42	ng/L		10/11/20 19:23	10/12/20 12:34	1
10:2 FTS	<1.8		1.8	0.61	ng/L		10/11/20 19:23	10/12/20 12:34	1
DONA	<1.8		1.8	0.36	ng/L		10/11/20 19:23	10/12/20 12:34	1
HFPO-DA (GenX)	<3.6		3.6	1.4	ng/L		10/11/20 19:23	10/12/20 12:34	1
F-53B Major	<1.8		1.8	0.22	ng/L		10/11/20 19:23	10/12/20 12:34	1
F-53B Minor	<1.8		1.8	0.29	ng/L		10/11/20 19:23	10/12/20 12:34	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	45		25 - 150				10/11/20 19:23	10/12/20 12:34	1
13C5 PFPeA	64		25 - 150				10/11/20 19:23	10/12/20 12:34	1
13C2 PFHxA	80		25 - 150				10/11/20 19:23	10/12/20 12:34	1
13C4 PFHpA	86		25 - 150				10/11/20 19:23	10/12/20 12:34	1
13C4 PFOA	95		25 - 150				10/11/20 19:23	10/12/20 12:34	1

Eurofins TestAmerica, Chicago

Client Sample Results

Client: ARCADIS U.S., Inc.
 Project/Site: Marinette 30015296.00009

Job ID: 500-189112-1

Client Sample ID: SW-U05 (10072020)

Lab Sample ID: 500-189112-5

Date Collected: 10/07/20 15:10

Matrix: Water

Date Received: 10/09/20 09:40

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C5 PFNA	103		25 - 150	10/11/20 19:23	10/12/20 12:34	1
13C2 PFDA	103		25 - 150	10/11/20 19:23	10/12/20 12:34	1
13C2 PFUnA	60		25 - 150	10/11/20 19:23	10/12/20 12:34	1
13C2 PFDoA	41		25 - 150	10/11/20 19:23	10/12/20 12:34	1
13C2 PFTeDA	65		25 - 150	10/11/20 19:23	10/12/20 12:34	1
13C2 PFHxDA	62		25 - 150	10/11/20 19:23	10/12/20 12:34	1
13C3 PFBS	85		25 - 150	10/11/20 19:23	10/12/20 12:34	1
18O2 PFHxS	95		25 - 150	10/11/20 19:23	10/12/20 12:34	1
13C4 PFOS	99		25 - 150	10/11/20 19:23	10/12/20 12:34	1
13C8 FOSA	105		25 - 150	10/11/20 19:23	10/12/20 12:34	1
d3-NMeFOSAA	82		25 - 150	10/11/20 19:23	10/12/20 12:34	1
d5-NEtFOSAA	56		25 - 150	10/11/20 19:23	10/12/20 12:34	1
d-N-MeFOSA-M	54		20 - 150	10/11/20 19:23	10/12/20 12:34	1
d-N-EtFOSA-M	23		20 - 150	10/11/20 19:23	10/12/20 12:34	1
d7-N-MeFOSE-M	43		10 - 120	10/11/20 19:23	10/12/20 12:34	1
d9-N-EtFOSE-M	34		10 - 120	10/11/20 19:23	10/12/20 12:34	1
M2-4:2 FTS	153	*5	25 - 150	10/11/20 19:23	10/12/20 12:34	1
M2-6:2 FTS	184	*5	25 - 150	10/11/20 19:23	10/12/20 12:34	1
M2-8:2 FTS	210	*5	25 - 150	10/11/20 19:23	10/12/20 12:34	1
13C3 HFPO-DA	84		25 - 150	10/11/20 19:23	10/12/20 12:34	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	3.0	J	5.0	1.9	mg/L			10/13/20 15:47	1

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189112-1

Client Sample ID: SW-U06 (10072020)

Lab Sample ID: 500-189112-6

Date Collected: 10/07/20 15:15

Matrix: Water

Date Received: 10/09/20 09:40

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	26		4.7	2.2	ng/L		10/11/20 19:23	10/12/20 12:43	1
Perfluoropentanoic acid (PFPeA)	52		1.9	0.46	ng/L		10/11/20 19:23	10/12/20 12:43	1
Perfluorohexanoic acid (PFHxA)	37		1.9	0.54	ng/L		10/11/20 19:23	10/12/20 12:43	1
Perfluoroheptanoic acid (PFHpA)	25		1.9	0.23	ng/L		10/11/20 19:23	10/12/20 12:43	1
Perfluorooctanoic acid (PFOA)	40		1.9	0.79	ng/L		10/11/20 19:23	10/12/20 12:43	1
Perfluorononanoic acid (PFNA)	3.7		1.9	0.25	ng/L		10/11/20 19:23	10/12/20 12:43	1
Perfluorodecanoic acid (PFDA)	0.48	J	1.9	0.29	ng/L		10/11/20 19:23	10/12/20 12:43	1
Perfluoroundecanoic acid (PFUnA)	<1.9		1.9	1.0	ng/L		10/11/20 19:23	10/12/20 12:43	1
Perfluorododecanoic acid (PFDoA)	<1.9		1.9	0.51	ng/L		10/11/20 19:23	10/12/20 12:43	1
Perfluorotridecanoic acid (PFTriA)	<1.9		1.9	1.2	ng/L		10/11/20 19:23	10/12/20 12:43	1
Perfluorotetradecanoic acid (PFTeA)	<1.9		1.9	0.68	ng/L		10/11/20 19:23	10/12/20 12:43	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<1.9		1.9	0.83	ng/L		10/11/20 19:23	10/12/20 12:43	1
Perfluoro-n-octadecanoic acid (PFODA)	<1.9		1.9	0.87	ng/L		10/11/20 19:23	10/12/20 12:43	1
Perfluorobutanesulfonic acid (PFBS)	3.1		1.9	0.19	ng/L		10/11/20 19:23	10/12/20 12:43	1
Perfluoropentanesulfonic acid (PFPeS)	2.7		1.9	0.28	ng/L		10/11/20 19:23	10/12/20 12:43	1
Perfluorohexanesulfonic acid (PFHxS)	37		1.9	0.53	ng/L		10/11/20 19:23	10/12/20 12:43	1
Perfluoroheptanesulfonic Acid (PFHpS)	4.3		1.9	0.18	ng/L		10/11/20 19:23	10/12/20 12:43	1
Perfluorooctanesulfonic acid (PFOS)	140		1.9	0.50	ng/L		10/11/20 19:23	10/12/20 12:43	1
Perfluorononanesulfonic acid (PFNS)	<1.9		1.9	0.34	ng/L		10/11/20 19:23	10/12/20 12:43	1
Perfluorodecanesulfonic acid (PFDS)	<1.9		1.9	0.30	ng/L		10/11/20 19:23	10/12/20 12:43	1
Perfluorododecanesulfonic acid (PFDoS)	<1.9		1.9	0.90	ng/L		10/11/20 19:23	10/12/20 12:43	1
Perfluorooctanesulfonamide (FOSA)	<1.9		1.9	0.91	ng/L		10/11/20 19:23	10/12/20 12:43	1
NEtFOSA	<1.9		1.9	0.81	ng/L		10/11/20 19:23	10/12/20 12:43	1
NMeFOSA	<1.9		1.9	0.40	ng/L		10/11/20 19:23	10/12/20 12:43	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<4.7		4.7	1.1	ng/L		10/11/20 19:23	10/12/20 12:43	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<4.7		4.7	1.2	ng/L		10/11/20 19:23	10/12/20 12:43	1
NMeFOSE	<3.7		3.7	1.3	ng/L		10/11/20 19:23	10/12/20 12:43	1
NEtFOSE	<1.9		1.9	0.79	ng/L		10/11/20 19:23	10/12/20 12:43	1
4:2 FTS	0.36	J	1.9	0.22	ng/L		10/11/20 19:23	10/12/20 12:43	1
6:2 FTS	28		4.7	2.3	ng/L		10/11/20 19:23	10/12/20 12:43	1
8:2 FTS	1.8	J	1.9	0.43	ng/L		10/11/20 19:23	10/12/20 12:43	1
10:2 FTS	<1.9		1.9	0.62	ng/L		10/11/20 19:23	10/12/20 12:43	1
DONA	<1.9		1.9	0.37	ng/L		10/11/20 19:23	10/12/20 12:43	1
HFPO-DA (GenX)	<3.7		3.7	1.4	ng/L		10/11/20 19:23	10/12/20 12:43	1
F-53B Major	<1.9		1.9	0.22	ng/L		10/11/20 19:23	10/12/20 12:43	1
F-53B Minor	<1.9		1.9	0.30	ng/L		10/11/20 19:23	10/12/20 12:43	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	44		25 - 150				10/11/20 19:23	10/12/20 12:43	1
13C5 PFPeA	63		25 - 150				10/11/20 19:23	10/12/20 12:43	1
13C2 PFHxA	73		25 - 150				10/11/20 19:23	10/12/20 12:43	1
13C4 PFHpA	83		25 - 150				10/11/20 19:23	10/12/20 12:43	1
13C4 PFOA	91		25 - 150				10/11/20 19:23	10/12/20 12:43	1

Eurofins TestAmerica, Chicago

Client Sample Results

Client: ARCADIS U.S., Inc.
 Project/Site: Marinette 30015296.00009

Job ID: 500-189112-1

Client Sample ID: SW-U06 (10072020)

Lab Sample ID: 500-189112-6

Date Collected: 10/07/20 15:15

Matrix: Water

Date Received: 10/09/20 09:40

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C5 PFNA	90		25 - 150	10/11/20 19:23	10/12/20 12:43	1
13C2 PFDA	94		25 - 150	10/11/20 19:23	10/12/20 12:43	1
13C2 PFUnA	89		25 - 150	10/11/20 19:23	10/12/20 12:43	1
13C2 PFDoA	82		25 - 150	10/11/20 19:23	10/12/20 12:43	1
13C2 PFTeDA	70		25 - 150	10/11/20 19:23	10/12/20 12:43	1
13C2 PFHxDA	58		25 - 150	10/11/20 19:23	10/12/20 12:43	1
13C3 PFBS	81		25 - 150	10/11/20 19:23	10/12/20 12:43	1
18O2 PFHxS	91		25 - 150	10/11/20 19:23	10/12/20 12:43	1
13C4 PFOS	95		25 - 150	10/11/20 19:23	10/12/20 12:43	1
13C8 FOSA	85		25 - 150	10/11/20 19:23	10/12/20 12:43	1
d3-NMeFOSAA	88		25 - 150	10/11/20 19:23	10/12/20 12:43	1
d5-NEtFOSAA	94		25 - 150	10/11/20 19:23	10/12/20 12:43	1
d-N-MeFOSA-M	51		20 - 150	10/11/20 19:23	10/12/20 12:43	1
d-N-EtFOSA-M	42		20 - 150	10/11/20 19:23	10/12/20 12:43	1
d7-N-MeFOSE-M	41		10 - 120	10/11/20 19:23	10/12/20 12:43	1
d9-N-EtFOSE-M	39		10 - 120	10/11/20 19:23	10/12/20 12:43	1
M2-4:2 FTS	144		25 - 150	10/11/20 19:23	10/12/20 12:43	1
M2-6:2 FTS	177	*5	25 - 150	10/11/20 19:23	10/12/20 12:43	1
M2-8:2 FTS	162	*5	25 - 150	10/11/20 19:23	10/12/20 12:43	1
13C3 HFPO-DA	81		25 - 150	10/11/20 19:23	10/12/20 12:43	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	5.0		5.0	1.9	mg/L			10/13/20 15:47	1

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189112-1

Client Sample ID: SW-U07 (10072020)

Lab Sample ID: 500-189112-7

Date Collected: 10/07/20 15:25

Matrix: Water

Date Received: 10/09/20 09:40

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	25		4.6	2.2	ng/L		10/11/20 19:23	10/12/20 12:52	1
Perfluoropentanoic acid (PFPeA)	49		1.8	0.45	ng/L		10/11/20 19:23	10/12/20 12:52	1
Perfluorohexanoic acid (PFHxA)	37		1.8	0.54	ng/L		10/11/20 19:23	10/12/20 12:52	1
Perfluoroheptanoic acid (PFHpA)	22		1.8	0.23	ng/L		10/11/20 19:23	10/12/20 12:52	1
Perfluorooctanoic acid (PFOA)	40		1.8	0.79	ng/L		10/11/20 19:23	10/12/20 12:52	1
Perfluorononanoic acid (PFNA)	3.5		1.8	0.25	ng/L		10/11/20 19:23	10/12/20 12:52	1
Perfluorodecanoic acid (PFDA)	0.37	J	1.8	0.29	ng/L		10/11/20 19:23	10/12/20 12:52	1
Perfluoroundecanoic acid (PFUnA)	<1.8		1.8	1.0	ng/L		10/11/20 19:23	10/12/20 12:52	1
Perfluorododecanoic acid (PFDoA)	<1.8		1.8	0.51	ng/L		10/11/20 19:23	10/12/20 12:52	1
Perfluorotridecanoic acid (PFTriA)	<1.8		1.8	1.2	ng/L		10/11/20 19:23	10/12/20 12:52	1
Perfluorotetradecanoic acid (PFTeA)	<1.8		1.8	0.67	ng/L		10/11/20 19:23	10/12/20 12:52	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	1.0	J B	1.8	0.82	ng/L		10/11/20 19:23	10/12/20 12:52	1
Perfluoro-n-octadecanoic acid (PFODA)	<1.8		1.8	0.87	ng/L		10/11/20 19:23	10/12/20 12:52	1
Perfluorobutanesulfonic acid (PFBS)	3.0		1.8	0.18	ng/L		10/11/20 19:23	10/12/20 12:52	1
Perfluoropentanesulfonic acid (PFPeS)	2.5		1.8	0.28	ng/L		10/11/20 19:23	10/12/20 12:52	1
Perfluorohexanesulfonic acid (PFHxS)	38		1.8	0.53	ng/L		10/11/20 19:23	10/12/20 12:52	1
Perfluoroheptanesulfonic Acid (PFHpS)	4.4		1.8	0.18	ng/L		10/11/20 19:23	10/12/20 12:52	1
Perfluorooctanesulfonic acid (PFOS)	150		1.8	0.50	ng/L		10/11/20 19:23	10/12/20 12:52	1
Perfluorononanesulfonic acid (PFNS)	<1.8		1.8	0.34	ng/L		10/11/20 19:23	10/12/20 12:52	1
Perfluorodecanesulfonic acid (PFDS)	<1.8		1.8	0.30	ng/L		10/11/20 19:23	10/12/20 12:52	1
Perfluorododecanesulfonic acid (PFDoS)	<1.8		1.8	0.90	ng/L		10/11/20 19:23	10/12/20 12:52	1
Perfluorooctanesulfonamide (FOSA)	<1.8		1.8	0.91	ng/L		10/11/20 19:23	10/12/20 12:52	1
NEtFOSA	<1.8		1.8	0.80	ng/L		10/11/20 19:23	10/12/20 12:52	1
NMeFOSA	<1.8		1.8	0.40	ng/L		10/11/20 19:23	10/12/20 12:52	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<4.6		4.6	1.1	ng/L		10/11/20 19:23	10/12/20 12:52	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<4.6		4.6	1.2	ng/L		10/11/20 19:23	10/12/20 12:52	1
NMeFOSE	<3.7		3.7	1.3	ng/L		10/11/20 19:23	10/12/20 12:52	1
NEtFOSE	<1.8		1.8	0.79	ng/L		10/11/20 19:23	10/12/20 12:52	1
4:2 FTS	0.33	J	1.8	0.22	ng/L		10/11/20 19:23	10/12/20 12:52	1
6:2 FTS	26		4.6	2.3	ng/L		10/11/20 19:23	10/12/20 12:52	1
8:2 FTS	2.0		1.8	0.42	ng/L		10/11/20 19:23	10/12/20 12:52	1
10:2 FTS	<1.8		1.8	0.62	ng/L		10/11/20 19:23	10/12/20 12:52	1
DONA	<1.8		1.8	0.37	ng/L		10/11/20 19:23	10/12/20 12:52	1
HFPO-DA (GenX)	<3.7		3.7	1.4	ng/L		10/11/20 19:23	10/12/20 12:52	1
F-53B Major	<1.8		1.8	0.22	ng/L		10/11/20 19:23	10/12/20 12:52	1
F-53B Minor	<1.8		1.8	0.30	ng/L		10/11/20 19:23	10/12/20 12:52	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	45		25 - 150				10/11/20 19:23	10/12/20 12:52	1
13C5 PFPeA	65		25 - 150				10/11/20 19:23	10/12/20 12:52	1
13C2 PFHxA	76		25 - 150				10/11/20 19:23	10/12/20 12:52	1
13C4 PFHpA	85		25 - 150				10/11/20 19:23	10/12/20 12:52	1
13C4 PFOA	89		25 - 150				10/11/20 19:23	10/12/20 12:52	1

Eurofins TestAmerica, Chicago

Client Sample Results

Client: ARCADIS U.S., Inc.
 Project/Site: Marinette 30015296.00009

Job ID: 500-189112-1

Client Sample ID: SW-U07 (10072020)

Lab Sample ID: 500-189112-7

Date Collected: 10/07/20 15:25

Matrix: Water

Date Received: 10/09/20 09:40

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C5 PFNA	94		25 - 150	10/11/20 19:23	10/12/20 12:52	1
13C2 PFDA	96		25 - 150	10/11/20 19:23	10/12/20 12:52	1
13C2 PFUnA	95		25 - 150	10/11/20 19:23	10/12/20 12:52	1
13C2 PFDoA	99		25 - 150	10/11/20 19:23	10/12/20 12:52	1
13C2 PFTeDA	65		25 - 150	10/11/20 19:23	10/12/20 12:52	1
13C2 PFHxDA	57		25 - 150	10/11/20 19:23	10/12/20 12:52	1
13C3 PFBS	86		25 - 150	10/11/20 19:23	10/12/20 12:52	1
18O2 PFHxS	92		25 - 150	10/11/20 19:23	10/12/20 12:52	1
13C4 PFOS	94		25 - 150	10/11/20 19:23	10/12/20 12:52	1
13C8 FOSA	84		25 - 150	10/11/20 19:23	10/12/20 12:52	1
d3-NMeFOSAA	94		25 - 150	10/11/20 19:23	10/12/20 12:52	1
d5-NEtFOSAA	99		25 - 150	10/11/20 19:23	10/12/20 12:52	1
d-N-MeFOSA-M	52		20 - 150	10/11/20 19:23	10/12/20 12:52	1
d-N-EtFOSA-M	42		20 - 150	10/11/20 19:23	10/12/20 12:52	1
d7-N-MeFOSE-M	52		10 - 120	10/11/20 19:23	10/12/20 12:52	1
d9-N-EtFOSE-M	47		10 - 120	10/11/20 19:23	10/12/20 12:52	1
M2-4:2 FTS	153	*5	25 - 150	10/11/20 19:23	10/12/20 12:52	1
M2-6:2 FTS	178	*5	25 - 150	10/11/20 19:23	10/12/20 12:52	1
M2-8:2 FTS	174	*5	25 - 150	10/11/20 19:23	10/12/20 12:52	1
13C3 HFPO-DA	85		25 - 150	10/11/20 19:23	10/12/20 12:52	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	4.5	J	5.0	1.9	mg/L			10/13/20 15:48	1

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189112-1

Client Sample ID: SW-U08 (10072020)

Lab Sample ID: 500-189112-8

Date Collected: 10/07/20 15:30

Matrix: Water

Date Received: 10/09/20 09:40

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	24		4.8	2.3	ng/L		10/11/20 19:23	10/12/20 13:02	1
Perfluoropentanoic acid (PFPeA)	48		1.9	0.47	ng/L		10/11/20 19:23	10/12/20 13:02	1
Perfluorohexanoic acid (PFHxA)	36		1.9	0.55	ng/L		10/11/20 19:23	10/12/20 13:02	1
Perfluoroheptanoic acid (PFHpA)	24		1.9	0.24	ng/L		10/11/20 19:23	10/12/20 13:02	1
Perfluorooctanoic acid (PFOA)	38		1.9	0.81	ng/L		10/11/20 19:23	10/12/20 13:02	1
Perfluorononanoic acid (PFNA)	4.4		1.9	0.26	ng/L		10/11/20 19:23	10/12/20 13:02	1
Perfluorodecanoic acid (PFDA)	0.37	J	1.9	0.30	ng/L		10/11/20 19:23	10/12/20 13:02	1
Perfluoroundecanoic acid (PFUnA)	<1.9		1.9	1.0	ng/L		10/11/20 19:23	10/12/20 13:02	1
Perfluorododecanoic acid (PFDoA)	<1.9		1.9	0.52	ng/L		10/11/20 19:23	10/12/20 13:02	1
Perfluorotridecanoic acid (PFTriA)	<1.9		1.9	1.2	ng/L		10/11/20 19:23	10/12/20 13:02	1
Perfluorotetradecanoic acid (PFTeA)	<1.9		1.9	0.70	ng/L		10/11/20 19:23	10/12/20 13:02	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	0.93	J B	1.9	0.85	ng/L		10/11/20 19:23	10/12/20 13:02	1
Perfluoro-n-octadecanoic acid (PFODA)	<1.9		1.9	0.90	ng/L		10/11/20 19:23	10/12/20 13:02	1
Perfluorobutanesulfonic acid (PFBS)	3.6		1.9	0.19	ng/L		10/11/20 19:23	10/12/20 13:02	1
Perfluoropentanesulfonic acid (PFPeS)	4.4		1.9	0.29	ng/L		10/11/20 19:23	10/12/20 13:02	1
Perfluorohexanesulfonic acid (PFHxS)	59		1.9	0.54	ng/L		10/11/20 19:23	10/12/20 13:02	1
Perfluoroheptanesulfonic Acid (PFHpS)	8.4		1.9	0.18	ng/L		10/11/20 19:23	10/12/20 13:02	1
Perfluorooctanesulfonic acid (PFOS)	230		1.9	0.52	ng/L		10/11/20 19:23	10/12/20 13:02	1
Perfluorononanesulfonic acid (PFNS)	<1.9		1.9	0.35	ng/L		10/11/20 19:23	10/12/20 13:02	1
Perfluorodecanesulfonic acid (PFDS)	<1.9		1.9	0.31	ng/L		10/11/20 19:23	10/12/20 13:02	1
Perfluorododecanesulfonic acid (PFDoS)	<1.9		1.9	0.93	ng/L		10/11/20 19:23	10/12/20 13:02	1
Perfluorooctanesulfonamide (FOSA)	<1.9		1.9	0.93	ng/L		10/11/20 19:23	10/12/20 13:02	1
NEtFOSA	<1.9		1.9	0.83	ng/L		10/11/20 19:23	10/12/20 13:02	1
NMeFOSA	<1.9		1.9	0.41	ng/L		10/11/20 19:23	10/12/20 13:02	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<4.8		4.8	1.1	ng/L		10/11/20 19:23	10/12/20 13:02	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<4.8		4.8	1.2	ng/L		10/11/20 19:23	10/12/20 13:02	1
NMeFOSE	<3.8		3.8	1.3	ng/L		10/11/20 19:23	10/12/20 13:02	1
NEtFOSE	<1.9		1.9	0.81	ng/L		10/11/20 19:23	10/12/20 13:02	1
4:2 FTS	0.24	J	1.9	0.23	ng/L		10/11/20 19:23	10/12/20 13:02	1
6:2 FTS	28		4.8	2.4	ng/L		10/11/20 19:23	10/12/20 13:02	1
8:2 FTS	2.2		1.9	0.44	ng/L		10/11/20 19:23	10/12/20 13:02	1
10:2 FTS	<1.9		1.9	0.64	ng/L		10/11/20 19:23	10/12/20 13:02	1
DONA	<1.9		1.9	0.38	ng/L		10/11/20 19:23	10/12/20 13:02	1
HFPO-DA (GenX)	<3.8		3.8	1.4	ng/L		10/11/20 19:23	10/12/20 13:02	1
F-53B Major	<1.9		1.9	0.23	ng/L		10/11/20 19:23	10/12/20 13:02	1
F-53B Minor	<1.9		1.9	0.31	ng/L		10/11/20 19:23	10/12/20 13:02	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	40		25 - 150				10/11/20 19:23	10/12/20 13:02	1
13C5 PFPeA	57		25 - 150				10/11/20 19:23	10/12/20 13:02	1
13C2 PFHxA	68		25 - 150				10/11/20 19:23	10/12/20 13:02	1
13C4 PFHpA	75		25 - 150				10/11/20 19:23	10/12/20 13:02	1
13C4 PFOA	82		25 - 150				10/11/20 19:23	10/12/20 13:02	1

Eurofins TestAmerica, Chicago

Client Sample Results

Client: ARCADIS U.S., Inc.
 Project/Site: Marinette 30015296.00009

Job ID: 500-189112-1

Client Sample ID: SW-U08 (10072020)

Lab Sample ID: 500-189112-8

Date Collected: 10/07/20 15:30

Matrix: Water

Date Received: 10/09/20 09:40

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C5 PFNA	73		25 - 150	10/11/20 19:23	10/12/20 13:02	1
13C2 PFDA	77		25 - 150	10/11/20 19:23	10/12/20 13:02	1
13C2 PFUnA	73		25 - 150	10/11/20 19:23	10/12/20 13:02	1
13C2 PFDoA	69		25 - 150	10/11/20 19:23	10/12/20 13:02	1
13C2 PFTeDA	61		25 - 150	10/11/20 19:23	10/12/20 13:02	1
13C2 PFHxDA	55		25 - 150	10/11/20 19:23	10/12/20 13:02	1
13C3 PFBS	74		25 - 150	10/11/20 19:23	10/12/20 13:02	1
18O2 PFHxS	79		25 - 150	10/11/20 19:23	10/12/20 13:02	1
13C4 PFOS	82		25 - 150	10/11/20 19:23	10/12/20 13:02	1
13C8 FOSA	74		25 - 150	10/11/20 19:23	10/12/20 13:02	1
d3-NMeFOSAA	78		25 - 150	10/11/20 19:23	10/12/20 13:02	1
d5-NEtFOSAA	85		25 - 150	10/11/20 19:23	10/12/20 13:02	1
d-N-MeFOSA-M	44		20 - 150	10/11/20 19:23	10/12/20 13:02	1
d-N-EtFOSA-M	35		20 - 150	10/11/20 19:23	10/12/20 13:02	1
d7-N-MeFOSE-M	33		10 - 120	10/11/20 19:23	10/12/20 13:02	1
d9-N-EtFOSE-M	33		10 - 120	10/11/20 19:23	10/12/20 13:02	1
M2-4:2 FTS	135		25 - 150	10/11/20 19:23	10/12/20 13:02	1
M2-6:2 FTS	149		25 - 150	10/11/20 19:23	10/12/20 13:02	1
M2-8:2 FTS	141		25 - 150	10/11/20 19:23	10/12/20 13:02	1
13C3 HFPO-DA	72		25 - 150	10/11/20 19:23	10/12/20 13:02	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	3.5	J	5.0	1.9	mg/L			10/13/20 15:49	1

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189112-1

Client Sample ID: SW-U09 (10072020)

Lab Sample ID: 500-189112-9

Date Collected: 10/07/20 15:45

Matrix: Water

Date Received: 10/09/20 09:40

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	20		4.7	2.2	ng/L		10/11/20 19:23	10/12/20 13:30	1
Perfluoropentanoic acid (PFPeA)	39		1.9	0.46	ng/L		10/11/20 19:23	10/12/20 13:30	1
Perfluorohexanoic acid (PFHxA)	28		1.9	0.54	ng/L		10/11/20 19:23	10/12/20 13:30	1
Perfluoroheptanoic acid (PFHpA)	17		1.9	0.23	ng/L		10/11/20 19:23	10/12/20 13:30	1
Perfluorooctanoic acid (PFOA)	27		1.9	0.79	ng/L		10/11/20 19:23	10/12/20 13:30	1
Perfluorononanoic acid (PFNA)	3.1		1.9	0.25	ng/L		10/11/20 19:23	10/12/20 13:30	1
Perfluorodecanoic acid (PFDA)	0.53	J	1.9	0.29	ng/L		10/11/20 19:23	10/12/20 13:30	1
Perfluoroundecanoic acid (PFUnA)	<1.9		1.9	1.0	ng/L		10/11/20 19:23	10/12/20 13:30	1
Perfluorododecanoic acid (PFDoA)	<1.9		1.9	0.51	ng/L		10/11/20 19:23	10/12/20 13:30	1
Perfluorotridecanoic acid (PFTriA)	<1.9		1.9	1.2	ng/L		10/11/20 19:23	10/12/20 13:30	1
Perfluorotetradecanoic acid (PFTeA)	<1.9		1.9	0.68	ng/L		10/11/20 19:23	10/12/20 13:30	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	1.0	J B	1.9	0.83	ng/L		10/11/20 19:23	10/12/20 13:30	1
Perfluoro-n-octadecanoic acid (PFODA)	<1.9		1.9	0.88	ng/L		10/11/20 19:23	10/12/20 13:30	1
Perfluorobutanesulfonic acid (PFBS)	2.4		1.9	0.19	ng/L		10/11/20 19:23	10/12/20 13:30	1
Perfluoropentanesulfonic acid (PFPeS)	0.73	J	1.9	0.28	ng/L		10/11/20 19:23	10/12/20 13:30	1
Perfluorohexanesulfonic acid (PFHxS)	14		1.9	0.53	ng/L		10/11/20 19:23	10/12/20 13:30	1
Perfluoroheptanesulfonic Acid (PFHpS)	0.91	J	1.9	0.18	ng/L		10/11/20 19:23	10/12/20 13:30	1
Perfluorooctanesulfonic acid (PFOS)	69		1.9	0.50	ng/L		10/11/20 19:23	10/12/20 13:30	1
Perfluorononanesulfonic acid (PFNS)	<1.9		1.9	0.35	ng/L		10/11/20 19:23	10/12/20 13:30	1
Perfluorodecanesulfonic acid (PFDS)	<1.9		1.9	0.30	ng/L		10/11/20 19:23	10/12/20 13:30	1
Perfluorododecanesulfonic acid (PFDoS)	<1.9		1.9	0.91	ng/L		10/11/20 19:23	10/12/20 13:30	1
Perfluorooctanesulfonamide (FOSA)	<1.9		1.9	0.92	ng/L		10/11/20 19:23	10/12/20 13:30	1
NEtFOSA	<1.9		1.9	0.81	ng/L		10/11/20 19:23	10/12/20 13:30	1
NMeFOSA	<1.9		1.9	0.40	ng/L		10/11/20 19:23	10/12/20 13:30	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<4.7		4.7	1.1	ng/L		10/11/20 19:23	10/12/20 13:30	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<4.7		4.7	1.2	ng/L		10/11/20 19:23	10/12/20 13:30	1
NMeFOSE	<3.7		3.7	1.3	ng/L		10/11/20 19:23	10/12/20 13:30	1
NEtFOSE	<1.9		1.9	0.79	ng/L		10/11/20 19:23	10/12/20 13:30	1
4:2 FTS	<1.9		1.9	0.22	ng/L		10/11/20 19:23	10/12/20 13:30	1
6:2 FTS	41		4.7	2.3	ng/L		10/11/20 19:23	10/12/20 13:30	1
8:2 FTS	1.7	J	1.9	0.43	ng/L		10/11/20 19:23	10/12/20 13:30	1
10:2 FTS	<1.9		1.9	0.63	ng/L		10/11/20 19:23	10/12/20 13:30	1
DONA	<1.9		1.9	0.37	ng/L		10/11/20 19:23	10/12/20 13:30	1
HFPO-DA (GenX)	<3.7		3.7	1.4	ng/L		10/11/20 19:23	10/12/20 13:30	1
F-53B Major	<1.9		1.9	0.22	ng/L		10/11/20 19:23	10/12/20 13:30	1
F-53B Minor	<1.9		1.9	0.30	ng/L		10/11/20 19:23	10/12/20 13:30	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	35		25 - 150				10/11/20 19:23	10/12/20 13:30	1
13C5 PFPeA	51		25 - 150				10/11/20 19:23	10/12/20 13:30	1
13C2 PFHxA	59		25 - 150				10/11/20 19:23	10/12/20 13:30	1
13C4 PFHpA	66		25 - 150				10/11/20 19:23	10/12/20 13:30	1
13C4 PFOA	71		25 - 150				10/11/20 19:23	10/12/20 13:30	1

Eurofins TestAmerica, Chicago

Client Sample Results

Client: ARCADIS U.S., Inc.
 Project/Site: Marinette 30015296.00009

Job ID: 500-189112-1

Client Sample ID: SW-U09 (10072020)

Lab Sample ID: 500-189112-9

Date Collected: 10/07/20 15:45

Matrix: Water

Date Received: 10/09/20 09:40

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

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C5 PFNA	80		25 - 150	10/11/20 19:23	10/12/20 13:30	1
13C2 PFDA	71		25 - 150	10/11/20 19:23	10/12/20 13:30	1
13C2 PFUnA	69		25 - 150	10/11/20 19:23	10/12/20 13:30	1
13C2 PFDoA	74		25 - 150	10/11/20 19:23	10/12/20 13:30	1
13C2 PFTeDA	56		25 - 150	10/11/20 19:23	10/12/20 13:30	1
13C2 PFHxDA	45		25 - 150	10/11/20 19:23	10/12/20 13:30	1
13C3 PFBS	67		25 - 150	10/11/20 19:23	10/12/20 13:30	1
18O2 PFHxS	75		25 - 150	10/11/20 19:23	10/12/20 13:30	1
13C4 PFOS	77		25 - 150	10/11/20 19:23	10/12/20 13:30	1
13C8 FOSA	68		25 - 150	10/11/20 19:23	10/12/20 13:30	1
d3-NMeFOSAA	73		25 - 150	10/11/20 19:23	10/12/20 13:30	1
d5-NEtFOSAA	79		25 - 150	10/11/20 19:23	10/12/20 13:30	1
d-N-MeFOSA-M	42		20 - 150	10/11/20 19:23	10/12/20 13:30	1
d-N-EtFOSA-M	34		20 - 150	10/11/20 19:23	10/12/20 13:30	1
d7-N-MeFOSE-M	37		10 - 120	10/11/20 19:23	10/12/20 13:30	1
d9-N-EtFOSE-M	34		10 - 120	10/11/20 19:23	10/12/20 13:30	1
M2-4:2 FTS	121		25 - 150	10/11/20 19:23	10/12/20 13:30	1
M2-6:2 FTS	66		25 - 150	10/11/20 19:23	10/12/20 13:30	1
M2-8:2 FTS	130		25 - 150	10/11/20 19:23	10/12/20 13:30	1
13C3 HFPO-DA	64		25 - 150	10/11/20 19:23	10/12/20 13:30	1

General Chemistry

<i>Analyte</i>	<i>Result</i>	<i>Qualifier</i>	<i>RL</i>	<i>MDL</i>	<i>Unit</i>	<i>D</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Total Suspended Solids	3.0	J	5.0	1.9	mg/L			10/13/20 15:50	1

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189112-1

Client Sample ID: SW-U10 (10072020)

Lab Sample ID: 500-189112-10

Date Collected: 10/07/20 16:00

Matrix: Water

Date Received: 10/09/20 09:40

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	19		4.6	2.2	ng/L		10/11/20 19:23	10/12/20 13:39	1
Perfluoropentanoic acid (PFPeA)	35		1.8	0.45	ng/L		10/11/20 19:23	10/12/20 13:39	1
Perfluorohexanoic acid (PFHxA)	26		1.8	0.53	ng/L		10/11/20 19:23	10/12/20 13:39	1
Perfluoroheptanoic acid (PFHpA)	16		1.8	0.23	ng/L		10/11/20 19:23	10/12/20 13:39	1
Perfluorooctanoic acid (PFOA)	25		1.8	0.78	ng/L		10/11/20 19:23	10/12/20 13:39	1
Perfluorononanoic acid (PFNA)	3.1		1.8	0.25	ng/L		10/11/20 19:23	10/12/20 13:39	1
Perfluorodecanoic acid (PFDA)	0.35	J	1.8	0.28	ng/L		10/11/20 19:23	10/12/20 13:39	1
Perfluoroundecanoic acid (PFUnA)	<1.8		1.8	1.0	ng/L		10/11/20 19:23	10/12/20 13:39	1
Perfluorododecanoic acid (PFDoA)	<1.8		1.8	0.50	ng/L		10/11/20 19:23	10/12/20 13:39	1
Perfluorotridecanoic acid (PFTriA)	<1.8		1.8	1.2	ng/L		10/11/20 19:23	10/12/20 13:39	1
Perfluorotetradecanoic acid (PFTeA)	<1.8		1.8	0.67	ng/L		10/11/20 19:23	10/12/20 13:39	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	0.84	J B	1.8	0.82	ng/L		10/11/20 19:23	10/12/20 13:39	1
Perfluoro-n-octadecanoic acid (PFODA)	<1.8		1.8	0.86	ng/L		10/11/20 19:23	10/12/20 13:39	1
Perfluorobutanesulfonic acid (PFBS)	2.3		1.8	0.18	ng/L		10/11/20 19:23	10/12/20 13:39	1
Perfluoropentanesulfonic acid (PFPeS)	0.47	J	1.8	0.27	ng/L		10/11/20 19:23	10/12/20 13:39	1
Perfluorohexanesulfonic acid (PFHxS)	5.6		1.8	0.52	ng/L		10/11/20 19:23	10/12/20 13:39	1
Perfluoroheptanesulfonic Acid (PFHpS)	0.31	J	1.8	0.17	ng/L		10/11/20 19:23	10/12/20 13:39	1
Perfluorooctanesulfonic acid (PFOS)	11		1.8	0.49	ng/L		10/11/20 19:23	10/12/20 13:39	1
Perfluorononanesulfonic acid (PFNS)	<1.8		1.8	0.34	ng/L		10/11/20 19:23	10/12/20 13:39	1
Perfluorodecanesulfonic acid (PFDS)	<1.8		1.8	0.29	ng/L		10/11/20 19:23	10/12/20 13:39	1
Perfluorododecanesulfonic acid (PFDoS)	<1.8		1.8	0.89	ng/L		10/11/20 19:23	10/12/20 13:39	1
Perfluorooctanesulfonamide (FOSA)	<1.8		1.8	0.90	ng/L		10/11/20 19:23	10/12/20 13:39	1
NEtFOSA	<1.8		1.8	0.80	ng/L		10/11/20 19:23	10/12/20 13:39	1
NMeFOSA	<1.8		1.8	0.39	ng/L		10/11/20 19:23	10/12/20 13:39	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<4.6		4.6	1.1	ng/L		10/11/20 19:23	10/12/20 13:39	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<4.6		4.6	1.2	ng/L		10/11/20 19:23	10/12/20 13:39	1
NMeFOSE	<3.7		3.7	1.3	ng/L		10/11/20 19:23	10/12/20 13:39	1
NEtFOSE	<1.8		1.8	0.78	ng/L		10/11/20 19:23	10/12/20 13:39	1
4:2 FTS	<1.8		1.8	0.22	ng/L		10/11/20 19:23	10/12/20 13:39	1
6:2 FTS	18		4.6	2.3	ng/L		10/11/20 19:23	10/12/20 13:39	1
8:2 FTS	1.3	J	1.8	0.42	ng/L		10/11/20 19:23	10/12/20 13:39	1
10:2 FTS	<1.8		1.8	0.61	ng/L		10/11/20 19:23	10/12/20 13:39	1
DONA	<1.8		1.8	0.37	ng/L		10/11/20 19:23	10/12/20 13:39	1
HFPO-DA (GenX)	<3.7		3.7	1.4	ng/L		10/11/20 19:23	10/12/20 13:39	1
F-53B Major	<1.8		1.8	0.22	ng/L		10/11/20 19:23	10/12/20 13:39	1
F-53B Minor	<1.8		1.8	0.29	ng/L		10/11/20 19:23	10/12/20 13:39	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	37		25 - 150				10/11/20 19:23	10/12/20 13:39	1
13C5 PFPeA	54		25 - 150				10/11/20 19:23	10/12/20 13:39	1
13C2 PFHxA	63		25 - 150				10/11/20 19:23	10/12/20 13:39	1
13C4 PFHpA	72		25 - 150				10/11/20 19:23	10/12/20 13:39	1
13C4 PFOA	79		25 - 150				10/11/20 19:23	10/12/20 13:39	1

Eurofins TestAmerica, Chicago

Client Sample Results

Client: ARCADIS U.S., Inc.
 Project/Site: Marinette 30015296.00009

Job ID: 500-189112-1

Client Sample ID: SW-U10 (10072020)

Lab Sample ID: 500-189112-10

Date Collected: 10/07/20 16:00

Matrix: Water

Date Received: 10/09/20 09:40

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

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C5 PFNA	81		25 - 150	10/11/20 19:23	10/12/20 13:39	1
13C2 PFDA	79		25 - 150	10/11/20 19:23	10/12/20 13:39	1
13C2 PFUnA	82		25 - 150	10/11/20 19:23	10/12/20 13:39	1
13C2 PFDoA	62		25 - 150	10/11/20 19:23	10/12/20 13:39	1
13C2 PFTeDA	52		25 - 150	10/11/20 19:23	10/12/20 13:39	1
13C2 PFHxDA	57		25 - 150	10/11/20 19:23	10/12/20 13:39	1
13C3 PFBS	72		25 - 150	10/11/20 19:23	10/12/20 13:39	1
18O2 PFHxS	81		25 - 150	10/11/20 19:23	10/12/20 13:39	1
13C4 PFOS	84		25 - 150	10/11/20 19:23	10/12/20 13:39	1
13C8 FOSA	72		25 - 150	10/11/20 19:23	10/12/20 13:39	1
d3-NMeFOSAA	78		25 - 150	10/11/20 19:23	10/12/20 13:39	1
d5-NEtFOSAA	83		25 - 150	10/11/20 19:23	10/12/20 13:39	1
d-N-MeFOSA-M	41		20 - 150	10/11/20 19:23	10/12/20 13:39	1
d-N-EtFOSA-M	33		20 - 150	10/11/20 19:23	10/12/20 13:39	1
d7-N-MeFOSE-M	32		10 - 120	10/11/20 19:23	10/12/20 13:39	1
d9-N-EtFOSE-M	34		10 - 120	10/11/20 19:23	10/12/20 13:39	1
M2-4:2 FTS	131		25 - 150	10/11/20 19:23	10/12/20 13:39	1
M2-6:2 FTS	151	*5	25 - 150	10/11/20 19:23	10/12/20 13:39	1
M2-8:2 FTS	138		25 - 150	10/11/20 19:23	10/12/20 13:39	1
13C3 HFPO-DA	70		25 - 150	10/11/20 19:23	10/12/20 13:39	1

General Chemistry

<i>Analyte</i>	<i>Result</i>	<i>Qualifier</i>	<i>RL</i>	<i>MDL</i>	<i>Unit</i>	<i>D</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Total Suspended Solids	4.0	J	5.0	1.9	mg/L			10/14/20 14:14	1

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189112-1

Client Sample ID: DUP-03-10072020

Lab Sample ID: 500-189112-11

Date Collected: 10/07/20 00:00

Matrix: Water

Date Received: 10/09/20 09:40

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	61		4.7	2.2	ng/L		10/11/20 19:23	10/12/20 14:06	1
Perfluoropentanoic acid (PFPeA)	180		1.9	0.46	ng/L		10/11/20 19:23	10/12/20 14:06	1
Perfluorohexanoic acid (PFHxA)	150		1.9	0.54	ng/L		10/11/20 19:23	10/12/20 14:06	1
Perfluoroheptanoic acid (PFHpA)	73		1.9	0.23	ng/L		10/11/20 19:23	10/12/20 14:06	1
Perfluorooctanoic acid (PFOA)	360		1.9	0.79	ng/L		10/11/20 19:23	10/12/20 14:06	1
Perfluorononanoic acid (PFNA)	25		1.9	0.25	ng/L		10/11/20 19:23	10/12/20 14:06	1
Perfluorodecanoic acid (PFDA)	2.6		1.9	0.29	ng/L		10/11/20 19:23	10/12/20 14:06	1
Perfluoroundecanoic acid (PFUnA)	<1.9		1.9	1.0	ng/L		10/11/20 19:23	10/12/20 14:06	1
Perfluorododecanoic acid (PFDoA)	<1.9		1.9	0.51	ng/L		10/11/20 19:23	10/12/20 14:06	1
Perfluorotridecanoic acid (PFTriA)	<1.9		1.9	1.2	ng/L		10/11/20 19:23	10/12/20 14:06	1
Perfluorotetradecanoic acid (PFTeA)	<1.9		1.9	0.68	ng/L		10/11/20 19:23	10/12/20 14:06	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	0.91	J B	1.9	0.83	ng/L		10/11/20 19:23	10/12/20 14:06	1
Perfluoro-n-octadecanoic acid (PFODA)	<1.9		1.9	0.88	ng/L		10/11/20 19:23	10/12/20 14:06	1
Perfluorobutanesulfonic acid (PFBS)	3.0		1.9	0.19	ng/L		10/11/20 19:23	10/12/20 14:06	1
Perfluoropentanesulfonic acid (PFPeS)	2.6		1.9	0.28	ng/L		10/11/20 19:23	10/12/20 14:06	1
Perfluorohexanesulfonic acid (PFHxS)	35		1.9	0.53	ng/L		10/11/20 19:23	10/12/20 14:06	1
Perfluoroheptanesulfonic Acid (PFHpS)	3.8		1.9	0.18	ng/L		10/11/20 19:23	10/12/20 14:06	1
Perfluorooctanesulfonic acid (PFOS)	150		1.9	0.50	ng/L		10/11/20 19:23	10/12/20 14:06	1
Perfluorononanesulfonic acid (PFNS)	<1.9		1.9	0.35	ng/L		10/11/20 19:23	10/12/20 14:06	1
Perfluorodecanesulfonic acid (PFDS)	<1.9		1.9	0.30	ng/L		10/11/20 19:23	10/12/20 14:06	1
Perfluorododecanesulfonic acid (PFDoS)	<1.9		1.9	0.91	ng/L		10/11/20 19:23	10/12/20 14:06	1
Perfluorooctanesulfonamide (FOSA)	1.3	J	1.9	0.92	ng/L		10/11/20 19:23	10/12/20 14:06	1
NEtFOSA	<1.9		1.9	0.81	ng/L		10/11/20 19:23	10/12/20 14:06	1
NMeFOSA	<1.9		1.9	0.40	ng/L		10/11/20 19:23	10/12/20 14:06	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<4.7		4.7	1.1	ng/L		10/11/20 19:23	10/12/20 14:06	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<4.7		4.7	1.2	ng/L		10/11/20 19:23	10/12/20 14:06	1
NMeFOSE	<3.7		3.7	1.3	ng/L		10/11/20 19:23	10/12/20 14:06	1
NEtFOSE	<1.9		1.9	0.79	ng/L		10/11/20 19:23	10/12/20 14:06	1
4:2 FTS	11		1.9	0.22	ng/L		10/11/20 19:23	10/12/20 14:06	1
8:2 FTS	110		1.9	0.43	ng/L		10/11/20 19:23	10/12/20 14:06	1
10:2 FTS	<1.9		1.9	0.63	ng/L		10/11/20 19:23	10/12/20 14:06	1
DONA	<1.9		1.9	0.37	ng/L		10/11/20 19:23	10/12/20 14:06	1
HFPO-DA (GenX)	<3.7		3.7	1.4	ng/L		10/11/20 19:23	10/12/20 14:06	1
F-53B Major	<1.9		1.9	0.22	ng/L		10/11/20 19:23	10/12/20 14:06	1
F-53B Minor	<1.9		1.9	0.30	ng/L		10/11/20 19:23	10/12/20 14:06	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	45		25 - 150	10/11/20 19:23	10/12/20 14:06	1
13C5 PFPeA	66		25 - 150	10/11/20 19:23	10/12/20 14:06	1
13C2 PFHxA	73		25 - 150	10/11/20 19:23	10/12/20 14:06	1
13C4 PFHpA	87		25 - 150	10/11/20 19:23	10/12/20 14:06	1
13C4 PFOA	82		25 - 150	10/11/20 19:23	10/12/20 14:06	1

Eurofins TestAmerica, Chicago

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189112-1

Client Sample ID: DUP-03-10072020

Lab Sample ID: 500-189112-11

Date Collected: 10/07/20 00:00

Matrix: Water

Date Received: 10/09/20 09:40

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

<u>Isotope Dilution</u>	<u>%Recovery</u>	<u>Qualifier</u>	<u>Limits</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Dil Fac</u>
13C5 PFNA	88		25 - 150	10/11/20 19:23	10/12/20 14:06	1
13C2 PFDA	91		25 - 150	10/11/20 19:23	10/12/20 14:06	1
13C2 PFUnA	86		25 - 150	10/11/20 19:23	10/12/20 14:06	1
13C2 PFDoA	91		25 - 150	10/11/20 19:23	10/12/20 14:06	1
13C2 PFTeDA	74		25 - 150	10/11/20 19:23	10/12/20 14:06	1
13C2 PFHxDA	66		25 - 150	10/11/20 19:23	10/12/20 14:06	1
13C3 PFBS	85		25 - 150	10/11/20 19:23	10/12/20 14:06	1
18O2 PFHxS	94		25 - 150	10/11/20 19:23	10/12/20 14:06	1
13C4 PFOS	94		25 - 150	10/11/20 19:23	10/12/20 14:06	1
13C8 FOSA	83		25 - 150	10/11/20 19:23	10/12/20 14:06	1
d3-NMeFOSAA	89		25 - 150	10/11/20 19:23	10/12/20 14:06	1
d5-NEtFOSAA	100		25 - 150	10/11/20 19:23	10/12/20 14:06	1
d-N-MeFOSA-M	46		20 - 150	10/11/20 19:23	10/12/20 14:06	1
d-N-EtFOSA-M	39		20 - 150	10/11/20 19:23	10/12/20 14:06	1
d7-N-MeFOSE-M	43		10 - 120	10/11/20 19:23	10/12/20 14:06	1
d9-N-EtFOSE-M	41		10 - 120	10/11/20 19:23	10/12/20 14:06	1
M2-4:2 FTS	148		25 - 150	10/11/20 19:23	10/12/20 14:06	1
M2-8:2 FTS	139		25 - 150	10/11/20 19:23	10/12/20 14:06	1
13C3 HFPO-DA	89		25 - 150	10/11/20 19:23	10/12/20 14:06	1

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

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>RL</u>	<u>MDL</u>	<u>Unit</u>	<u>D</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Dil Fac</u>
6:2 FTS	1200		47	23	ng/L		10/11/20 19:23	10/13/20 15:46	10
<u>Isotope Dilution</u>	<u>%Recovery</u>	<u>Qualifier</u>	<u>Limits</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Dil Fac</u>			
M2-6:2 FTS	106		25 - 150	10/11/20 19:23	10/13/20 15:46	10			

General Chemistry

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>RL</u>	<u>MDL</u>	<u>Unit</u>	<u>D</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Dil Fac</u>
Total Suspended Solids	5.0		5.0	1.9	mg/L			10/13/20 15:51	1

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189112-1

Client Sample ID: Field Blank-10-07-2020

Lab Sample ID: 500-189112-12

Date Collected: 10/07/20 12:00

Matrix: Water

Date Received: 10/09/20 09:40

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<5.1		5.1	2.5	ng/L		10/11/20 19:23	10/12/20 14:15	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	0.50	ng/L		10/11/20 19:23	10/12/20 14:15	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	0.59	ng/L		10/11/20 19:23	10/12/20 14:15	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	0.26	ng/L		10/11/20 19:23	10/12/20 14:15	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	0.87	ng/L		10/11/20 19:23	10/12/20 14:15	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	0.28	ng/L		10/11/20 19:23	10/12/20 14:15	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	0.32	ng/L		10/11/20 19:23	10/12/20 14:15	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	1.1	ng/L		10/11/20 19:23	10/12/20 14:15	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	0.56	ng/L		10/11/20 19:23	10/12/20 14:15	1
Perfluorotridecanoic acid (PFTriA)	<2.0		2.0	1.3	ng/L		10/11/20 19:23	10/12/20 14:15	1
Perfluorotetradecanoic acid (PFTeA)	<2.0		2.0	0.75	ng/L		10/11/20 19:23	10/12/20 14:15	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	0.91	J B	2.0	0.91	ng/L		10/11/20 19:23	10/12/20 14:15	1
Perfluoro-n-octadecanoic acid (PFODA)	<2.0		2.0	0.96	ng/L		10/11/20 19:23	10/12/20 14:15	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	0.20	ng/L		10/11/20 19:23	10/12/20 14:15	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	0.31	ng/L		10/11/20 19:23	10/12/20 14:15	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	0.58	ng/L		10/11/20 19:23	10/12/20 14:15	1
Perfluoroheptanesulfonic Acid (PFHpS)	<2.0		2.0	0.19	ng/L		10/11/20 19:23	10/12/20 14:15	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	0.55	ng/L		10/11/20 19:23	10/12/20 14:15	1
Perfluorononanesulfonic acid (PFNS)	<2.0		2.0	0.38	ng/L		10/11/20 19:23	10/12/20 14:15	1
Perfluorodecanesulfonic acid (PFDS)	<2.0		2.0	0.33	ng/L		10/11/20 19:23	10/12/20 14:15	1
Perfluorododecanesulfonic acid (PFDoS)	<2.0		2.0	0.99	ng/L		10/11/20 19:23	10/12/20 14:15	1
Perfluorooctanesulfonamide (FOSA)	<2.0		2.0	1.0	ng/L		10/11/20 19:23	10/12/20 14:15	1
NEtFOSA	<2.0		2.0	0.89	ng/L		10/11/20 19:23	10/12/20 14:15	1
NMeFOSA	<2.0		2.0	0.44	ng/L		10/11/20 19:23	10/12/20 14:15	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<5.1		5.1	1.2	ng/L		10/11/20 19:23	10/12/20 14:15	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<5.1		5.1	1.3	ng/L		10/11/20 19:23	10/12/20 14:15	1
NMeFOSE	<4.1		4.1	1.4	ng/L		10/11/20 19:23	10/12/20 14:15	1
NEtFOSE	<2.0		2.0	0.87	ng/L		10/11/20 19:23	10/12/20 14:15	1
4:2 FTS	<2.0		2.0	0.25	ng/L		10/11/20 19:23	10/12/20 14:15	1
6:2 FTS	<5.1		5.1	2.6	ng/L		10/11/20 19:23	10/12/20 14:15	1
8:2 FTS	<2.0		2.0	0.47	ng/L		10/11/20 19:23	10/12/20 14:15	1
10:2 FTS	<2.0		2.0	0.69	ng/L		10/11/20 19:23	10/12/20 14:15	1
DONA	<2.0		2.0	0.41	ng/L		10/11/20 19:23	10/12/20 14:15	1
HFPO-DA (GenX)	<4.1		4.1	1.5	ng/L		10/11/20 19:23	10/12/20 14:15	1
F-53B Major	<2.0		2.0	0.25	ng/L		10/11/20 19:23	10/12/20 14:15	1
F-53B Minor	<2.0		2.0	0.33	ng/L		10/11/20 19:23	10/12/20 14:15	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	71		25 - 150	10/11/20 19:23	10/12/20 14:15	1
13C5 PFPeA	76		25 - 150	10/11/20 19:23	10/12/20 14:15	1
13C2 PFHxA	78		25 - 150	10/11/20 19:23	10/12/20 14:15	1
13C4 PFHpA	81		25 - 150	10/11/20 19:23	10/12/20 14:15	1
13C4 PFOA	84		25 - 150	10/11/20 19:23	10/12/20 14:15	1
13C5 PFNA	95		25 - 150	10/11/20 19:23	10/12/20 14:15	1
13C2 PFDA	88		25 - 150	10/11/20 19:23	10/12/20 14:15	1

Eurofins TestAmerica, Chicago

Client Sample Results

Client: ARCADIS U.S., Inc.
 Project/Site: Marinette 30015296.00009

Job ID: 500-189112-1

Client Sample ID: Field Blank-10-07-2020

Lab Sample ID: 500-189112-12

Date Collected: 10/07/20 12:00

Matrix: Water

Date Received: 10/09/20 09:40

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

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C2 PFUnA	75		25 - 150	10/11/20 19:23	10/12/20 14:15	1
13C2 PFDoA	68		25 - 150	10/11/20 19:23	10/12/20 14:15	1
13C2 PFTeDA	71		25 - 150	10/11/20 19:23	10/12/20 14:15	1
13C2 PFHxDA	72		25 - 150	10/11/20 19:23	10/12/20 14:15	1
13C3 PFBS	77		25 - 150	10/11/20 19:23	10/12/20 14:15	1
18O2 PFHxS	76		25 - 150	10/11/20 19:23	10/12/20 14:15	1
13C4 PFOS	82		25 - 150	10/11/20 19:23	10/12/20 14:15	1
13C8 FOSA	72		25 - 150	10/11/20 19:23	10/12/20 14:15	1
d3-NMeFOSAA	80		25 - 150	10/11/20 19:23	10/12/20 14:15	1
d5-NEtFOSAA	89		25 - 150	10/11/20 19:23	10/12/20 14:15	1
d-N-MeFOSA-M	65		20 - 150	10/11/20 19:23	10/12/20 14:15	1
d-N-EtFOSA-M	51		20 - 150	10/11/20 19:23	10/12/20 14:15	1
d7-N-MeFOSE-M	39		10 - 120	10/11/20 19:23	10/12/20 14:15	1
d9-N-EtFOSE-M	38		10 - 120	10/11/20 19:23	10/12/20 14:15	1
M2-4:2 FTS	110		25 - 150	10/11/20 19:23	10/12/20 14:15	1
M2-6:2 FTS	106		25 - 150	10/11/20 19:23	10/12/20 14:15	1
M2-8:2 FTS	106		25 - 150	10/11/20 19:23	10/12/20 14:15	1
13C3 HFPO-DA	73		25 - 150	10/11/20 19:23	10/12/20 14:15	1

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189112-1

Client Sample ID: SW-39

Lab Sample ID: 500-189112-13

Date Collected: 10/07/20 15:20

Matrix: Water

Date Received: 10/09/20 09:40

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	24		4.8	2.3	ng/L		10/11/20 19:23	10/12/20 14:24	1
Perfluoropentanoic acid (PFPeA)	33		1.9	0.47	ng/L		10/11/20 19:23	10/12/20 14:24	1
Perfluorohexanoic acid (PFHxA)	19		1.9	0.55	ng/L		10/11/20 19:23	10/12/20 14:24	1
Perfluoroheptanoic acid (PFHpA)	4.6		1.9	0.24	ng/L		10/11/20 19:23	10/12/20 14:24	1
Perfluorooctanoic acid (PFOA)	36		1.9	0.81	ng/L		10/11/20 19:23	10/12/20 14:24	1
Perfluorononanoic acid (PFNA)	0.92	J	1.9	0.26	ng/L		10/11/20 19:23	10/12/20 14:24	1
Perfluorodecanoic acid (PFDA)	<1.9		1.9	0.29	ng/L		10/11/20 19:23	10/12/20 14:24	1
Perfluoroundecanoic acid (PFUnA)	<1.9		1.9	1.0	ng/L		10/11/20 19:23	10/12/20 14:24	1
Perfluorododecanoic acid (PFDoA)	<1.9		1.9	0.52	ng/L		10/11/20 19:23	10/12/20 14:24	1
Perfluorotridecanoic acid (PFTriA)	<1.9		1.9	1.2	ng/L		10/11/20 19:23	10/12/20 14:24	1
Perfluorotetradecanoic acid (PFTeA)	<1.9		1.9	0.69	ng/L		10/11/20 19:23	10/12/20 14:24	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	0.85	J B	1.9	0.85	ng/L		10/11/20 19:23	10/12/20 14:24	1
Perfluoro-n-octadecanoic acid (PFODA)	<1.9		1.9	0.89	ng/L		10/11/20 19:23	10/12/20 14:24	1
Perfluorobutanesulfonic acid (PFBS)	1.1	J	1.9	0.19	ng/L		10/11/20 19:23	10/12/20 14:24	1
Perfluoropentanesulfonic acid (PFPeS)	<1.9		1.9	0.29	ng/L		10/11/20 19:23	10/12/20 14:24	1
Perfluorohexanesulfonic acid (PFHxS)	2.6		1.9	0.54	ng/L		10/11/20 19:23	10/12/20 14:24	1
Perfluoroheptanesulfonic Acid (PFHpS)	<1.9		1.9	0.18	ng/L		10/11/20 19:23	10/12/20 14:24	1
Perfluorooctanesulfonic acid (PFOS)	2.2		1.9	0.51	ng/L		10/11/20 19:23	10/12/20 14:24	1
Perfluorononanesulfonic acid (PFNS)	<1.9		1.9	0.35	ng/L		10/11/20 19:23	10/12/20 14:24	1
Perfluorodecanesulfonic acid (PFDS)	<1.9		1.9	0.30	ng/L		10/11/20 19:23	10/12/20 14:24	1
Perfluorododecanesulfonic acid (PFDoS)	<1.9		1.9	0.92	ng/L		10/11/20 19:23	10/12/20 14:24	1
Perfluorooctanesulfonamide (FOSA)	<1.9		1.9	0.93	ng/L		10/11/20 19:23	10/12/20 14:24	1
NEtFOSA	<1.9		1.9	0.83	ng/L		10/11/20 19:23	10/12/20 14:24	1
NMeFOSA	<1.9		1.9	0.41	ng/L		10/11/20 19:23	10/12/20 14:24	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<4.8		4.8	1.1	ng/L		10/11/20 19:23	10/12/20 14:24	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<4.8		4.8	1.2	ng/L		10/11/20 19:23	10/12/20 14:24	1
NMeFOSE	<3.8		3.8	1.3	ng/L		10/11/20 19:23	10/12/20 14:24	1
NEtFOSE	<1.9		1.9	0.81	ng/L		10/11/20 19:23	10/12/20 14:24	1
4:2 FTS	0.78	J	1.9	0.23	ng/L		10/11/20 19:23	10/12/20 14:24	1
6:2 FTS	20		4.8	2.4	ng/L		10/11/20 19:23	10/12/20 14:24	1
8:2 FTS	1.0	J	1.9	0.44	ng/L		10/11/20 19:23	10/12/20 14:24	1
10:2 FTS	<1.9		1.9	0.64	ng/L		10/11/20 19:23	10/12/20 14:24	1
DONA	<1.9		1.9	0.38	ng/L		10/11/20 19:23	10/12/20 14:24	1
HFPO-DA (GenX)	<3.8		3.8	1.4	ng/L		10/11/20 19:23	10/12/20 14:24	1
F-53B Major	<1.9		1.9	0.23	ng/L		10/11/20 19:23	10/12/20 14:24	1
F-53B Minor	<1.9		1.9	0.30	ng/L		10/11/20 19:23	10/12/20 14:24	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	68		25 - 150				10/11/20 19:23	10/12/20 14:24	1
13C5 PFPeA	76		25 - 150				10/11/20 19:23	10/12/20 14:24	1
13C2 PFHxA	85		25 - 150				10/11/20 19:23	10/12/20 14:24	1
13C4 PFHpA	88		25 - 150				10/11/20 19:23	10/12/20 14:24	1
13C4 PFOA	94		25 - 150				10/11/20 19:23	10/12/20 14:24	1

Eurofins TestAmerica, Chicago

Client Sample Results

Client: ARCADIS U.S., Inc.
 Project/Site: Marinette 30015296.00009

Job ID: 500-189112-1

Client Sample ID: SW-39

Lab Sample ID: 500-189112-13

Date Collected: 10/07/20 15:20

Matrix: Water

Date Received: 10/09/20 09:40

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

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C5 PFNA	96		25 - 150	10/11/20 19:23	10/12/20 14:24	1
13C2 PFDA	95		25 - 150	10/11/20 19:23	10/12/20 14:24	1
13C2 PFUnA	90		25 - 150	10/11/20 19:23	10/12/20 14:24	1
13C2 PFDoA	68		25 - 150	10/11/20 19:23	10/12/20 14:24	1
13C2 PFTeDA	57		25 - 150	10/11/20 19:23	10/12/20 14:24	1
13C2 PFHxDA	58		25 - 150	10/11/20 19:23	10/12/20 14:24	1
13C3 PFBS	83		25 - 150	10/11/20 19:23	10/12/20 14:24	1
18O2 PFHxS	85		25 - 150	10/11/20 19:23	10/12/20 14:24	1
13C4 PFOS	90		25 - 150	10/11/20 19:23	10/12/20 14:24	1
13C8 FOSA	81		25 - 150	10/11/20 19:23	10/12/20 14:24	1
d3-NMeFOSAA	84		25 - 150	10/11/20 19:23	10/12/20 14:24	1
d5-NEtFOSAA	94		25 - 150	10/11/20 19:23	10/12/20 14:24	1
d-N-MeFOSA-M	45		20 - 150	10/11/20 19:23	10/12/20 14:24	1
d-N-EtFOSA-M	36		20 - 150	10/11/20 19:23	10/12/20 14:24	1
d7-N-MeFOSE-M	32		10 - 120	10/11/20 19:23	10/12/20 14:24	1
d9-N-EtFOSE-M	30		10 - 120	10/11/20 19:23	10/12/20 14:24	1
M2-4:2 FTS	113		25 - 150	10/11/20 19:23	10/12/20 14:24	1
M2-6:2 FTS	120		25 - 150	10/11/20 19:23	10/12/20 14:24	1
M2-8:2 FTS	121		25 - 150	10/11/20 19:23	10/12/20 14:24	1
13C3 HFPO-DA	84		25 - 150	10/11/20 19:23	10/12/20 14:24	1

General Chemistry

<i>Analyte</i>	<i>Result</i>	<i>Qualifier</i>	<i>RL</i>	<i>MDL</i>	<i>Unit</i>	<i>D</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Total Suspended Solids	24		5.0	1.9	mg/L			10/14/20 12:27	1

Definitions/Glossary

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189112-1

Qualifiers

LCMS

Qualifier	Qualifier Description
*5	Isotope dilution analyte is outside acceptance limits.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
F5	Duplicate RPD exceeds limit, and one or both sample results are less than 5 times RL.
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.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189112-1

Method: 537 (modified) - Fluorinated Alkyl Substances

Lab Sample ID: MB 320-420804/1-A
Matrix: Water
Analysis Batch: 420854

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 420804

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Perfluorobutanoic acid (PFBA)	<5.0		5.0	2.4	ng/L		10/11/20 19:23	10/12/20 11:39	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	0.49	ng/L		10/11/20 19:23	10/12/20 11:39	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	0.58	ng/L		10/11/20 19:23	10/12/20 11:39	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	0.25	ng/L		10/11/20 19:23	10/12/20 11:39	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	0.85	ng/L		10/11/20 19:23	10/12/20 11:39	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	0.27	ng/L		10/11/20 19:23	10/12/20 11:39	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	0.31	ng/L		10/11/20 19:23	10/12/20 11:39	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	1.1	ng/L		10/11/20 19:23	10/12/20 11:39	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	0.55	ng/L		10/11/20 19:23	10/12/20 11:39	1
Perfluorotridecanoic acid (PFTriA)	<2.0		2.0	1.3	ng/L		10/11/20 19:23	10/12/20 11:39	1
Perfluorotetradecanoic acid (PFTeA)	<2.0		2.0	0.73	ng/L		10/11/20 19:23	10/12/20 11:39	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	0.961	J	2.0	0.89	ng/L		10/11/20 19:23	10/12/20 11:39	1
Perfluoro-n-octadecanoic acid (PFODA)	<2.0		2.0	0.94	ng/L		10/11/20 19:23	10/12/20 11:39	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	0.20	ng/L		10/11/20 19:23	10/12/20 11:39	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	0.30	ng/L		10/11/20 19:23	10/12/20 11:39	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	0.57	ng/L		10/11/20 19:23	10/12/20 11:39	1
Perfluoroheptanesulfonic Acid (PFHpS)	<2.0		2.0	0.19	ng/L		10/11/20 19:23	10/12/20 11:39	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	0.54	ng/L		10/11/20 19:23	10/12/20 11:39	1
Perfluorononanesulfonic acid (PFNS)	<2.0		2.0	0.37	ng/L		10/11/20 19:23	10/12/20 11:39	1
Perfluorodecanesulfonic acid (PFDS)	<2.0		2.0	0.32	ng/L		10/11/20 19:23	10/12/20 11:39	1
Perfluorododecanesulfonic acid (PFDoS)	<2.0		2.0	0.97	ng/L		10/11/20 19:23	10/12/20 11:39	1
Perfluorooctanesulfonamide (FOSA)	<2.0		2.0	0.98	ng/L		10/11/20 19:23	10/12/20 11:39	1
NEtFOSA	<2.0		2.0	0.87	ng/L		10/11/20 19:23	10/12/20 11:39	1
NMeFOSA	<2.0		2.0	0.43	ng/L		10/11/20 19:23	10/12/20 11:39	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<5.0		5.0	1.2	ng/L		10/11/20 19:23	10/12/20 11:39	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<5.0		5.0	1.3	ng/L		10/11/20 19:23	10/12/20 11:39	1
NMeFOSE	<4.0		4.0	1.4	ng/L		10/11/20 19:23	10/12/20 11:39	1
NEtFOSE	<2.0		2.0	0.85	ng/L		10/11/20 19:23	10/12/20 11:39	1
4:2 FTS	<2.0		2.0	0.24	ng/L		10/11/20 19:23	10/12/20 11:39	1
6:2 FTS	<5.0		5.0	2.5	ng/L		10/11/20 19:23	10/12/20 11:39	1
8:2 FTS	<2.0		2.0	0.46	ng/L		10/11/20 19:23	10/12/20 11:39	1
10:2 FTS	<2.0		2.0	0.67	ng/L		10/11/20 19:23	10/12/20 11:39	1
DONA	<2.0		2.0	0.40	ng/L		10/11/20 19:23	10/12/20 11:39	1
HFPO-DA (GenX)	<4.0		4.0	1.5	ng/L		10/11/20 19:23	10/12/20 11:39	1
F-53B Major	<2.0		2.0	0.24	ng/L		10/11/20 19:23	10/12/20 11:39	1
F-53B Minor	<2.0		2.0	0.32	ng/L		10/11/20 19:23	10/12/20 11:39	1
	MB	MB					Prepared	Analyzed	Dil Fac
Isotope Dilution	%Recovery	Qualifier	Limits						
13C4 PFBA	74		25 - 150				10/11/20 19:23	10/12/20 11:39	1
13C5 PFPeA	77		25 - 150				10/11/20 19:23	10/12/20 11:39	1
13C2 PFHxA	78		25 - 150				10/11/20 19:23	10/12/20 11:39	1
13C4 PFHpA	79		25 - 150				10/11/20 19:23	10/12/20 11:39	1
13C4 PFOA	88		25 - 150				10/11/20 19:23	10/12/20 11:39	1

Eurofins TestAmerica, Chicago

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189112-1

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

Lab Sample ID: MB 320-420804/1-A
Matrix: Water
Analysis Batch: 420854

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 420804

Isotope Dilution	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
13C5 PFNA	85		25 - 150	10/11/20 19:23	10/12/20 11:39	1
13C2 PFDA	94		25 - 150	10/11/20 19:23	10/12/20 11:39	1
13C2 PFUnA	81		25 - 150	10/11/20 19:23	10/12/20 11:39	1
13C2 PFDoA	82		25 - 150	10/11/20 19:23	10/12/20 11:39	1
13C2 PFTeDA	70		25 - 150	10/11/20 19:23	10/12/20 11:39	1
13C2 PFHxDA	69		25 - 150	10/11/20 19:23	10/12/20 11:39	1
13C3 PFBS	78		25 - 150	10/11/20 19:23	10/12/20 11:39	1
18O2 PFHxS	81		25 - 150	10/11/20 19:23	10/12/20 11:39	1
13C4 PFOS	84		25 - 150	10/11/20 19:23	10/12/20 11:39	1
13C8 FOSA	72		25 - 150	10/11/20 19:23	10/12/20 11:39	1
d3-NMeFOSAA	84		25 - 150	10/11/20 19:23	10/12/20 11:39	1
d5-NEtFOSAA	91		25 - 150	10/11/20 19:23	10/12/20 11:39	1
d-N-MeFOSA-M	65		20 - 150	10/11/20 19:23	10/12/20 11:39	1
d-N-EtFOSA-M	41		20 - 150	10/11/20 19:23	10/12/20 11:39	1
d7-N-MeFOSE-M	25		10 - 120	10/11/20 19:23	10/12/20 11:39	1
d9-N-EtFOSE-M	24		10 - 120	10/11/20 19:23	10/12/20 11:39	1
M2-4:2 FTS	103		25 - 150	10/11/20 19:23	10/12/20 11:39	1
M2-6:2 FTS	107		25 - 150	10/11/20 19:23	10/12/20 11:39	1
M2-8:2 FTS	115		25 - 150	10/11/20 19:23	10/12/20 11:39	1
13C3 HFPO-DA	78		25 - 150	10/11/20 19:23	10/12/20 11:39	1

Lab Sample ID: LCS 320-420804/2-A
Matrix: Water
Analysis Batch: 420854

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 420804

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.	Limits
Perfluoropentanoic acid (PFPeA)	40.0	38.2		ng/L		95	71 - 131	
Perfluorohexanoic acid (PFHxA)	40.0	40.7		ng/L		102	73 - 133	
Perfluoroheptanoic acid (PFHpA)	40.0	42.0		ng/L		105	72 - 132	
Perfluorooctanoic acid (PFOA)	40.0	37.1		ng/L		93	70 - 130	
Perfluorononanoic acid (PFNA)	40.0	39.4		ng/L		98	75 - 135	
Perfluorodecanoic acid (PFDA)	40.0	38.6		ng/L		97	76 - 136	
Perfluoroundecanoic acid (PFUnA)	40.0	35.8		ng/L		89	68 - 128	
Perfluorododecanoic acid (PFDoA)	40.0	30.7		ng/L		77	71 - 131	
Perfluorotridecanoic acid (PFTriA)	40.0	46.2		ng/L		115	71 - 131	
Perfluorotetradecanoic acid (PFTeA)	40.0	41.0		ng/L		103	70 - 130	
Perfluoro-n-hexadecanoic acid (PFHxDA)	40.0	35.6		ng/L		89	76 - 136	
Perfluoro-n-octadecanoic acid (PFODA)	40.0	38.1		ng/L		95	58 - 145	
Perfluorobutanesulfonic acid (PFBS)	35.4	36.3		ng/L		103	67 - 127	
Perfluoropentanesulfonic acid (PFPeS)	37.5	39.7		ng/L		106	66 - 126	
Perfluorohexanesulfonic acid (PFHxS)	36.4	34.4		ng/L		94	59 - 119	

Eurofins TestAmerica, Chicago

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189112-1

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

Lab Sample ID: LCS 320-420804/2-A
Matrix: Water
Analysis Batch: 420854

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 420804

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluoroheptanesulfonic Acid (PFHpS)	38.1	38.2		ng/L		100	76 - 136
Perfluorooctanesulfonic acid (PFOS)	37.1	36.9		ng/L		99	70 - 130
Perfluorononanesulfonic acid (PFNS)	38.4	37.8		ng/L		98	75 - 135
Perfluorodecanesulfonic acid (PFDS)	38.6	38.0		ng/L		99	71 - 131
Perfluorododecanesulfonic acid (PFDoS)	38.7	37.9		ng/L		98	67 - 127
Perfluorooctanesulfonamide (FOSA)	40.0	42.5		ng/L		106	73 - 133
NMeFOSA	40.0	40.0		ng/L		100	67 - 154
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	41.1		ng/L		103	76 - 136
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	39.6		ng/L		99	76 - 136
NMeFOSE	40.0	36.7		ng/L		92	70 - 130
NEtFOSE	40.0	38.4		ng/L		96	71 - 131
4:2 FTS	37.4	37.8		ng/L		101	79 - 139
6:2 FTS	37.9	36.8		ng/L		97	59 - 175
8:2 FTS	38.3	39.0		ng/L		102	75 - 135
10:2 FTS	38.6	44.5		ng/L		115	64 - 142
DONA	37.7	36.3		ng/L		96	79 - 139
HFPO-DA (GenX)	40.0	37.3		ng/L		93	51 - 173
F-53B Major	37.3	34.7		ng/L		93	75 - 135
F-53B Minor	37.7	33.7		ng/L		90	54 - 114

Isotope Dilution	LCS LCS		Limits
	%Recovery	Qualifier	
13C4 PFBA	81		25 - 150
13C5 PFPeA	84		25 - 150
13C2 PFHxA	79		25 - 150
13C4 PFHpA	86		25 - 150
13C4 PFOA	99		25 - 150
13C5 PFNA	95		25 - 150
13C2 PFDA	100		25 - 150
13C2 PFUnA	85		25 - 150
13C2 PFDoA	69		25 - 150
13C2 PFTeDA	78		25 - 150
13C2 PFHxDA	75		25 - 150
13C3 PFBS	82		25 - 150
18O2 PFHxS	86		25 - 150
13C4 PFOS	91		25 - 150
13C8 FOSA	82		25 - 150
d3-NMeFOSAA	94		25 - 150
d5-NEtFOSAA	87		25 - 150
d-N-MeFOSA-M	70		20 - 150
d-N-EtFOSA-M	44		20 - 150
d7-N-MeFOSE-M	31		10 - 120
d9-N-EtFOSE-M	26		10 - 120
M2-4:2 FTS	109		25 - 150

Eurofins TestAmerica, Chicago

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189112-1

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

Lab Sample ID: LCS 320-420804/2-A
Matrix: Water
Analysis Batch: 420854

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 420804

Isotope Dilution	LCS		Limits
	%Recovery	Qualifier	
M2-6:2 FTS	118		25 - 150
M2-8:2 FTS	135		25 - 150
13C3 HFPO-DA	83		25 - 150

Lab Sample ID: 500-189112-10 MS
Matrix: Water
Analysis Batch: 420854

Client Sample ID: SW-U10 (10072020)
Prep Type: Total/NA
Prep Batch: 420804

Analyte	Sample Result	Sample Qualifier	Spike Added	MS		Unit	D	%Rec	Limits
				Result	Qualifier				
Perfluorobutanoic acid (PFBA)	19		35.7	54.2		ng/L		98	76 - 136
Perfluoropentanoic acid (PFPeA)	35		35.7	64.7		ng/L		83	71 - 131
Perfluorohexanoic acid (PFHxA)	26		35.7	57.1		ng/L		87	73 - 133
Perfluoroheptanoic acid (PFHpA)	16		35.7	49.0		ng/L		92	72 - 132
Perfluorooctanoic acid (PFOA)	25		35.7	49.7		ng/L		70	70 - 130
Perfluorononanoic acid (PFNA)	3.1		35.7	41.7		ng/L		108	75 - 135
Perfluorodecanoic acid (PFDA)	0.35	J	35.7	39.1		ng/L		109	76 - 136
Perfluoroundecanoic acid (PFUnA)	<1.8		35.7	42.3		ng/L		119	68 - 128
Perfluorododecanoic acid (PFDoA)	<1.8		35.7	35.0		ng/L		98	71 - 131
Perfluorotridecanoic acid (PFTriA)	<1.8		35.7	32.2		ng/L		90	71 - 131
Perfluorotetradecanoic acid (PFTeA)	<1.8		35.7	30.9		ng/L		87	70 - 130
Perfluoro-n-hexadecanoic acid (PFHxDA)	0.84	J B	35.7	33.8		ng/L		92	76 - 136
Perfluoro-n-octadecanoic acid (PFODA)	<1.8		35.7	32.7		ng/L		91	58 - 145
Perfluorobutanesulfonic acid (PFBS)	2.3		31.6	33.6		ng/L		99	67 - 127
Perfluoropentanesulfonic acid (PFPeS)	0.47	J	33.5	39.0		ng/L		115	66 - 126
Perfluorohexanesulfonic acid (PFHxS)	5.6		32.5	35.6		ng/L		92	59 - 119
Perfluoroheptanesulfonic Acid (PFHpS)	0.31	J	34.0	34.0		ng/L		99	76 - 136
Perfluorooctanesulfonic acid (PFOS)	11		33.1	40.8		ng/L		91	70 - 130
Perfluorononanesulfonic acid (PFNS)	<1.8		34.3	32.8		ng/L		96	75 - 135
Perfluorodecanesulfonic acid (PFDS)	<1.8		34.4	32.3		ng/L		94	71 - 131
Perfluorododecanesulfonic acid (PFDoS)	<1.8		34.6	25.9		ng/L		75	67 - 127
Perfluorooctanesulfonamide (FOSA)	<1.8		35.7	38.8		ng/L		109	73 - 133
NMeFOSA	<1.8		35.7	33.3		ng/L		93	67 - 154
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<4.6		35.7	38.6		ng/L		108	76 - 136
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<4.6		35.7	35.9		ng/L		100	76 - 136
NMeFOSE	<3.7		35.7	33.1		ng/L		93	70 - 130
NEtFOSE	<1.8		35.7	32.5		ng/L		91	71 - 131

Eurofins TestAmerica, Chicago

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189112-1

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

Lab Sample ID: 500-189112-10 MS

Client Sample ID: SW-U10 (10072020)

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 420854

Prep Batch: 420804

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.	Limits
	Result	Qualifier	Added	Result	Qualifier					
4:2 FTS	<1.8		33.4	34.6		ng/L		104		79 - 139
6:2 FTS	18		33.9	51.4		ng/L		99		59 - 175
8:2 FTS	1.3	J	34.2	36.3		ng/L		102		75 - 135
10:2 FTS	<1.8		34.4	32.2		ng/L		93		64 - 142
DONA	<1.8		33.6	27.7		ng/L		82		79 - 139
HFPO-DA (GenX)	<3.7		35.7	33.8		ng/L		95		51 - 173
F-53B Major	<1.8		33.3	30.4		ng/L		91		75 - 135
F-53B Minor	<1.8		33.6	27.9		ng/L		83		54 - 114

Isotope Dilution	MS	MS	Limits
	%Recovery	Qualifier	
13C4 PFBA	41		25 - 150
13C5 PFPeA	62		25 - 150
13C2 PFHxA	71		25 - 150
13C4 PFHpA	81		25 - 150
13C4 PFOA	85		25 - 150
13C5 PFNA	85		25 - 150
13C2 PFDA	85		25 - 150
13C2 PFUnA	80		25 - 150
13C2 PFDoA	79		25 - 150
13C2 PFTeDA	70		25 - 150
13C2 PFHxDA	60		25 - 150
13C3 PFBS	79		25 - 150
18O2 PFHxS	87		25 - 150
13C4 PFOS	94		25 - 150
13C8 FOSA	82		25 - 150
d3-NMeFOSAA	87		25 - 150
d5-NEtFOSAA	93		25 - 150
d-N-MeFOSA-M	50		20 - 150
d-N-EtFOSA-M	39		20 - 150
d7-N-MeFOSE-M	41		10 - 120
d9-N-EtFOSE-M	39		10 - 120
M2-4:2 FTS	136		25 - 150
M2-6:2 FTS	160	*5	25 - 150
M2-8:2 FTS	144		25 - 150
13C3 HFPO-DA	79		25 - 150

Lab Sample ID: 500-189112-10 MSD

Client Sample ID: SW-U10 (10072020)

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 420854

Prep Batch: 420804

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	Limits	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier							
Perfluorobutanoic acid (PFBA)	19		36.4	55.3		ng/L		99		76 - 136	2	30
Perfluoropentanoic acid (PFPeA)	35		36.4	70.3		ng/L		97		71 - 131	8	30
Perfluorohexanoic acid (PFHxA)	26		36.4	62.1		ng/L		99		73 - 133	8	30
Perfluoroheptanoic acid (PFHpA)	16		36.4	53.6		ng/L		103		72 - 132	9	30
Perfluorooctanoic acid (PFOA)	25		36.4	56.9		ng/L		89		70 - 130	14	30
Perfluorononanoic acid (PFNA)	3.1		36.4	39.5		ng/L		100		75 - 135	6	30
Perfluorodecanoic acid (PFDA)	0.35	J	36.4	34.4		ng/L		94		76 - 136	13	30

Eurofins TestAmerica, Chicago

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189112-1

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

Lab Sample ID: 500-189112-10 MSD
Matrix: Water
Analysis Batch: 420854

Client Sample ID: SW-U10 (10072020)
Prep Type: Total/NA
Prep Batch: 420804

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perfluoroundecanoic acid (PFUnA)	<1.8		36.4	37.4		ng/L		103	68 - 128	12	30
Perfluorododecanoic acid (PFDoA)	<1.8		36.4	31.4		ng/L		86	71 - 131	11	30
Perfluorotridecanoic acid (PFTriA)	<1.8		36.4	29.7		ng/L		82	71 - 131	8	30
Perfluorotetradecanoic acid (PFTeA)	<1.8		36.4	40.8		ng/L		112	70 - 130	27	30
Perfluoro-n-hexadecanoic acid (PFHxDA)	0.84	J B	36.4	34.6		ng/L		93	76 - 136	3	30
Perfluoro-n-octadecanoic acid (PFODA)	<1.8		36.4	31.4		ng/L		86	58 - 145	4	30
Perfluorobutanesulfonic acid (PFBS)	2.3		32.2	34.0		ng/L		98	67 - 127	1	30
Perfluoropentanesulfonic acid (PFPeS)	0.47	J	34.1	38.5		ng/L		111	66 - 126	1	30
Perfluorohexanesulfonic acid (PFHxS)	5.6		33.1	34.9		ng/L		89	59 - 119	2	30
Perfluoroheptanesulfonic Acid (PFHpS)	0.31	J	34.6	34.5		ng/L		99	76 - 136	1	30
Perfluorooctanesulfonic acid (PFOS)	11		33.8	41.7		ng/L		92	70 - 130	2	30
Perfluorononanesulfonic acid (PFNS)	<1.8		34.9	32.6		ng/L		93	75 - 135	1	30
Perfluorodecanesulfonic acid (PFDS)	<1.8		35.1	31.1		ng/L		89	71 - 131	4	30
Perfluorododecanesulfonic acid (PFDoS)	<1.8		35.2	25.5		ng/L		72	67 - 127	2	30
Perfluorooctanesulfonamide (FOSA)	<1.8		36.4	38.8		ng/L		106	73 - 133	0	30
NMeFOSA	<1.8		36.4	34.5		ng/L		95	67 - 154	3	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<4.6		36.4	38.9		ng/L		107	76 - 136	1	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<4.6		36.4	37.9		ng/L		104	76 - 136	5	30
NMeFOSE	<3.7		36.4	34.4		ng/L		94	70 - 130	4	30
NEtFOSE	<1.8		36.4	32.0		ng/L		88	71 - 131	1	30
4:2 FTS	<1.8		34.0	35.3		ng/L		104	79 - 139	2	30
6:2 FTS	18		34.5	49.2		ng/L		90	59 - 175	4	30
8:2 FTS	1.3	J	34.9	37.0		ng/L		102	75 - 135	2	30
10:2 FTS	<1.8		35.1	32.3		ng/L		92	64 - 142	0	30
DONA	<1.8		34.3	28.2		ng/L		82	79 - 139	2	30
HFPO-DA (GenX)	<3.7		36.4	35.9		ng/L		99	51 - 173	6	30
F-53B Major	<1.8		33.9	31.4		ng/L		93	75 - 135	3	30
F-53B Minor	<1.8		34.3	26.7		ng/L		78	54 - 114	4	30
MSD MSD											
Isotope Dilution	%Recovery	Qualifier	Limits								
13C4 PFBA	45		25 - 150								
13C5 PFPeA	65		25 - 150								
13C2 PFHxA	77		25 - 150								
13C4 PFHpA	87		25 - 150								
13C4 PFOA	94		25 - 150								
13C5 PFNA	107		25 - 150								

Eurofins TestAmerica, Chicago

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189112-1

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

Lab Sample ID: 500-189112-10 MSD
Matrix: Water
Analysis Batch: 420854

Client Sample ID: SW-U10 (10072020)
Prep Type: Total/NA
Prep Batch: 420804

Isotope Dilution	MSD MSD		Limits
	%Recovery	Qualifier	
13C2 PFDA	97		25 - 150
13C2 PFUnA	96		25 - 150
13C2 PFDoA	91		25 - 150
13C2 PFTeDA	70		25 - 150
13C2 PFHxDA	72		25 - 150
13C3 PFBS	87		25 - 150
18O2 PFHxS	100		25 - 150
13C4 PFOS	101		25 - 150
13C8 FOSA	90		25 - 150
d3-NMeFOSAA	92		25 - 150
d5-NEtFOSAA	99		25 - 150
d-N-MeFOSA-M	50		20 - 150
d-N-EtFOSA-M	42		20 - 150
d7-N-MeFOSE-M	38		10 - 120
d9-N-EtFOSE-M	37		10 - 120
M2-4:2 FTS	149		25 - 150
M2-6:2 FTS	180	*5	25 - 150
M2-8:2 FTS	154	*5	25 - 150
13C3 HFPO-DA	84		25 - 150

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 500-566337/1
Matrix: Water
Analysis Batch: 566337

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

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Total Suspended Solids	<5.0		5.0	1.9	mg/L			10/13/20 15:35	1

Lab Sample ID: LCS 500-566337/2
Matrix: Water
Analysis Batch: 566337

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits

Lab Sample ID: 500-189112-11 DU
Matrix: Water
Analysis Batch: 566337

Client Sample ID: DUP-03-10072020
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit

Lab Sample ID: MB 500-566524/1
Matrix: Water
Analysis Batch: 566524

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

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Total Suspended Solids	<5.0		5.0	1.9	mg/L			10/14/20 12:15	1

Eurofins TestAmerica, Chicago

QC Sample Results

Client: ARCADIS U.S., Inc.
 Project/Site: Marinette 30015296.00009

Job ID: 500-189112-1

Method: SM 2540D - Solids, Total Suspended (TSS) (Continued)

Lab Sample ID: LCS 500-566524/2
Matrix: Water
Analysis Batch: 566524

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	200	185		mg/L		93	80 - 120

Lab Sample ID: MB 500-566540/1
Matrix: Water
Analysis Batch: 566540

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	<5.0		5.0	1.9	mg/L			10/14/20 14:00	1

Lab Sample ID: LCS 500-566540/2
Matrix: Water
Analysis Batch: 566540

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	200	195		mg/L		97	80 - 120

Lab Sample ID: 500-189112-10 MS
Matrix: Water
Analysis Batch: 566540

Client Sample ID: SW-U10 (10072020)
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	4.0	J	100	98.0		mg/L		94	75 - 125

Lab Sample ID: 500-189112-10 MSD
Matrix: Water
Analysis Batch: 566540

Client Sample ID: SW-U10 (10072020)
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Suspended Solids	4.0	J	100	101		mg/L		97	75 - 125	3	20

Lab Chronicle

Client: ARCADIS U.S., Inc.
 Project/Site: Marinette 30015296.00009

Job ID: 500-189112-1

Client Sample ID: SW-U01 (10072020)

Lab Sample ID: 500-189112-1

Date Collected: 10/07/20 14:35

Matrix: Water

Date Received: 10/09/20 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			420804	10/11/20 19:23	VP	TAL SAC
Total/NA	Analysis	537 (modified)		1	420854	10/12/20 11:57	RS1	TAL SAC
Total/NA	Prep	3535	DL		420804	10/11/20 19:23	VP	TAL SAC
Total/NA	Analysis	537 (modified)	DL	10	421249	10/13/20 15:09	S1M	TAL SAC
Total/NA	Analysis	SM 2540D		1	566337		SMO	TAL CHI
					(Start)	10/13/20 15:43		
					(End)	10/13/20 15:44		

Client Sample ID: SW-U02 (10072020)

Lab Sample ID: 500-189112-2

Date Collected: 10/07/20 14:40

Matrix: Water

Date Received: 10/09/20 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			420804	10/11/20 19:23	VP	TAL SAC
Total/NA	Analysis	537 (modified)		1	420854	10/12/20 12:06	RS1	TAL SAC
Total/NA	Prep	3535	DL		420804	10/11/20 19:23	VP	TAL SAC
Total/NA	Analysis	537 (modified)	DL	10	421249	10/13/20 15:18	S1M	TAL SAC
Total/NA	Analysis	SM 2540D		1	566337		SMO	TAL CHI
					(Start)	10/13/20 15:44		
					(End)	10/13/20 15:45		

Client Sample ID: SW-U03 (10072020)

Lab Sample ID: 500-189112-3

Date Collected: 10/07/20 14:45

Matrix: Water

Date Received: 10/09/20 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			420804	10/11/20 19:23	VP	TAL SAC
Total/NA	Analysis	537 (modified)		1	420854	10/12/20 12:15	RS1	TAL SAC
Total/NA	Prep	3535	DL		420804	10/11/20 19:23	VP	TAL SAC
Total/NA	Analysis	537 (modified)	DL	10	421249	10/13/20 15:28	S1M	TAL SAC
Total/NA	Analysis	SM 2540D		1	566337		SMO	TAL CHI
					(Start)	10/13/20 15:45		
					(End)	10/13/20 15:46		

Client Sample ID: SW-U04 (10072020)

Lab Sample ID: 500-189112-4

Date Collected: 10/07/20 14:55

Matrix: Water

Date Received: 10/09/20 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			420804	10/11/20 19:23	VP	TAL SAC
Total/NA	Analysis	537 (modified)		1	420854	10/12/20 12:24	RS1	TAL SAC
Total/NA	Prep	3535	DL		420804	10/11/20 19:23	VP	TAL SAC
Total/NA	Analysis	537 (modified)	DL	10	421249	10/13/20 15:37	S1M	TAL SAC
Total/NA	Analysis	SM 2540D		1	566337		SMO	TAL CHI
					(Start)	10/13/20 15:46		
					(End)	10/13/20 15:47		

Eurofins TestAmerica, Chicago

Lab Chronicle

Client: ARCADIS U.S., Inc.
 Project/Site: Marinette 30015296.00009

Job ID: 500-189112-1

Client Sample ID: SW-U05 (10072020)

Lab Sample ID: 500-189112-5

Date Collected: 10/07/20 15:10

Matrix: Water

Date Received: 10/09/20 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			420804	10/11/20 19:23	VP	TAL SAC
Total/NA	Analysis	537 (modified)		1	420854	10/12/20 12:34	RS1	TAL SAC
Total/NA	Analysis	SM 2540D		1	566337		SMO	TAL CHI
					(Start)	10/13/20 15:47		
					(End)	10/13/20 15:47		

Client Sample ID: SW-U06 (10072020)

Lab Sample ID: 500-189112-6

Date Collected: 10/07/20 15:15

Matrix: Water

Date Received: 10/09/20 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			420804	10/11/20 19:23	VP	TAL SAC
Total/NA	Analysis	537 (modified)		1	420854	10/12/20 12:43	RS1	TAL SAC
Total/NA	Analysis	SM 2540D		1	566337		SMO	TAL CHI
					(Start)	10/13/20 15:47		
					(End)	10/13/20 15:48		

Client Sample ID: SW-U07 (10072020)

Lab Sample ID: 500-189112-7

Date Collected: 10/07/20 15:25

Matrix: Water

Date Received: 10/09/20 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			420804	10/11/20 19:23	VP	TAL SAC
Total/NA	Analysis	537 (modified)		1	420854	10/12/20 12:52	RS1	TAL SAC
Total/NA	Analysis	SM 2540D		1	566337		SMO	TAL CHI
					(Start)	10/13/20 15:48		
					(End)	10/13/20 15:49		

Client Sample ID: SW-U08 (10072020)

Lab Sample ID: 500-189112-8

Date Collected: 10/07/20 15:30

Matrix: Water

Date Received: 10/09/20 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			420804	10/11/20 19:23	VP	TAL SAC
Total/NA	Analysis	537 (modified)		1	420854	10/12/20 13:02	RS1	TAL SAC
Total/NA	Analysis	SM 2540D		1	566337		SMO	TAL CHI
					(Start)	10/13/20 15:49		
					(End)	10/13/20 15:50		

Client Sample ID: SW-U09 (10072020)

Lab Sample ID: 500-189112-9

Date Collected: 10/07/20 15:45

Matrix: Water

Date Received: 10/09/20 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			420804	10/11/20 19:23	VP	TAL SAC
Total/NA	Analysis	537 (modified)		1	420854	10/12/20 13:30	RS1	TAL SAC

Lab Chronicle

Client: ARCADIS U.S., Inc.
 Project/Site: Marinette 30015296.00009

Job ID: 500-189112-1

Client Sample ID: SW-U09 (10072020)
Date Collected: 10/07/20 15:45
Date Received: 10/09/20 09:40

Lab Sample ID: 500-189112-9
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2540D		1	566337		SMO	TAL CHI

Client Sample ID: SW-U10 (10072020)
Date Collected: 10/07/20 16:00
Date Received: 10/09/20 09:40

Lab Sample ID: 500-189112-10
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			420804	10/11/20 19:23	VP	TAL SAC
Total/NA	Analysis	537 (modified)		1	420854	10/12/20 13:39	RS1	TAL SAC
Total/NA	Analysis	SM 2540D		1	566540		SMO	TAL CHI
					(Start)	10/14/20 14:14		
					(End)	10/14/20 14:15		

Client Sample ID: DUP-03-10072020
Date Collected: 10/07/20 00:00
Date Received: 10/09/20 09:40

Lab Sample ID: 500-189112-11
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			420804	10/11/20 19:23	VP	TAL SAC
Total/NA	Analysis	537 (modified)		1	420854	10/12/20 14:06	RS1	TAL SAC
Total/NA	Prep	3535	DL		420804	10/11/20 19:23	VP	TAL SAC
Total/NA	Analysis	537 (modified)	DL	10	421249	10/13/20 15:46	S1M	TAL SAC
Total/NA	Analysis	SM 2540D		1	566337		SMO	TAL CHI
					(Start)	10/13/20 15:51		
					(End)	10/13/20 15:51		

Client Sample ID: Field Blank-10-07-2020
Date Collected: 10/07/20 12:00
Date Received: 10/09/20 09:40

Lab Sample ID: 500-189112-12
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			420804	10/11/20 19:23	VP	TAL SAC
Total/NA	Analysis	537 (modified)		1	420854	10/12/20 14:15	RS1	TAL SAC

Client Sample ID: SW-39
Date Collected: 10/07/20 15:20
Date Received: 10/09/20 09:40

Lab Sample ID: 500-189112-13
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			420804	10/11/20 19:23	VP	TAL SAC
Total/NA	Analysis	537 (modified)		1	420854	10/12/20 14:24	RS1	TAL SAC
Total/NA	Analysis	SM 2540D		1	566524		SMO	TAL CHI
					(Start)	10/14/20 12:27		
					(End)	10/14/20 12:28		

Lab Chronicle

Client: ARCADIS U.S., Inc.
Project/Site: Marinette 30015296.00009

Job ID: 500-189112-1

Laboratory References:

TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

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

1

2

3

4

5

6

7

8

9

10

11

12

13

14

Accreditation/Certification Summary

Client: ARCADIS U.S., Inc.
 Project/Site: Marinette 30015296.00009

Job ID: 500-189112-1

Laboratory: Eurofins TestAmerica, Chicago

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

Authority	Program	Identification Number	Expiration Date
Wisconsin	State	999580010	08-31-21

Laboratory: Eurofins TestAmerica, Sacramento

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

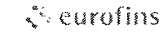
Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	17-020	01-20-21
ANAB	Dept. of Defense ELAP	L2468	01-20-21
ANAB	Dept. of Energy	L2468.01	01-20-21
ANAB	ISO/IEC 17025	L2468	01-20-21
Arizona	State	AZ0708	08-11-21
Arkansas DEQ	State	88-0691	06-17-21
California	State	2897	01-31-22
Colorado	State	CA0004	08-31-21
Connecticut	State	PH-0691	06-30-21
Florida	NELAP	E87570	06-30-21
Georgia	State	4040	01-30-21
Hawaii	State	<cert No.>	01-29-21
Illinois	NELAP	200060	03-17-21
Kansas	NELAP	E-10375	10-31-20
Louisiana	NELAP	01944	06-30-21
Maine	State	CA00004	04-14-22
Michigan	State	9947	08-03-23
Nevada	State	CA000442021-1	07-31-21
New Hampshire	NELAP	2997	04-18-21
New Jersey	NELAP	CA005	06-30-21
New York	NELAP	11666	04-01-21
Oregon	NELAP	4040	01-29-21
Pennsylvania	NELAP	68-01272	03-31-21
Texas	NELAP	T104704399-19-13	06-01-21
US Fish & Wildlife	US Federal Programs	58448	07-31-21
USDA	US Federal Programs	P330-18-00239	07-31-21
Utah	NELAP	CA000442019-01	02-28-21
Vermont	State	VT-4040	04-16-21
Virginia	NELAP	460278	03-14-21
Washington	State	C581	05-05-21
West Virginia (DW)	State	9930C	12-31-20
Wisconsin	State	998204680	08-31-21
Wyoming	State Program	8TMS-L	01-28-19 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins TestAmerica, Chicago

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

Chain of Custody Record



Client Information		Sampler: <i>Amy Siefker</i>	Lab PM: Fredrick, Sandie	Carrier Tracking No(s):	COC No. 500-85814-38797 3																												
Client Contact Elizabeth Hover		Phone:	E-Mail sandra.fredrick@eurofinset.com		Page 1 of 8																												
Company ARCADIS U.S., Inc.		Analysis Requested			Job # <i>500-189112</i>																												
Address 126 North Jefferson Street Suite 400		Due Date Requested:	<table border="1"> <tr> <td colspan="2">Preservation Codes:</td> </tr> <tr> <td>A - HCL</td> <td>M - Hexane</td> </tr> <tr> <td>B - NaOH</td> <td>N - None</td> </tr> <tr> <td>C - Zn Acetate</td> <td>O - AsNaO2</td> </tr> <tr> <td>D - Nitric Acid</td> <td>P - Na2O4S</td> </tr> <tr> <td>E - NaHSO4</td> <td>Q - Na2SO3</td> </tr> <tr> <td>F - MeOH</td> <td>R - Na2S2O3</td> </tr> <tr> <td>G - Amchlor</td> <td>S - H2SO4</td> </tr> <tr> <td>H - Ascorbic Acid</td> <td>T - TSP Dodecahydrate</td> </tr> <tr> <td>I - Ice</td> <td>U - Acetone</td> </tr> <tr> <td>J - DI Water</td> <td>V - MCAA</td> </tr> <tr> <td>K - EDTA</td> <td>W - pH 4-5</td> </tr> <tr> <td>L - EDA</td> <td>Z - other (specify)</td> </tr> <tr> <td colspan="2">Other:</td> </tr> </table>			Preservation Codes:		A - HCL	M - Hexane	B - NaOH	N - None	C - Zn Acetate	O - AsNaO2	D - Nitric Acid	P - Na2O4S	E - NaHSO4	Q - Na2SO3	F - MeOH	R - Na2S2O3	G - Amchlor	S - H2SO4	H - Ascorbic Acid	T - TSP Dodecahydrate	I - Ice	U - Acetone	J - DI Water	V - MCAA	K - EDTA	W - pH 4-5	L - EDA	Z - other (specify)	Other:	
Preservation Codes:																																	
A - HCL	M - Hexane																																
B - NaOH	N - None																																
C - Zn Acetate	O - AsNaO2																																
D - Nitric Acid	P - Na2O4S																																
E - NaHSO4	Q - Na2SO3																																
F - MeOH	R - Na2S2O3																																
G - Amchlor	S - H2SO4																																
H - Ascorbic Acid	T - TSP Dodecahydrate																																
I - Ice	U - Acetone																																
J - DI Water	V - MCAA																																
K - EDTA	W - pH 4-5																																
L - EDA	Z - other (specify)																																
Other:																																	
City Milwaukee		TAT Requested (days): <i>Standard</i>																															
State, Zip WI, 53202		PG # 30015296.00009																															
Phone 500-189112 COC		WO #																															
Email Elizabeth.Hover@arcadis.com		Project # 50017363																															
Project Name Marinette 30015296 00009		SSON#																															
Site <i>Marinette, WI</i>																																	
Sample Identification		Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perforin (MS/MSD) (Yes or No)	2640D - TSS	PFC_IDA - PFAS, Extended List (36 Analytes)	Total Number of containers	Special Instructions/Note:																						
<i>SW-U01 (10072020)</i>		<i>10/7/20</i>	<i>1435</i>	<i>G</i>	<i>Water</i>	<i>N</i>	<i>N</i>	<i>X</i>	<i>X</i>																								
<i>SW-U02 (10072020)</i>			<i>1440</i>		<i>Water</i>																												
<i>SW-U03 (10072020)</i>			<i>1445</i>		<i>Water</i>																												
<i>SW-U04 (10072020)</i>			<i>1455</i>		<i>Water</i>																												
<i>SW-U05 (10072020)</i>			<i>1510</i>		<i>Water</i>																												
<i>SW-U06 (10072020)</i>			<i>1515</i>		<i>Water</i>																												
<i>SW-U07 (10072020)</i>			<i>1525</i>		<i>Water</i>																												
<i>SW-U08 (10072020)</i>			<i>1530</i>		<i>Water</i>																												
<i>SW-U09 (10072020)</i>			<i>1545</i>		<i>Water</i>																												
<i>SW-U10 (10072020)</i>			<i>1600</i>		<i>Water</i>																												
<i>DUP-03-10072020</i>			<i>—</i>		<i>Water</i>						<i>MS/MSD Duplicate</i>																						
Possible Hazard Identification						Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)																											
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological						<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months																											
Deliverable Requested: I, II, III, IV, Other (specify)						Special Instructions/QC Requirements.																											
Empty Kit Relinquished by:		Date:		Time:		Method of Shipment																											
<i>Amy Siefker</i>		<i>10/8/20 / 1700</i>		<i>Arcadis</i>		<i>Received by</i>		<i>10/9/20 0940</i>		<i>TA-CH</i>																							
Relinquished by		Date/Time		Company		Received by		Date/Time		Company																							
Relinquished by		Date/Time		Company		Received by		Date/Time		Company																							
Custody Seals Intact.		Custody Seal No..		Cooler Temperature (s) °C (and other Remarks)																													
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No				<i>2.0, 1.9, 2.9, 1.4 → 2.4, 1.7 → 2.7</i>																													

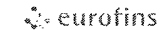
TOO CLOSE TO SW



Eurofins TestAmerica, Chicago

2417 Bond Street
University Park, IL 60464
Phone: 708-534-5200 Fax: 708-534-5211

Chain of Custody Record



Client Information				Sample: Amy Siefker	Lab EM: Fredrick, Sandie	Carrier Tracking No(s):	COC No.: 500-85814-38797 4					
Client Contact: Elizabeth Hover				Phone:	E-Mail: sandra.fredrick@eurofinset.com		Page 2 of 7					
Company: ARCADIS U.S., Inc				Analysis Requested				Job #: 500-189112				
Address: 126 North Jefferson Street Suite 400 City: Milwaukee State, Zip: WI, 53202 Phone: Email: Elizabeth.Hover@arcadis.com Project Name: Marinette 30015296.00009 Site: MANNETTE, WI								Due Date Requested: TAT Requested (days): Standard PC #: 30015296.00009 WO #: Project #: 50017363 SSOW#:				Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecanhydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify) Other:
Sample Identification		Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform IIS/MSD (Yes or No)	2640D - TSS	PFC_IDA - PFAS, Extended List (36 Analytes)	Total Number of containers	Special Instructions/Note:	
Field Blank-10-07-2020		10/7/20	1200	G	Water	N	N				Field Blank	
SW - 39		10/7/20	1520	G	Water	N	N	X	X			
					Water							
					Water							
					Water							
					Water							
					Water							
					Water							
					Water							
					Water							
					Water							
					Water							
Possible Hazard Identification				Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)								
<input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological				<input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months								
Deliverable Requested I, II, III, IV, Other (specify)				Special Instructions/QC Requirements.								
Empty Kit Relinquished by:				Date:		Time:		Method of Shipment:				
Relinquished by: Amy Siefker				Date/Time: 10/8/20 / 1700		Company: Arcadis		Received by: Shirley Scott		Date/Time: 10/9/20 0940		Company: DA-CHT
Relinquished by:				Date/Time:		Company:		Received by:		Date/Time:		Company:
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No				Custody Seal No.:				Cooler Temperature(s) °C and Other Remarks				

12
13

ORIGIN ID:RRLA (262) 202-5955
GUEST: JEREMY HAMLIN
COUNTRY INN & SUITES
2020 OLD PESHTIGO RD

SHIP DATE: 28FEB20
ACTWGT: 25.00 LB MAN
CAD: 525155/CAFE3211

MARINETTE, WI 54143
UNITED STATES US

TO

TESTAMERICA CHICAGO
2417 BOND STREET



UNIVERSITY PARK IL 60484-3

500-189112 Wayb

(700) 534-5200

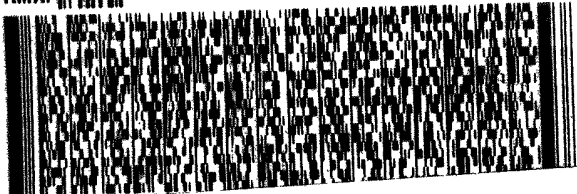
INU:

PO:

REF:

DEPT:

RMA: III III III



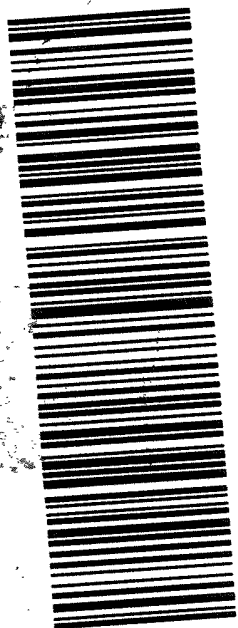
FedEx
Express



5111808050109

55297-435 EXP 09/21

FRI - 09 OCT 10:30A
PRIORITY OVERNIGHT
60484
IL-US ORD



#176495 10/08 56B12/2E7E/B765

FedEx
TRK# 7125 4942 1544
0221
NA JOTA

48qt

ORIGIN ID:RRLA (262) 202-5955
GUEST: JEREMY HAMLIN
COUNTRY INN & SUITES
2020 OLD PESHTIGO RD

SHIP DATE: 06MAR20
ACTWGT: 25.00 LB MAN
CAD: 525155/CAFE3211

MARINETTE, WI 54143
UNITED STATES US

TO

TESTAMERICA CHICAGO
2417 BOND STREET

UNIVERSITY PARK IL 60484-3101

(700) 534-5200

INU:

PO:

REF:

DEPT:

RMA: III III III

FedEx

TRK#
0221

7125 4942 2161

FRI - 09 OCT 10:30A
PRIORITY OVERNIGHT

NA JOTA

60484

IL-US ORD



48qt

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

ORIGIN ID:RRLA (262) 202-5955
GUEST: JEREMY HAMLIN
COUNTRY INN & SUITES
2020 OLD PESHTIGO RD

SHIP DATE: 06MAR20
ACTWGT: 25.00 LB MAN
CAD: 525155/CAFE3211

MARINETTE, WI 54143
UNITED STATES US

ORIGIN ID:RRLA (262) 202-5955
GUEST: JEREMY HAMLIN
COUNTRY INN & SUITES
2020 OLD PESHTIGO RD

SHIP DATE: 06MAR20
ACTWGT: 25.00 LB MAN
CAD: 525155/CAFE3211

MARINETTE, WI 54143
UNITED STATES US

TO
TESTAMERICA CHICAGO
2417 BOND STREET

TO
TESTAMERICA CHICAGO
2417 BOND STREET

UNIVERSITY PARK IL 60484-3101

UNIVERSITY PARK IL 60484-3101

(708) 534-5200

(708) 534-5200

RMA: 01111111

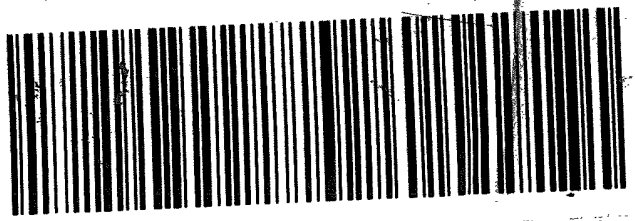
RMA: 01111111

FedEx
TRK# 7125 4942 2117

FRI - 09 OCT 10:30A
PRIORITY OVERNIGHT

NA JOTA

60484
IL-US ORD



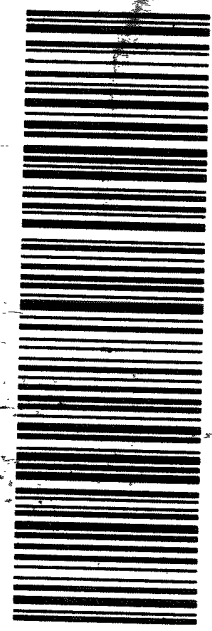
16qt.

FedEx
TRK# 7125 4942 2128

FRI - 09 OCT 10:30A
PRIORITY OVERNIGHT

NA JOTA

60484
IL-US ORD



BY 519
ST 22

5 10:30 A
2128
10/19

RETURNS MON-SAT

48qt.

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Eurofins TestAmerica, Chicago

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

Chain of Custody Record



Environment Testing
America

Client Information (Sub Contract Lab)		Sampler:		Lab PM: Fredrick, Sandie		Carrier Tracking No(s):		COC No: 500-140772.1			
Client Contact: Shipping/Receiving		Phone:		E-Mail: sandra.fredrick@eurofinset.com		State of Origin: Wisconsin		Page: Page 1 of 2			
Company: TestAmerica Laboratories, Inc.				Accreditations Required (See note): State Program - Wisconsin				Job #: 500-189112-1			
Address: 880 Riverside Parkway,		Due Date Requested: 10/21/2020		Analysis Requested						Preservation Codes: A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5 L - EDA Z - other (specify)	
City: West Sacramento		TAT Requested (days):									
State, Zip: CA, 95605		PO #:									
Phone: 916-373-5600(Tel) 916-372-1059(Fax)		WO #:									
Project Name: Marinette 30015296.00009		Project #: 50017363									
Site:		SSOW#:									
Sample Identification - Client ID (Lab ID)		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)		Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)			
								Field Filtered Sample (Yes or No)			
								Perform MS/MSD (Yes or No)			
								PFC IDA/3335_PFC PFAS_Extended List (36 Analytes)			
								Total Number of containers			
								Special Instructions/Note:			
SW-U01 (10072020) (500-189112-1)		10/7/20		14:35 Central		Water		X			
SW-U02 (10072020) (500-189112-2)		10/7/20		14:40 Central		Water		X			
SW-U03 (10072020) (500-189112-3)		10/7/20		14:45 Central		Water		X			
SW-U04 (10072020) (500-189112-4)		10/7/20		14:55 Central		Water		X			
SW-U05 (10072020) (500-189112-5)		10/7/20		15:10 Central		Water		X			
SW-U06 (10072020) (500-189112-6)		10/7/20		15:15 Central		Water		X			
SW-U07 (10072020) (500-189112-7)		10/7/20		15:25 Central		Water		X			
SW-U08 (10072020) (500-189112-8)		10/7/20		15:30 Central		Water		X			
SW-U09 (10072020) (500-189112-9)		10/7/20		15:45 Central		Water		X			
<p>Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.</p>											
Possible Hazard Identification					Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)						
Unconfirmed					<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months						
Deliverable Requested: I, II, III, IV, Other (specify)			Primary Deliverable Rank: 2		Special Instructions/QC Requirements:						
Empty Kit Relinquished by:			Date:		Time:		Method of Shipment:				
Relinquished by: <i>[Signature]</i>			Date/Time: 10/9/20 1700		Company: TA		Received by: <i>[Signature]</i>				
Relinquished by:			Date/Time:		Company:		Date/Time: 10/10/20 09:05				
Relinquished by:			Date/Time:		Company:		Date/Time:				
Custody Seals Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			Custody Seal No.: 13467606/1346765			Cooler Temperature(s)/C and Other Remarks: OB: 2.7/2.4 UPR: 2.2/1.9					



Eurofins TestAmerica, Chicago

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

Chain of Custody Record



Client Information (Sub Contract Lab)			Sampler:	Lab PM: Fredrick, Sandie	Carrier Tracking No(s):	COC No: 500-140772.2																																																																																					
Client Contact: Shipping/Receiving			Phone:	E-Mail: sandra.fredrick@eurofinset.com	State of Origin: Wisconsin	Page: Page 2 of 2																																																																																					
Company: TestAmerica Laboratories, Inc.				Accreditations Required (See note): State Program - Wisconsin			Job #: 500-189112-1																																																																																				
Address: 880 Riverside Parkway,		Due Date Requested: 10/21/2020		<table border="1"> <thead> <tr> <th colspan="12">Analysis Requested</th> </tr> <tr> <th>Field Filtered Sample (Yes or No)</th> <th>Perform MS/MSD (Yes or No)</th> <th>PFC IDA/3335_PFC PFAS_Extended List (36 Analytes)</th> <th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th> </tr> </thead> <tbody> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </tbody> </table>			Analysis Requested												Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	PFC IDA/3335_PFC PFAS_Extended List (36 Analytes)																																																																						Preservation Codes: A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5 L - EDA Z - other (specify)
Analysis Requested																																																																																											
Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	PFC IDA/3335_PFC PFAS_Extended List (36 Analytes)																																																																																									
City: West Sacramento	TAT Requested (days):		Project #: 50017363		Total Number of containers		Other:																																																																																				
State, Zip: CA, 95605			SSOW#:																																																																																								
Phone: 916-373-5600(Tel) 916-372-1059(Fax)	PO #:																																																																																										
Email:	WO #:																																																																																										
Project Name: Marinette 30015296.00009																																																																																											
Site:																																																																																											
Sample Identification - Client ID (Lab ID)			Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Special Instructions/Note:																																																																																				
			Preservation Code:																																																																																								
SW-U10 (10072020) (500-189112-10)			10/7/20	16:00 Central		Water																																																																																					
SW-U10 (10072020) (500-189112-10MS)			10/7/20	16:00 Central	MS	Water																																																																																					
SW-U10 (10072020) (500-189112-10MSD)			10/7/20	16:00 Central	MSD	Water																																																																																					
DUP-03-10072020 (500-189112-11)			10/7/20	Central		Water																																																																																					
Field Blank-10-07-2020 (500-189112-12)			10/7/20	12:00 Central		Water																																																																																					
SW-39 (500-189112-13)			10/7/20	15:20 Central		Water																																																																																					
<p>Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.</p>																																																																																											
Possible Hazard Identification					Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)																																																																																						
Unconfirmed					<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months																																																																																						
Deliverable Requested: I, II, III, IV, Other (specify)			Primary Deliverable Rank: 2		Special Instructions/QC Requirements:																																																																																						
Empty Kit Relinquished by:			Date:	Time:	Method of Shipment:																																																																																						
Relinquished by: <i>[Signature]</i>			Date/Time: 10/19/20 1700	Company: TA	Received by: <i>[Signature]</i>																																																																																						
Relinquished by:			Date/Time:	Company:	Date/Time: 10/10/20 09:05																																																																																						
Relinquished by:			Date/Time:	Company:	Date/Time:																																																																																						
Custody Seals Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.: 1346706/1346705			Cooler Temperature(s) °C and Other Remarks: 0TB: 2.7/2.4 core: 2.2/1.9																																																																																						

Page 51 of 58

10/19/2020



Login Sample Receipt Checklist

Client: ARCADIS U.S., Inc.

Job Number: 500-189112-1

Login Number: 189112

List Source: Eurofins TestAmerica, Chicago

List Number: 1

Creator: Scott, Sherri L

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are 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.	True	
Cooler Temperature is recorded.	True	2.6,2.9,2.4,2.7
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: ARCADIS U.S., Inc.

Job Number: 500-189112-1

Login Number: 189112

List Number: 2

Creator: Saephan, Kae C

List Source: Eurofins TestAmerica, Sacramento

List Creation: 10/10/20 12:28 PM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	1346765
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	ob: 2.4c corr: 1.9c
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



500-189112 Field Sheet

Tracking #: 189344497454

Job: _____

SO / PO / FO / SAT / 2-Day / Ground / UPS / CDO / Courier
GSO / OnTrac / Goldstreak / USPS / Other _____

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

Therm. ID: AK-5 Corr. Factor: (+) 0.5 °C
Ice Wet Gel _____ Other _____

Cooler Custody Seal: 1346765

Cooler ID: 1 OF 2

Temp Observed: 2.4 °C Corrected: 1.9 °C
From: Temp Blank Sample

Opening/Processing The Shipment	Yes	No	NA
Cooler compromised/tampered with?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Cooler Temperature is acceptable?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Initials: [Signature] Date: 10/10/20

Unpacking/Labeling The Samples	Yes	No	NA
CoC is complete w/o discrepancies?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Samples compromised/tampered with?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Sample containers have legible labels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample custody seal?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Containers are not broken or leaking?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample date/times are provided?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Appropriate containers are used?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample bottles are completely filled?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample preservatives verified?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Samples w/o discrepancies?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Zero headspace?*	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Alkalinity has no headspace?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Perchlorate has headspace? (Methods 314, 331, 6850)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Multiphasic samples are not present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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

Initials: [Signature] Date: 10/10/20

Notes: _____

Trizma Lot #(s): _____

Login Completion	Yes	No	NA
Receipt Temperature on COC?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Samples received within hold time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NCM Filed?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Log Release checked in TALS?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Initials: [Signature] Date: 10/10/20



Place Field Sheet Label Here

Tracking #: 189344497465

Job: _____

SO / PO / FO / (SAT) 2-Day / Ground / UPS / CDO / Courier
GSO / OnTrac / Goldstreak / USPS / Other _____

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

Therm. ID: AK-5 Corr. Factor: (+ 0.5) °C
Ice X Wet X Gel _____ Other _____
Cooler Custody Seal: 1346766
Cooler ID: 2 OF 2
Temp Observed: 2.7 °C Corrected: 2.2 °C
From: Temp Blank Sample

Notes: _____

Opening/Processing The Shipment

	Yes	No	NA
Cooler compromised/tampered with?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Cooler Temperature is acceptable?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Initials: [Signature] Date: 10/10/20

Unpacking/Labeling The Samples

	Yes	No	NA
CoC is complete w/o discrepancies?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Samples compromised/tampered with?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Sample containers have legible labels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample custody seal?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Containers are not broken or leaking?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample date/times are provided?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Appropriate containers are used?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample bottles are completely filled?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample preservatives verified?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Samples w/o discrepancies?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Zero headspace?*	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Alkalinity has no headspace?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Perchlorate has headspace? (Methods 314, 331, 6850)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Multiphasic samples are not present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

*Containers requiring zero headspace have no headspace, or bubble < 6 mm (1/4")
Initials: [Signature] Date: 10/10/20

Trizma Lot #(s): _____

Login Completion

	Yes	No	NA
Receipt Temperature on COC?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Samples received within hold time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NCM Filed?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Log Release checked in TALS?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Initials: [Signature] Date: 10/10/20

Isotope Dilution Summary

Client: ARCADIS U.S., Inc.
 Project/Site: Marinette 30015296.00009

Job ID: 500-189112-1

Method: 537 (modified) - Fluorinated Alkyl Substances

Matrix: Water

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFBA (25-150)	PFPeA (25-150)	PFHxA (25-150)	C4PFHA (25-150)	PFOA (25-150)	PFNA (25-150)	PFDA (25-150)	PFUnA (25-150)
500-189112-1	SW-U01 (10072020)	50	67	82	92		90	98	96
500-189112-1 - DL	SW-U01 (10072020)					83			
500-189112-2	SW-U02 (10072020)	51	70	80	94	99	106	101	102
500-189112-2 - DL	SW-U02 (10072020)								
500-189112-3	SW-U03 (10072020)	54	75	88	97	95	121	108	124
500-189112-3 - DL	SW-U03 (10072020)								
500-189112-4	SW-U04 (10072020)	47	64	72	87	93	95	91	97
500-189112-4 - DL	SW-U04 (10072020)								
500-189112-5	SW-U05 (10072020)	45	64	80	86	95	103	103	60
500-189112-6	SW-U06 (10072020)	44	63	73	83	91	90	94	89
500-189112-7	SW-U07 (10072020)	45	65	76	85	89	94	96	95
500-189112-8	SW-U08 (10072020)	40	57	68	75	82	73	77	73
500-189112-9	SW-U09 (10072020)	35	51	59	66	71	80	71	69
500-189112-10	SW-U10 (10072020)	37	54	63	72	79	81	79	82
500-189112-10 MS	SW-U10 (10072020)	41	62	71	81	85	85	85	80
500-189112-10 MSD	SW-U10 (10072020)	45	65	77	87	94	107	97	96
500-189112-11	DUP-03-10072020	45	66	73	87	82	88	91	86
500-189112-11 - DL	DUP-03-10072020								
500-189112-12	Field Blank-10-07-2020	71	76	78	81	84	95	88	75
500-189112-13	SW-39	68	76	85	88	94	96	95	90
LCS 320-420804/2-A	Lab Control Sample	81	84	79	86	99	95	100	85
MB 320-420804/1-A	Method Blank	74	77	78	79	88	85	94	81

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFDaA (25-150)	PFTDA (25-150)	PFHxDA (25-150)	C3PFBS (25-150)	PFHxS (25-150)	PFOS (25-150)	PFOSA (25-150)	d3NMFOS (25-150)
500-189112-1	SW-U01 (10072020)	72	73	64	91	100	99	94	99
500-189112-1 - DL	SW-U01 (10072020)								
500-189112-2	SW-U02 (10072020)	89	69	69	94	107	107	99	106
500-189112-2 - DL	SW-U02 (10072020)								
500-189112-3	SW-U03 (10072020)	101	84	76	103	114	114	103	110
500-189112-3 - DL	SW-U03 (10072020)								
500-189112-4	SW-U04 (10072020)	92	74	63	85	91		88	95
500-189112-4 - DL	SW-U04 (10072020)						87		
500-189112-5	SW-U05 (10072020)	41	65	62	85	95	99	105	82
500-189112-6	SW-U06 (10072020)	82	70	58	81	91	95	85	88
500-189112-7	SW-U07 (10072020)	99	65	57	86	92	94	84	94
500-189112-8	SW-U08 (10072020)	69	61	55	74	79	82	74	78
500-189112-9	SW-U09 (10072020)	74	56	45	67	75	77	68	73
500-189112-10	SW-U10 (10072020)	62	52	57	72	81	84	72	78
500-189112-10 MS	SW-U10 (10072020)	79	70	60	79	87	94	82	87
500-189112-10 MSD	SW-U10 (10072020)	91	70	72	87	100	101	90	92
500-189112-11	DUP-03-10072020	91	74	66	85	94	94	83	89
500-189112-11 - DL	DUP-03-10072020								
500-189112-12	Field Blank-10-07-2020	68	71	72	77	76	82	72	80
500-189112-13	SW-39	68	57	58	83	85	90	81	84
LCS 320-420804/2-A	Lab Control Sample	69	78	75	82	86	91	82	94
MB 320-420804/1-A	Method Blank	82	70	69	78	81	84	72	84

Isotope Dilution Summary

Client: ARCADIS U.S., Inc.
 Project/Site: Marinette 30015296.00009

Job ID: 500-189112-1

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Isotope Dilution Recovery (Acceptance Limits)							
		d5NEFOS (25-150)	dMeFOSA (20-150)	dEtFOSA (20-150)	NMFM (10-120)	NEFM (10-120)	M242FTS (25-150)	M262FTS (25-150)	M282FTS (25-150)
500-189112-1	SW-U01 (10072020)	109	56	43	41	43	165 *5		158 *5
500-189112-1 - DL	SW-U01 (10072020)							116	
500-189112-2	SW-U02 (10072020)	115	58	44	42	41	172 *5		176 *5
500-189112-2 - DL	SW-U02 (10072020)							108	
500-189112-3	SW-U03 (10072020)	121	58	49	49	42	191 *5		193 *5
500-189112-3 - DL	SW-U03 (10072020)							123	
500-189112-4	SW-U04 (10072020)	104	49	40	37	36	153 *5	151 *5	176 *5
500-189112-4 - DL	SW-U04 (10072020)								
500-189112-5	SW-U05 (10072020)	56	54	23	43	34	153 *5	184 *5	210 *5
500-189112-6	SW-U06 (10072020)	94	51	42	41	39	144	177 *5	162 *5
500-189112-7	SW-U07 (10072020)	99	52	42	52	47	153 *5	178 *5	174 *5
500-189112-8	SW-U08 (10072020)	85	44	35	33	33	135	149	141
500-189112-9	SW-U09 (10072020)	79	42	34	37	34	121	66	130
500-189112-10	SW-U10 (10072020)	83	41	33	32	34	131	151 *5	138
500-189112-10 MS	SW-U10 (10072020)	93	50	39	41	39	136	160 *5	144
500-189112-10 MSD	SW-U10 (10072020)	99	50	42	38	37	149	180 *5	154 *5
500-189112-11	DUP-03-10072020	100	46	39	43	41	148		139
500-189112-11 - DL	DUP-03-10072020							106	
500-189112-12	Field Blank-10-07-2020	89	65	51	39	38	110	106	106
500-189112-13	SW-39	94	45	36	32	30	113	120	121
LCS 320-420804/2-A	Lab Control Sample	87	70	44	31	26	109	118	135
MB 320-420804/1-A	Method Blank	91	65	41	25	24	103	107	115

Lab Sample ID	Client Sample ID	Percent Isotope Dilution Recovery (Acceptance Limits)
		HFPODA (25-150)
500-189112-1	SW-U01 (10072020)	90
500-189112-1 - DL	SW-U01 (10072020)	
500-189112-2	SW-U02 (10072020)	88
500-189112-2 - DL	SW-U02 (10072020)	
500-189112-3	SW-U03 (10072020)	99
500-189112-3 - DL	SW-U03 (10072020)	
500-189112-4	SW-U04 (10072020)	84
500-189112-4 - DL	SW-U04 (10072020)	
500-189112-5	SW-U05 (10072020)	84
500-189112-6	SW-U06 (10072020)	81
500-189112-7	SW-U07 (10072020)	85
500-189112-8	SW-U08 (10072020)	72
500-189112-9	SW-U09 (10072020)	64
500-189112-10	SW-U10 (10072020)	70
500-189112-10 MS	SW-U10 (10072020)	79
500-189112-10 MSD	SW-U10 (10072020)	84
500-189112-11	DUP-03-10072020	89
500-189112-11 - DL	DUP-03-10072020	
500-189112-12	Field Blank-10-07-2020	73
500-189112-13	SW-39	84
LCS 320-420804/2-A	Lab Control Sample	83
MB 320-420804/1-A	Method Blank	78

Surrogate Legend
 PFBA = 13C4 PFBA

Isotope Dilution Summary

Client: ARCADIS U.S., Inc.

Job ID: 500-189112-1

Project/Site: Marinette 30015296.00009

PFPeA = 13C5 PFPeA
PFHxA = 13C2 PFHxA
C4PFHA = 13C4 PFHpA
PFOA = 13C4 PFOA
PFNA = 13C5 PFNA
PFDA = 13C2 PFDA
PFUnA = 13C2 PFUnA
PFDoA = 13C2 PFDoA
PFTDA = 13C2 PFTeDA
PFHxDA = 13C2 PFHxDA
C3PFBS = 13C3 PFBS
PFHxS = 18O2 PFHxS
PFOS = 13C4 PFOS
PFOSA = 13C8 FOSA
d3NMFOS = d3-NMeFOSAA
d5NEFOS = d5-NEtFOSAA
dMeFOSA = d-N-MeFOSA-M
dEtFOSA = d-N-EtFOSA-M
NMFm = d7-N-MeFOSE-M
NEFM = d9-N-EtFOSE-M
M242FTS = M2-4:2 FTS
M262FTS = M2-6:2 FTS
M282FTS = M2-8:2 FTS
HFPODA = 13C3 HFPO-DA

1

2

3

4

5

6

7

8

9

10

11

12

13

14