

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: 320-17585-1
Client Project/Site: HSCSD 16101

For:
Alpha Geological Services, Inc.
679 Plank Road
Clifton Park, New York 12065

Attn: Jean Neubeck



Authorized for release by:
3/21/2016 2:43:48 PM
David Alltucker, Project Manager I
(916)374-4383
david.alltucker@testamericainc.com

Designee for
Jill Kellmann, Manager of Project Management
(916)374-4402
jill.kellmann@testamericainc.com

LINKS

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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.

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Definitions/Glossary

Client: Alpha Geological Services, Inc.
Project/Site: HSCSD 16101

TestAmerica Job ID: 320-17585-1

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.
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, 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 Geological Services, Inc.
Project/Site: HSCSD 16101

TestAmerica Job ID: 320-17585-1

Job ID: 320-17585-1

Laboratory: TestAmerica Sacramento

Narrative

**Job Narrative
320-17585-1**

Receipt

The sample was received on 3/5/2016 9:10 AM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.4° C.

LCMS

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

Organic Prep

Method(s) 537: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with 320-103471

Method(s) 537: This sample was received at the laboratory unpreserved, the sample was extracted after consultation with the project manager. Raw Well Water (320-17585-1)

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

Detection Summary

Client: Alpha Geological Services, Inc.
Project/Site: HSCSD 16101

TestAmerica Job ID: 320-17585-1

Client Sample ID: Raw Well Water

Lab Sample ID: 320-17585-1

No Detections.

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This Detection Summary does not include radiochemical test results.

TestAmerica Sacramento

Client Sample Results

Client: Alpha Geological Services, Inc.
Project/Site: HSCSD 16101

TestAmerica Job ID: 320-17585-1

Client Sample ID: Raw Well Water

Lab Sample ID: 320-17585-1

Date Collected: 03/03/16 11:32

Matrix: Water

Date Received: 03/05/16 09:10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctane Sulfonate (PFOS)	ND		0.039	0.015	ug/L		03/16/16 07:10	03/17/16 12:26	1
Perfluorooctanoic acid (PFOA)	ND		0.019	0.0091	ug/L		03/16/16 07:10	03/17/16 12:26	1
Perfluorononanoic acid (PFNA)	ND		0.019	0.011	ug/L		03/16/16 07:10	03/17/16 12:26	1
Perfluorohexanesulfonic acid (PFHxS)	ND		0.029	0.011	ug/L		03/16/16 07:10	03/17/16 12:26	1
Perfluoroheptanoic acid (PFHpA)	ND		0.0096	0.0044	ug/L		03/16/16 07:10	03/17/16 12:26	1
Perfluorobutanesulfonic acid (PFBS)	ND		0.087	0.046	ug/L		03/16/16 07:10	03/17/16 12:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	94		70 - 130	03/16/16 07:10	03/17/16 12:26	1
13C2 PFDA	105		70 - 130	03/16/16 07:10	03/17/16 12:26	1



Surrogate Summary

Client: Alpha Geological Services, Inc.
Project/Site: HSCSD 16101

TestAmerica Job ID: 320-17585-1

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

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		3C2 PFHx (70-130)	3C2 PFDA (70-130)
320-17585-1	Raw Well Water	94	105
LCS 320-103471/2-A LLCS	Lab Control Sample	94	102
LCSD 320-103471/3-A LLCSD	Lab Control Sample Dup	89	99
MB 320-103471/1-A	Method Blank	90	96

Surrogate Legend

13C2 PFHxA = 13C2 PFHxA

13C2 PFDA = 13C2 PFDA

QC Sample Results

Client: Alpha Geological Services, Inc.
Project/Site: HSCSD 16101

TestAmerica Job ID: 320-17585-1

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

Lab Sample ID: MB 320-103471/1-A

Matrix: Water

Analysis Batch: 103582

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 103471

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctane Sulfonate (PFOS)	ND		0.040	0.016	ug/L		03/16/16 07:10	03/17/16 00:37	1
Perfluorooctanoic acid (PFOA)	ND		0.020	0.0094	ug/L		03/16/16 07:10	03/17/16 00:37	1
Perfluorononanoic acid (PFNA)	ND		0.020	0.011	ug/L		03/16/16 07:10	03/17/16 00:37	1
Perfluorohexanesulfonic acid (PFHxS)	ND		0.030	0.012	ug/L		03/16/16 07:10	03/17/16 00:37	1
Perfluoroheptanoic acid (PFHpA)	ND		0.010	0.0046	ug/L		03/16/16 07:10	03/17/16 00:37	1
Perfluorobutanesulfonic acid (PFBS)	ND		0.090	0.048	ug/L		03/16/16 07:10	03/17/16 00:37	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	90		70 - 130	03/16/16 07:10	03/17/16 00:37	1
13C2 PFDA	96		70 - 130	03/16/16 07:10	03/17/16 00:37	1

Lab Sample ID: LCS 320-103471/2-A LLCS

Matrix: Water

Analysis Batch: 103582

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 103471

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorooctane Sulfonate (PFOS)	0.0400	0.0293	J	ug/L		73	50 - 150
Perfluorooctanoic acid (PFOA)	0.0199	0.0171	J	ug/L		86	50 - 150
Perfluorononanoic acid (PFNA)	0.0199	0.0194	J	ug/L		98	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	0.0298	0.0185	J	ug/L		62	50 - 150
Perfluoroheptanoic acid (PFHpA)	0.0101	0.00906	J	ug/L		90	50 - 150
Perfluorobutanesulfonic acid (PFBS)	0.0902	0.0648	J	ug/L		72	50 - 150

Surrogate	LLCS %Recovery	LLCS Qualifier	Limits
13C2 PFHxA	94		70 - 130
13C2 PFDA	102		70 - 130

Lab Sample ID: LCSD 320-103471/3-A LLCSD

Matrix: Water

Analysis Batch: 103582

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 103471

Analyte	Spike Added	LLCSD Result	LLCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perfluorooctane Sulfonate (PFOS)	0.0400	0.0282	J	ug/L		70	50 - 150	4	50
Perfluorooctanoic acid (PFOA)	0.0199	0.0167	J	ug/L		84	50 - 150	3	50
Perfluorononanoic acid (PFNA)	0.0199	0.0178	J	ug/L		90	50 - 150	8	50
Perfluorohexanesulfonic acid (PFHxS)	0.0298	0.0178	J	ug/L		60	50 - 150	4	50
Perfluoroheptanoic acid (PFHpA)	0.0101	0.00876	J	ug/L		87	50 - 150	3	50
Perfluorobutanesulfonic acid (PFBS)	0.0902	0.0565	J	ug/L		63	50 - 150	14	50

Surrogate	LLCSD %Recovery	LLCSD Qualifier	Limits
13C2 PFHxA	89		70 - 130
13C2 PFDA	99		70 - 130

TestAmerica Sacramento

QC Association Summary

Client: Alpha Geological Services, Inc.
Project/Site: HSCSD 16101

TestAmerica Job ID: 320-17585-1

LCMS

Prep Batch: 103471

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-17585-1	Raw Well Water	Total/NA	Water	537	
LCS 320-103471/2-A LLCS	Lab Control Sample	Total/NA	Water	537	
LCSD 320-103471/3-A LLCS	Lab Control Sample Dup	Total/NA	Water	537	
MB 320-103471/1-A	Method Blank	Total/NA	Water	537	

Analysis Batch: 103582

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-17585-1	Raw Well Water	Total/NA	Water	537	103471
LCS 320-103471/2-A LLCS	Lab Control Sample	Total/NA	Water	537	103471
LCSD 320-103471/3-A LLCS	Lab Control Sample Dup	Total/NA	Water	537	103471
MB 320-103471/1-A	Method Blank	Total/NA	Water	537	103471

Lab Chronicle

Client: Alpha Geological Services, Inc.
Project/Site: HSCSD 16101

TestAmerica Job ID: 320-17585-1

Client Sample ID: Raw Well Water

Lab Sample ID: 320-17585-1

Date Collected: 03/03/16 11:32

Matrix: Water

Date Received: 03/05/16 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537			259.5 mL	1.00 mL	103471	03/16/16 07:10	HJA	TAL SAC
Total/NA	Analysis	537		1	259.5 mL	1.00 mL	103582	03/17/16 12:26	JRB	TAL SAC

Laboratory References:

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

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Certification Summary

Client: Alpha Geological Services, Inc.
Project/Site: HSCSD 16101

TestAmerica Job ID: 320-17585-1

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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Method Summary

Client: Alpha Geological Services, Inc.
Project/Site: HSCSD 16101

TestAmerica Job ID: 320-17585-1

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 Geological Services, Inc.
Project/Site: HSCSD 16101

TestAmerica Job ID: 320-17585-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-17585-1	Raw Well Water	Water	03/03/16 11:32	03/05/16 09:10

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TestAmerica Buffalo
 10 Hazelwood Drive, Suite 106
 Amherst, New York 14228
 Phone (716) 691-2600

Albany Service Center
 25 Kraft Avenue
 Albany, NY 12205
 Phone (518) 428-8140

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Chain of Custody Record

Client Information Client Contact: Jean M. Neubeck Phone: 518-348-6995		Lab PM: Jill Kellmann E-Mail: jneubeck@alphageoscience.com		Carrier Tracking No(s): COC No: Pages: Job #	
Alpha Geoscience Address: 679 Plank Road City: Clifton Park State, Zip: NY, 12065 Phone: 518-348-6995 Email: jneubeck@alphageoscience.com Project Name/Number: HSCSD 18101 Site: Hoosick Fall, NY		Analysis Requested Due Date Requested: TAT Requested (days): normal Quote #: PO #: Project#:			
Sample Identification Sample Name: Raw Well Water Sample Date: 03/03/2016 Sample Time: 11:32 Sample Type (C=Comp, G=grab): G Matrix (W=water, S=solid, O=waste/oil, BT=tissue, A=air): GW Preservation Code: GW		Field Filtered Sample? <input checked="" type="checkbox"/> X Perform MS/MSD? <input checked="" type="checkbox"/> X Method 537 - Underserved		Total Number of Containers: 6 total PFOA/PFOS:	
Special Instructions/Note:  320-17585 Chain of Custody		Preservation Codes: A - HCL J - DI Water B - NaOH M - Hexane C - Zn Acetate N - None D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2SO3 H - Ascorbic Acid S - H2SO4 L - Ice Z - other (specify)			
Regulatory programs: MCP <input type="checkbox"/> GW/ISI <input type="checkbox"/> RCP <input type="checkbox"/> CT RSR <input type="checkbox"/> DEP Form <input type="checkbox"/> EDD Required <input type="checkbox"/>		Possible Hazard Identification <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 Deliverable Requested: I, II, III, IV, Other (specify) normal			
Relinquished by: <i>[Signature]</i> Relinquished by: Jean M. Neubeck Date/Time: 03/04/2016 12:10 Company: AlphaGeo		Received by: <i>[Signature]</i> Received by: Jill Kellmann Date/Time: 3/4/16 12:10 Company: TA-ALS		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return to Client <input checked="" type="checkbox"/> Archive For _____ Months	
Relinquished by: <i>[Signature]</i> Relinquished by: Jean M. Neubeck Date/Time: 3-4-16 17:00 Company: TA-ALS		Received by: <i>[Signature]</i> Received by: Jill Kellmann Date/Time: 3-5-16 9:10 Company: TA-ALS		Cooler Temperature(s) °C and Other Remarks: 2.4	



Login Sample Receipt Checklist

Client: Alpha Geological Services, Inc.

Job Number: 320-17585-1

Login Number: 17585

List Source: TestAmerica Sacramento

List Number: 1

Creator: Nelson, Kym D

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	592401
Sample custody seals, if present, are intact.	True	591533, 591536
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?	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 <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

