

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: 320-17058-1
Client Project/Site: HFCS16101

For:
Alpha Geosciences
679 Plank Road
Clifton Park, New York 12065

Attn: Jean Neubeck



Authorized for release by:
2/4/2016 1:42:24 PM

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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.

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15



Table of Contents

Cover Page	1
Table of Contents	2
Definitions/Glossary	3
Case Narrative	4
Detection Summary	5
Client Sample Results	6
Surrogate Summary	7
QC Sample Results	8
QC Association Summary	9
Lab Chronicle	10
Certification Summary	11
Method Summary	12
Sample Summary	13
Chain of Custody	14
Receipt Checklists	15

Definitions/Glossary

Client: Alpha Geosciences
Project/Site: HFCS16101

TestAmerica Job ID: 320-17058-1

Qualifiers

LCMS

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.
▫	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, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
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
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: Alpha Geosciences
Project/Site: HFCS16101

TestAmerica Job ID: 320-17058-1

Job ID: 320-17058-1

Laboratory: TestAmerica Sacramento

Narrative

Receipt

The samples were received on 1/29/2016 10:10 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.4° C.

LCMS - Method 537

Results for sample BG Cold Tap (320-17058-2) 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

The internal standard (ISTD) response for the following samples was outside control limits compared to the most recent CCV: HS Kit Tap (320-17058-1) and BG Cold Tap (320-17058-2). The samples were re-analyzed with concurring results and the original set of data has been reported. The internal standards responses were in control as compared to the calibration curve.

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

Organic Prep

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

Detection Summary

Client: Alpha Geosciences
Project/Site: HFCS16101

TestAmerica Job ID: 320-17058-1

Client Sample ID: HS Kit Tap

Lab Sample ID: 320-17058-1

No Detections.

Client Sample ID: BG Cold Tap

Lab Sample ID: 320-17058-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanoic acid (PFOA) - DL	0.40		0.086	0.041	ug/L	5		537	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Sacramento

Client Sample Results

Client: Alpha Geosciences
Project/Site: HFCS16101

TestAmerica Job ID: 320-17058-1

Client Sample ID: HS Kit Tap

Date Collected: 01/27/16 14:18

Date Received: 01/29/16 10:10

Lab Sample ID: 320-17058-1

Matrix: Water

Method: 537 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctane Sulfonate (PFOS)	ND		0.036	0.014	ug/L		02/01/16 13:57	02/03/16 05:00	1
Perfluorooctanoic acid (PFOA)	ND		0.018	0.0086	ug/L		02/01/16 13:57	02/03/16 05:00	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C2 PFHxA	73		70 - 130				02/01/16 13:57	02/03/16 05:00	1
13C2 PFDA	82		70 - 130				02/01/16 13:57	02/03/16 05:00	1

Client Sample ID: BG Cold Tap

Date Collected: 01/27/16 14:58

Date Received: 01/29/16 10:10

Lab Sample ID: 320-17058-2

Matrix: Water

Method: 537 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctane Sulfonate (PFOS)	ND		0.034	0.013	ug/L		02/01/16 13:57	02/03/16 05:29	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C2 PFHxA	74		70 - 130				02/01/16 13:57	02/03/16 05:29	1
13C2 PFDA	82		70 - 130				02/01/16 13:57	02/03/16 05:29	1

Method: 537 - Perfluorinated Alkyl Acids (LC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanoic acid (PFOA)	0.40		0.086	0.041	ug/L		02/01/16 13:57	02/03/16 12:54	5
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C2 PFHxA	72		70 - 130				02/01/16 13:57	02/03/16 12:54	5
13C2 PFDA	79		70 - 130				02/01/16 13:57	02/03/16 12:54	5

Surrogate Summary

Client: Alpha Geosciences
Project/Site: HFCS16101

TestAmerica Job ID: 320-17058-1

Method: 537 - Perfluorinated Alkyl Acids (LC/MS)

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	3C2 PFHx	3C2 PFDA
		(70-130)	(70-130)
320-17058-1	HS Kit Tap	73	82
320-17058-2	BG Cold Tap	74	82
320-17058-2 - DL	BG Cold Tap	72	79
LCS 320-99637/2-A	Lab Control Sample	80	85
MB 320-99637/1-A	Method Blank	77	81

Surrogate Legend

13C2 PFHxA = 13C2 PFHxA

13C2 PFDA = 13C2 PFDA

QC Sample Results

Client: Alpha Geosciences
Project/Site: HFCS16101

TestAmerica Job ID: 320-17058-1

Method: 537 - Perfluorinated Alkyl Acids (LC/MS)

Lab Sample ID: MB 320-99637/1-A
Matrix: Water
Analysis Batch: 99773

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 99637

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctane Sulfonate (PFOS)	ND		0.040	0.016	ug/L		02/01/16 13:57	02/03/16 10:55	1
Perfluorooctanoic acid (PFOA)	ND		0.020	0.0094	ug/L		02/01/16 13:57	02/03/16 10:55	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	77		70 - 130	02/01/16 13:57	02/03/16 10:55	1
13C2 PFDA	81		70 - 130	02/01/16 13:57	02/03/16 10:55	1

Lab Sample ID: LCS 320-99637/2-A
Matrix: Water
Analysis Batch: 99773

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 99637

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorooctane Sulfonate (PFOS)	0.0400	0.0308	J	ug/L		77	70 - 130
Perfluorooctanoic acid (PFOA)	0.0206	0.0197	J	ug/L		96	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
13C2 PFHxA	80		70 - 130
13C2 PFDA	85		70 - 130

QC Association Summary

Client: Alpha Geosciences
Project/Site: HFCS16101

TestAmerica Job ID: 320-17058-1

LCMS

Prep Batch: 99637

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-17058-1	HS Kit Tap	Total/NA	Water	537	
320-17058-2	BG Cold Tap	Total/NA	Water	537	
320-17058-2 - DL	BG Cold Tap	Total/NA	Water	537	
LCS 320-99637/2-A	Lab Control Sample	Total/NA	Water	537	
MB 320-99637/1-A	Method Blank	Total/NA	Water	537	

Analysis Batch: 99773

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-17058-1	HS Kit Tap	Total/NA	Water	537	99637
320-17058-2	BG Cold Tap	Total/NA	Water	537	99637
320-17058-2 - DL	BG Cold Tap	Total/NA	Water	537	99637
LCS 320-99637/2-A	Lab Control Sample	Total/NA	Water	537	99637
MB 320-99637/1-A	Method Blank	Total/NA	Water	537	99637

Lab Chronicle

Client: Alpha Geosciences
Project/Site: HFCS16101

TestAmerica Job ID: 320-17058-1

Client Sample ID: HS Kit Tap

Date Collected: 01/27/16 14:18

Date Received: 01/29/16 10:10

Lab Sample ID: 320-17058-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537			274.8 mL	1.00 mL	99637	02/01/16 13:57	JER	TAL SAC
Total/NA	Analysis	537		1	274.8 mL	1.00 mL	99773	02/03/16 05:00	CBW	TAL SAC

Client Sample ID: BG Cold Tap

Date Collected: 01/27/16 14:58

Date Received: 01/29/16 10:10

Lab Sample ID: 320-17058-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537			290.2 mL	1.00 mL	99637	02/01/16 13:57	JER	TAL SAC
Total/NA	Analysis	537		1	290.2 mL	1.00 mL	99773	02/03/16 05:29	CBW	TAL SAC
Total/NA	Prep	537	DL		290.2 mL	1.00 mL	99637	02/01/16 13:57	JER	TAL SAC
Total/NA	Analysis	537	DL	5	290.2 mL	1.00 mL	99773	02/03/16 12:54	CBW	TAL SAC

Laboratory References:

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

Certification Summary

Client: Alpha Geosciences
Project/Site: HFCS16101

TestAmerica Job ID: 320-17058-1

Laboratory: TestAmerica Sacramento

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

Authority	Program	EPA Region	Certification ID	Expiration Date
USEPA UCMR	Federal	1	CA00044	11-06-16

Analysis Method	Prep Method	Matrix	Analyte
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- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

Method Summary

Client: Alpha Geosciences
Project/Site: HFCS16101

TestAmerica Job ID: 320-17058-1

Method	Method Description	Protocol	Laboratory
537	Perfluorinated Alkyl Acids (LC/MS)	EPA	TAL SAC

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

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

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Sample Summary

Client: Alpha Geosciences
Project/Site: HFCS16101

TestAmerica Job ID: 320-17058-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-17058-1	HS Kit Tap	Water	01/27/16 14:18	01/29/16 10:10
320-17058-2	BG Cold Tap	Water	01/27/16 14:58	01/29/16 10:10

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Login Sample Receipt Checklist

Client: Alpha Geosciences

Job Number: 320-17058-1

Login Number: 17058
List Number: 1
Creator: Nelson, Kym D

List Source: TestAmerica Sacramento

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	Seal
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
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	

