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Jeff Jarvis
AK Department of Transportation
Box 239, #1 Airport Road
Gustavus, AK 99826

30 July 2018

PFOA & PFOS Investigation

Date of Collection: June 27, 2018

Sampling Location: Gustavus, AK

Summary

Two samples from the Gustavus Water Plant and the Alaska Airlines Well were received at Admiralty Environmental, Juneau, AK on June 27, 2018.

Samples were forwarded to TestAmerica, Sacramento for the analysis of PFOA and PFOS. All laboratory acceptance criteria were met for all samples.

A complete report of the final lab results is enclosed. The official laboratory report follows this letter, and includes the analytical results, case narrative and chain of custody forms.

Kind Regards,

A handwritten signature in dark ink, appearing to read "David Wetzel". The signature is fluid and cursive, with the first name "David" being more prominent than the last name "Wetzel".

David Wetzel
Admiralty Environmental

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Sacramento

880 Riverside Parkway

West Sacramento, CA 95605

Tel: (916)373-5600

TestAmerica Job ID: 320-40832-1

Client Project/Site: PFAS, Commercial

For:

Admiralty Environmental, LLC

641 W. Willoughby Ave

Suite 301

Juneau, Alaska 99801

Attn: Hope Oneill

Cesar C Cortes

Authorized for release by:

7/30/2018 10:14:51 AM

Cesar Cortes, Project Management Assistant I

(916)373-5600

cesar.cortes@testamericainc.com

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www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 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.

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Definitions/Glossary

Client: Admiralty Environmental, LLC
Project/Site: PFAS, Commercial

TestAmerica Job ID: 320-40832-1

Qualifiers

LCMS

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time
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.

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
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)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
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)

Case Narrative

Client: Admiralty Environmental, LLC
Project/Site: PFAS, Commercial

TestAmerica Job ID: 320-40832-1

Job ID: 320-40832-1

Laboratory: TestAmerica Sacramento

Narrative

Receipt

The samples were received on 7/3/2018 at 9:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 5.8° C.

Method 537 (modified)

The method blank contained Perfluorooctanoic acid (PFOA) greater than one-half the Reporting Limit and Perfluorooctane Sulfonic Acid (PFOS) greater than the RL, preparation batch 320-233425 and analytical batch 320-236310. Samples Gustavus Water Plant AE20398 (320-40832-1) and Alaska Airlines Well AE20399 (320-40832-2) were re-extracted outside of hold time. Both sets of data are reported.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD).

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

Detection Summary

Client: Admiralty Environmental, LLC
Project/Site: PFAS, Commercial

TestAmerica Job ID: 320-40832-1

Client Sample ID: Gustavus Water Plant AE20398

Lab Sample ID: 320-40832-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Perfluorooctanoic acid (PFOA)	11	B	1.9	0.80	ng/L	1			537 (modified)	Total/NA
Perfluorooctane Sulfonate (PFOS)	15	B	1.9	0.51	ng/L	1			537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA) - RE	5.5	H	1.9	0.79	ng/L	1			537 (modified)	Total/NA
Perfluorooctane Sulfonate (PFOS) - RE	16	H	1.9	0.51	ng/L	1			537 (modified)	Total/NA

Client Sample ID: Alaska Airlines Well AE20399

Lab Sample ID: 320-40832-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Perfluorooctanoic acid (PFOA)	5.5	B	1.8	0.78	ng/L	1			537 (modified)	Total/NA
Perfluorooctane Sulfonate (PFOS)	200	B	1.8	0.50	ng/L	1			537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA) - RE	3.1	H	1.8	0.78	ng/L	1			537 (modified)	Total/NA
Perfluorooctane Sulfonate (PFOS) - RE	250	H	1.8	0.49	ng/L	1			537 (modified)	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Sacramento

Client Sample Results

Client: Admiralty Environmental, LLC
Project/Site: PFAS, Commercial

TestAmerica Job ID: 320-40832-1

Client Sample ID: Gustavus Water Plant AE20398

Date Collected: 06/27/18 07:45

Date Received: 07/03/18 09:30

Lab Sample ID: 320-40832-1

Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanoic acid (PFOA)	11	B	1.9	0.80	ng/L		07/11/18 12:04	07/28/18 09:57	1
Perfluorooctane Sulfonate (PFOS)	15	B	1.9	0.51	ng/L		07/11/18 12:04	07/28/18 09:57	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFOS	111		25 - 150				07/11/18 12:04	07/28/18 09:57	1
13C4 PFOA	110		25 - 150				07/11/18 12:04	07/28/18 09:57	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanoic acid (PFOA)	5.5	H	1.9	0.79	ng/L		07/26/18 17:38	07/27/18 23:39	1
Perfluorooctane Sulfonate (PFOS)	16	H	1.9	0.51	ng/L		07/26/18 17:38	07/27/18 23:39	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFOS	98		25 - 150				07/26/18 17:38	07/27/18 23:39	1
13C4 PFOA	99		25 - 150				07/26/18 17:38	07/27/18 23:39	1

Client Sample ID: Alaska Airlines Well AE20399

Date Collected: 06/27/18 08:05

Date Received: 07/03/18 09:30

Lab Sample ID: 320-40832-2

Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanoic acid (PFOA)	5.5	B	1.8	0.78	ng/L		07/11/18 12:04	07/25/18 12:53	1
Perfluorooctane Sulfonate (PFOS)	200	B	1.8	0.50	ng/L		07/11/18 12:04	07/25/18 12:53	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFOS	87		25 - 150				07/11/18 12:04	07/25/18 12:53	1
13C4 PFOA	92		25 - 150				07/11/18 12:04	07/25/18 12:53	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanoic acid (PFOA)	3.1	H	1.8	0.78	ng/L		07/26/18 17:38	07/27/18 23:47	1
Perfluorooctane Sulfonate (PFOS)	250	H	1.8	0.49	ng/L		07/26/18 17:38	07/27/18 23:47	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFOS	95		25 - 150				07/26/18 17:38	07/27/18 23:47	1
13C4 PFOA	100		25 - 150				07/26/18 17:38	07/27/18 23:47	1

TestAmerica Sacramento

Isotope Dilution Summary

Client: Admiralty Environmental, LLC
Project/Site: PFAS, Commercial

TestAmerica Job ID: 320-40832-1

Method: 537 (modified) - Fluorinated Alkyl Substances

Matrix: Water

Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	PFOS (25-150)	PFOA (25-150)
320-40832-1 - RE	Gustavus Water Plant AE20398	98	99
320-40832-1	Gustavus Water Plant AE20398	111	110
320-40832-2	Alaska Airlines Well AE20399	87	92
320-40832-2 - RE	Alaska Airlines Well AE20399	95	100
LCS 320-233425/2-A	Lab Control Sample	82	83
LCS 320-236289/2-A	Lab Control Sample	113	106
LCSD 320-233425/3-A	Lab Control Sample Dup	94	100
LCSD 320-236289/3-A	Lab Control Sample Dup	106	101
MB 320-233425/1-A	Method Blank	96	103
MB 320-236289/1-A	Method Blank	106	101
Surrogate Legend			
PFOS = 13C4 PFOS			
PFOA = 13C4 PFOA			

QC Sample Results

Client: Admiralty Environmental, LLC
Project/Site: PFAS, Commercial

TestAmerica Job ID: 320-40832-1

Method: 537 (modified) - Fluorinated Alkyl Substances

Lab Sample ID: MB 320-233425/1-A

Matrix: Water

Analysis Batch: 236310

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 233425

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanoic acid (PFOA)	1.21	J	2.0	0.85	ng/L		07/11/18 12:04	07/26/18 12:22	1
Perfluorooctane Sulfonate (PFOS)	23.9		2.0	0.54	ng/L		07/11/18 12:04	07/26/18 12:22	1
Isotope Dilution	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFOS	96		25 - 150				07/11/18 12:04	07/26/18 12:22	1
13C4 PFOA	103		25 - 150				07/11/18 12:04	07/26/18 12:22	1

Lab Sample ID: LCS 320-233425/2-A

Matrix: Water

Analysis Batch: 235347

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 233425

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorooctanoic acid (PFOA)	40.0	39.2		ng/L		98	64 - 124
Perfluorooctane Sulfonate (PFOS)	37.1	43.2		ng/L		116	67 - 127
Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits				
13C4 PFOS	82		25 - 150				
13C4 PFOA	83		25 - 150				

Lab Sample ID: LCSD 320-233425/3-A

Matrix: Water

Analysis Batch: 235347

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 233425

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perfluorooctanoic acid (PFOA)	40.0	39.7		ng/L		99	64 - 124	1	30
Perfluorooctane Sulfonate (PFOS)	37.1	37.5		ng/L		101	67 - 127	14	30
Isotope Dilution	LCSD %Recovery	LCSD Qualifier	Limits						
13C4 PFOS	94		25 - 150						
13C4 PFOA	100		25 - 150						

Lab Sample ID: MB 320-236289/1-A

Matrix: Water

Analysis Batch: 236645

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 236289

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanoic acid (PFOA)	ND		2.0	0.85	ng/L		07/26/18 10:27	07/27/18 23:15	1
Perfluorooctane Sulfonate (PFOS)	ND		2.0	0.54	ng/L		07/26/18 10:27	07/27/18 23:15	1
Isotope Dilution	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFOS	106		25 - 150				07/26/18 10:27	07/27/18 23:15	1
13C4 PFOA	101		25 - 150				07/26/18 10:27	07/27/18 23:15	1

TestAmerica Sacramento

QC Sample Results

Client: Admiralty Environmental, LLC
Project/Site: PFAS, Commercial

TestAmerica Job ID: 320-40832-1

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

Lab Sample ID: LCS 320-236289/2-A

Matrix: Water

Analysis Batch: 236645

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 236289

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorooctanoic acid (PFOA)	40.0	36.8		ng/L		92	64 - 124
Perfluorooctane Sulfonate (PFOS)	37.1	37.8		ng/L		102	67 - 127
Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits				
13C4 PFOS	113		25 - 150				
13C4 PFOA	106		25 - 150				

Lab Sample ID: LCSD 320-236289/3-A

Matrix: Water

Analysis Batch: 236645

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 236289

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Perfluorooctanoic acid (PFOA)	40.0	36.8		ng/L		92	64 - 124	0	30
Perfluorooctane Sulfonate (PFOS)	37.1	38.2		ng/L		103	67 - 127	1	30
Isotope Dilution	LCSD %Recovery	LCSD Qualifier	Limits						
13C4 PFOS	106		25 - 150						
13C4 PFOA	101		25 - 150						

TestAmerica Sacramento

QC Association Summary

Client: Admiralty Environmental, LLC
Project/Site: PFAS, Commercial

TestAmerica Job ID: 320-40832-1

LCMS

Prep Batch: 233425

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-40832-1	Gustavus Water Plant AE20398	Total/NA	Water	3535	
320-40832-2	Alaska Airlines Well AE20399	Total/NA	Water	3535	
MB 320-233425/1-A	Method Blank	Total/NA	Water	3535	
LCS 320-233425/2-A	Lab Control Sample	Total/NA	Water	3535	
LCSD 320-233425/3-A	Lab Control Sample Dup	Total/NA	Water	3535	

Analysis Batch: 235347

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 320-233425/2-A	Lab Control Sample	Total/NA	Water	537 (modified)	233425
LCSD 320-233425/3-A	Lab Control Sample Dup	Total/NA	Water	537 (modified)	233425

Analysis Batch: 236249

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-40832-2	Alaska Airlines Well AE20399	Total/NA	Water	537 (modified)	233425

Prep Batch: 236289

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-40832-1 - RE	Gustavus Water Plant AE20398	Total/NA	Water	3535	
320-40832-2 - RE	Alaska Airlines Well AE20399	Total/NA	Water	3535	
MB 320-236289/1-A	Method Blank	Total/NA	Water	3535	
LCS 320-236289/2-A	Lab Control Sample	Total/NA	Water	3535	
LCSD 320-236289/3-A	Lab Control Sample Dup	Total/NA	Water	3535	

Analysis Batch: 236310

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 320-233425/1-A	Method Blank	Total/NA	Water	537 (modified)	233425

Analysis Batch: 236645

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-40832-1 - RE	Gustavus Water Plant AE20398	Total/NA	Water	537 (modified)	236289
320-40832-2 - RE	Alaska Airlines Well AE20399	Total/NA	Water	537 (modified)	236289
MB 320-236289/1-A	Method Blank	Total/NA	Water	537 (modified)	236289
LCS 320-236289/2-A	Lab Control Sample	Total/NA	Water	537 (modified)	236289
LCSD 320-236289/3-A	Lab Control Sample Dup	Total/NA	Water	537 (modified)	236289

Analysis Batch: 236715

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-40832-1	Gustavus Water Plant AE20398	Total/NA	Water	537 (modified)	233425

Lab Chronicle

Client: Admiralty Environmental, LLC
Project/Site: PFAS, Commercial

TestAmerica Job ID: 320-40832-1

Client Sample ID: Gustavus Water Plant AE20398

Lab Sample ID: 320-40832-1

Date Collected: 06/27/18 07:45

Matrix: Water

Date Received: 07/03/18 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535	RE		267.3 mL	10.00 mL	236289	07/26/18 17:38	TWL	TAL SAC
Total/NA	Analysis	537 (modified)	RE	1			236645	07/27/18 23:39	AAR	TAL SAC
Total/NA	Prep	3535			266.2 mL	10.0 mL	233425	07/11/18 12:04	KMK	TAL SAC
Total/NA	Analysis	537 (modified)		1			236715	07/28/18 09:57	AAR	TAL SAC

Client Sample ID: Alaska Airlines Well AE20399

Lab Sample ID: 320-40832-2

Date Collected: 06/27/18 08:05

Matrix: Water

Date Received: 07/03/18 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535	RE		273.4 mL	10.00 mL	236289	07/26/18 17:38	TWL	TAL SAC
Total/NA	Analysis	537 (modified)	RE	1			236645	07/27/18 23:47	AAR	TAL SAC
Total/NA	Prep	3535			271.4 mL	10.0 mL	233425	07/11/18 12:04	KMK	TAL SAC
Total/NA	Analysis	537 (modified)		1			236249	07/25/18 12:53	ABH	TAL SAC

Laboratory References:

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

Accreditation/Certification Summary

Client: Admiralty Environmental, LLC
Project/Site: PFAS, Commercial

TestAmerica Job ID: 320-40832-1

Laboratory: TestAmerica Sacramento

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

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska (UST)	State Program	10	17-020	01-20-21

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
537 (modified)	3535	Water	Perfluorooctane Sulfonate (PFOS)
537 (modified)	3535	Water	Perfluorooctanoic acid (PFOA)

Method Summary

Client: Admiralty Environmental, LLC
Project/Site: PFAS, Commercial

TestAmerica Job ID: 320-40832-1

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

Protocol References:

EPA = US Environmental Protection Agency

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

Laboratory References:

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

Sample Summary

Client: Admiralty Environmental, LLC
Project/Site: PFAS, Commercial

TestAmerica Job ID: 320-40832-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-40832-1	Gustavus Water Plant AE20398	Water	06/27/18 07:45	07/03/18 09:30
320-40832-2	Alaska Airlines Well AE20399	Water	06/27/18 08:05	07/03/18 09:30



Admiralty Environmental
641 W. Willoughby Ave., Suite 301
Juneau, AK 99801
(907) 463-4415 fax (907) 247-4476

CHAIN OF CUSTODY/TRANSMITTAL RECORD
PAGE 1 OF 1

CLIENT:

Gustavus DOT

PROJECT:

PFAS/PFOAs
Investigation

AE 20398

REPORT TO: Jeff Jarvis

PHONE#: 907-723-8954

ADDRESS: PO Box 239

Gustavus, AK 99826

SAMPLED BY:

David Shatswell
Cert. Water/Wastewater Op.

EMAIL:

DAVID_SHATSWELLE@NPS.GOV

COMMENTS:

FIELD RESULTS

DATE	TIME	SITE DESCRIPTION / IDENTIFIER	MATRIX	# OF BOTTLES	PFAS / PFOA													pH	Temp		
6/27	0745	Gustavus Water Plant NPS	H2O	2	1																
			H2O	2	1																
			H2O	2	1																
			H2O	2	1																

RELINQUISHED BY:

Signature

David Shatswell

Printed Name

David Shatswell

DATE

6/27/2018

TIME

0745

RECEIVED BY:

Signature

Jeff Jarvis

Printed Name

Jeff Jarvis

DATE

6/27/18

TIME

0745

RELINQUISHED BY:

Signature

Jeff Jarvis

Printed Name

Jeff Jarvis

DATE

6/27/18

TIME

0812

RECEIVED BY:

Signature

R. Coffee

Printed Name

R. Coffee

DATE

6/27/18

TIME

14:12

Section to be Completed at Receiving Laboratory

Temp Loc:

1061

Thermo ID#:

Lab #7

Condition of
Custody Seal:

✓

Initiated By:

RC

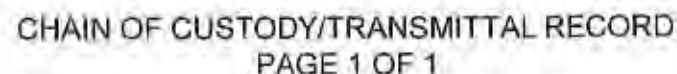
Shipped Via:

AKSEA00005

RELINQUISHED BY DATE 7/2/18

Signature: [Signature] TIME: 0800

Print: MACKENZIE McMAHON





320-40832 Chain of Custody

Bottle Order Information

Bottle Order: PFAS, Commercial
Bottle Order #: 4994
Request From Client: 6/19/2018
Date Order Posted: 6/19/2018 12:18:44PM
Order Status: Ready To Process
Prepared By: Cesar Cortes
Deliver By Date: 6/21/2018 11:59:00PM
Lab Project Number 32011397

Order Completion Information

Creator: Cesar Cortes
Filled by:
Sent Date:
Sent Via:
Tracking #:

Sets	Bottles/Set	Qty	Bottle Type Description	Preservative	Method	Matrix	Sample Type	Comments	Lot #
4	2	8	Plastic 250ml - unpreserved	None	PFC_IDA - PFOA/PFOS Only	Water	Normal		

Notes to Field Staff:**Health and Safety Notes:**

Preservative Comment

Relinquished By	Company	Date	Time	Received By	Company	Seal #
						Seal #
						Seal #
Relinquished By	Company	Date	Time	Received By	Company	Seal #
						Seal #
						Seal #

Please notify us immediately if an error is found in shipment

PFCs Sampling Checklist

Date: 6/27/2018

Weather (temp./precipitation): _____

Site Name: Gustavus Water Plant

Field Clothing and PPE:

- ☒ No clothing or boots containing Gore-Tex™
- ☒ All safety boots made from polyurethane and PVC
- ☒ No materials containing Tyvek™
- ☒ Field crew has not used fabric softener on clothing
- ☒ Field crew has not used cosmetics, moisturizers, hand cream, or other related products this morning
- ☒ Field crew has not applied unauthorized sunscreen or insect repellent

Field Equipment:

- ☒ No Teflon® or LDPE containing materials on-site
- ☒ All sample materials made from stainless steel, HDPE, acetate, silicon, or polypropylene
- ☒ No waterproof field books on-site
- ☒ No plastic clipboards, binders, or spiral hard cover notebooks on-site
- ☒ No adhesives (Post-It Notes) on-site

- ☒ *Acceptable for this scenario! 6/25/18*
- ☒ Coolers filled with regular ice only. No chemical (blue) ice packs in possession

Sample Containers:

- ☒ All sample containers made of HDPE or polypropylene
- ☒ Caps are unlined and made of HDPE or polypropylene

Wet Weather (as applicable):

- ☒ Wet weather gear made of polyurethane and PVC only

Equipment Decontamination:

- ☒ "PFC-free" water on-site for decontamination of sample equipment. No other water sources to be used.
- ☒ Alconox and Liquinox to be used as decontamination materials

Food Considerations:

- ☒ No food or drink on-site with exception of bottled water and/or hydration drinks (i.e., Gatorade and Powerade) that is available for consumption only in the staging area

If any applicable boxes cannot be checked, the Field Lead shall describe the noncompliance issues below and work with field personnel to address noncompliance issues prior to commencement of that day's work. Corrective action shall include removal of noncompliance items from the site or removal of worker offsite until in compliance.

Describe the noncompliance issues (include personnel not in compliance) and action/outcome of noncompliance:

Field Lead Name: David K. Shatswell

Field Lead Signature: David K. Shatswell

David Shatswell NPS. Gov

Time: 0745

PFCs Sampling Checklist

Date: 6/27/18

Weather (temp./precipitation): Overcast

Site Name: Alaska Airlines Well

Field Clothing and PPE:

- ☒ No clothing or boots containing Gore-Tex™
- ☒ All safety boots made from polyurethane and PVC
- ☒ No materials containing Tyvek®
- ☒ Field crew has not used fabric softener on clothing
- ☒ Field crew has not used cosmetics, moisturizers, hand cream, or other related products this morning
- ☒ Field crew has not applied unauthorized sunscreen or insect repellent

Field Equipment:

- ☒ No Teflon® or LDPE containing materials on-site
- ☒ All sample materials made from stainless steel, HDPE, acetate, silicon, or polypropylene
- ☒ No waterproof field books on-site
- ☒ No plastic clipboards, binders, or spiral hard cover notebooks on-site
- ☒ No adhesives (Post-It Notes) on-site

- ☒ Acceptable for the standard well
☒ Coolers filled with regular ice only. No chemical (blue) ice packs in possession

Sample Containers:

- ☒ All sample containers made of HDPE or polypropylene
- ☒ Caps are unlined and made of HDPE or polypropylene

Wet Weather (as applicable):

- ☒ Wet weather gear made of polyurethane and PVC only

Equipment Decontamination:

- ☒ "PFC-free" water on-site for decontamination of sample equipment. No other water sources to be used.
- ☒ Alconox and Liquinox to be used as decontamination materials

Food Considerations:

- ☒ No food or drink on-site with exception of bottled water and/or hydration drinks (i.e., Gatorade and Powerade) that is available for consumption only in the staging area

If any applicable boxes cannot be checked, the Field Lead shall describe the noncompliance issues below and work with field personnel to address noncompliance issues prior to commencement of that day's work. Corrective action shall include removal of noncompliance items from the site or removal of worker offsite until in compliance.

Describe the noncompliance issues (include personnel not in compliance) and action/outcome of noncompliance:

Field Lead Name: Jeff Jarvis

Field Lead Signature: [Signature]

Time: 0810



Admiralty Environmental Cooler Receipt Form

Client: Admiralty Environmental, LLC
Project: Gustavus DOT

AE # AE 20398

Date Opened: 6/27/2018 Opened by: R. Coffee

A. External Cooler Conditions

• Local Sampling Event

1. Project ID: 000

2. COC Attached? Yes Properly Completed? Yes Signed by AE employee? Yes

Small Temp. Blank: n/a (temp in Celsius)
Large Temp. Blank: 2.70 (temp in Celsius)

• Air-Transported Sampling Event

1. Project ID: DW

2. COC Attached? yes Properly Completed? yes Signed by AE employee? yes

3. Airbill attached? yes Airbill # 2225577

4. Custody Seals? yes

5. Seals intact? yes

Temp. Blank: 1.61 (temp in Celsius)

COMMENTS:

B. Sample Conditions

Number of Samples Received: 1 Packing type: Cooler

Number of Bottles Received: 2

1. Samples in proper bags? Yes

2. Bottles intact? Yes

3. Sufficient sample volume? Yes

4. Labels agree with COC? Yes

5. Samples delivered within holding time? Yes

Problems encountered: No

Was the project manager called? Yes

COMMENTS:

Signature: Roger Coffee

Date and time: 6/27/18 14:11



Admiralty Environmental Cooler Receipt Form

Client: Admiralty Environmental, LLC
Project: Gustavus DOT

AE# AE 20399

Date Opened: 6/27/2018 Opened by: R. Coffee

A. External Cooler Conditions

◆ Local Sampling Event

1. Project ID: 000

2. COC Attached? Yes Properly Completed? Yes Signed by AE employee? Yes

Small Temp. Blank: n/a (temp in Celsius)

Large Temp. Blank: 2.70 (temp in Celsius)

◆ Air-Transported Sampling Event

1. Project ID: DW

2. COC Attached? yes Properly Completed? yes Signed by AE employee? yes

3. Airbill attached? yes Airbill #: 2225577

4. Custody Seals? yes

5. Seals intact? yes

Temp. Blank: 1.61 (temp in Celsius)

COMMENTS:

B. Sample Conditions

Number of Samples Received: 1 Packing type: Cooler

Number of Bottles Received: 2

1. Samples in proper bags? Yes

2. Bottles intact? Yes

3. Sufficient sample volume? Yes

4. Labels agree with COC? Yes

5. Samples delivered within holding time? Yes

Problems encountered? No

Was the project manager called? Yes

COMMENTS:

Signature: R. Coffee

Date and time: 6/28/18 14:12

Login Sample Receipt Checklist

Client: Admiralty Environmental, LLC

Job Number: 320-40832-1

Login Number: 40832

List Source: TestAmerica Sacramento

List Number: 1

Creator: Nelson, Kym D

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	187341, 187342
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	Gel Packs
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	