ALS Environmental
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May 21, 2014 Analytical Report for Service Request No: K1404977

Brandon Kernen
New Hampshire Department of Environmental Services
29 Hazen Drive
P.O. Box 95
Concord, NH 03301

Dear Brandon:

Enclosed are the results of the samples submitted to our laboratory on May 17, 2014. For your reference, these analyses have been assigned our service request number K1404977.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please call if you have any questions. My extension is 3275. You may also contact me via Email at Chris.Leaf@alsglobal.com.

Respectfully submitted,

ALS Group USA Corp. dba ALS Environmental

Chris Leaf
Project Manager

CL/aj

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
J	The result is an estimated value.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimated value.
J	The result is an estimated value.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEC UST	http://dec.alaska.gov/applications/eh/ehllabreports/USTLabs.aspx	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2286
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L12-28
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Georgia DNR	http://www.gaepd.org/Documents/techguide_pcb.html#cel	881
Hawaii DOH	Not available	-
Idaho DHW	http://www.healthandwelfare.idaho.gov/Health/Labs/CertificationDrinkingWaterLabs/tabid/1833/Default.aspx	-
ISO 17025	http://www.pjlabs.com/	L12-27
Louisiana DEQ	http://www.deq.louisiana.gov/portal/DIVISIONS/PublicParticipationandPermitSupport/LouisianaLaboratoryAccreditationProgram.aspx	3016
Maine DHS	Not available	WA0035
Michigan DEQ	http://www.michigan.gov/deq/0,1607,7-135-3307_4131_4156---,00.html	9949
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Montana DPHHS	http://www.dphhs.mt.gov/publichealth/	CERT0047
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA35
New Jersey DEP	http://www.nj.gov/dep/oqa/	WA005
North Carolina DWQ	http://www.dwqlab.org/	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA200001
South Carolina DHEC	http://www.scdhec.gov/environment/envserv/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	4704427-08-TX
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C1203
Wisconsin DNR	http://dnr.wi.gov/	998386840
Wyoming (EPA Region 8)	http://www.epa.gov/region8/water/dwhome/wyomingdi.html	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.
Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/anlayte is offered by that state.

CHAIN OF CUSTODY / UCMR-3

1317 South 13th Ave. • Kelso, WA 98626 • (360) 577-7222 • (800) 695-7222 • FAX (360) 636-1068

SR# K1404977

All fields must be filled out. The information in the Shaded Fields is required for reporting your UCMR-3 results.

Public Water System Name:

Public Water System ID: | Schedule Event: (*i.e.SE1, SE2, etc.*)

Project Manager: (*Person receiving report*) NHDES - BRANDON KERNEN

Address: (*Street*) PO Box 95 29 Hazen Drive

City/State/Zip) CONCORD NH 03302

Phone Number: 603 271 0660 | Fax Number: 603 271 0656

Sampled By: (*Please print clearly*) Brandon Kerney

Sampler's Signature:

Sample Point ID	Date Collected	Time Collected	Facility ID	Water Source Type (SW= Surface Water, GW=Ground Water, GU=Ground water under influence of SW, MX= any combination of types)	Sample Point Type: Check Only One per Sample Point — EP=Entry Point Sample	Sample Point Type: Check Only One per Sample Point — MR=Distribution Sample at maximum residence time	NUMBER OF CONTAINERS	List 1 - Assessment [1]524.3 ☐ [1]522 ☐ 537 ☐ [1]Metals ☐ [1]Chlorate ☐ Cr+6 ☐	List 2 - Screening Survey 539 ☐	MR Sampling Metals ☐ Chlorate ☐ Cr+6 ☐	Additional Information
Bellamy Raw	5/16/14	1330		SW			4	X			
Bellamy Raw Field Blank	5/16/14	1330					1	X			
DPW	5/16/14	1520		MX			4	X			
DPW FIELD BLANK	5/16/14	1520					1	X			
	~~5/16/14~~	~~BR~~						X			
	~~5/16/14~~	~~BR~~						X			
	~~5/16/14~~	~~BR~~						X			

INVOICE INFORMATION

P.O. # DW GB

Bill To: BRANDON KERNEN

Address: PO BOX 95

City State Zip: CONCORD, NH 03302

SPECIAL INSTRUCTIONS/COMMENTS

1. *Samples subcontracted to a certified ALS lab for analysis.*

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Printed Name: Brandon Kerney	Printed Name: SWART	Printed Name:	Printed Name:
Signature:	Signature:	Signature:	Signature:
Date/Time: 5-16-14 830AM	Date/Time: 5/17/14 1000	Date/Time:	Date/Time:
Company: NHDES	Company: ALS	Company:	Company:

CHAIN OF CUSTODY / UCMR-3

ALS

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SR# K1404977

Page 1 of 2

All fields must be filled out. The information in the Shaded Fields is required for reporting your UCMR-3 results.

Public Water System Name:

Public Water System ID: | Schedule Event: (*i.e.SE1, SE2, etc.*)

Project Manager: (*Person receiving report*) NHDES - Brandon Kerney

Address: (*Street*) PO Box 95 29 Hazen Drive

City/State/Zip) Concord NH 03302

Phone Number: 603 271 0660 | Fax Number: 603 271 0656

Sampled By: (*Please print clearly*) Brandon Kerney

Sampler's Signature:

Sample Point ID	Date Collected	Time Collected	Facility ID	Water Source Type (SW= Surface Water, GW=Ground Water, GU=Ground water under influence of SW, MX= any combination of types)	Sample Point Type: Check Only One per Sample Point: EP=Entry Point Sample	MR=Distribution Sample at maximum residence time	NUMBER OF CONTAINERS	List 1 - Assessment [1]524.3 ☐ [1]522 ☐ 537 ☐ [1]Metals ☐ [1]Chlorate ☐ Cr+6 ☐	List 2 - Screening Survey 539 ☐	MR Sampling Metals ☐ Chlorate ☐ Cr+6 ☐	Additional Information
NewCastle	5/16/14	1545		MX			4	X			
NewCastle Field Blank	5/16/14	1545					1	X			
Madbury 2	5/16/14	1400		GW			4	X			
Madbury2 Field Blank	5/16/14	1400					1	X			
Haven	5/16/14	1600		GW			4	X			
Haven Field Blank	5/16/14	1600					1	X			
	~~5/16/14~~ BK							Y			

INVOICE INFORMATION

P.O. # DW GB

Bill To: Brandon Kerney

Address: PO Box 95

City State Zip: Concord, NH 03302

SPECIAL INSTRUCTIONS/COMMENTS

1. *Samples subcontracted to a certified ALS lab for analysis.*

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Printed Name: Brandon Kerney	Printed Name: SWOLF	Printed Name:	Printed Name:
Signature:	Signature:	Signature:	Signature:
Date/Time: 5-16-14 830 PM	Date/Time: 5/17/14 1000	Date/Time:	Date/Time:
Company: NHDES	Company: ALS	Company:	Company:

PC CL

Cooler Receipt and Preservation Form

Client / Project: NHDES Service Request *K14* 4977

Received: 5/17/14 Opened: 5/17/14 By: JW Unloaded: 5/17/14 By: JW

1. Samples were received via? *Mail* (*Fed Ex*) *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) (*Cooler*) *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA (Y) N If yes, how many and where? one, front
   If present, were custody seals intact? (Y) N If present, were they signed and dated? (Y) N

Raw Cooler Temp	Corrected. Cooler Temp	Raw Temp Blank	Corrected Temp Blank	Corr. Factor	Thermometer ID	Cooler/COC ID (NA)	Tracking Number (NA)	Filed
-0.1	-0.1	2.4	2.4	0	336		5478 9733 4632	
-0.4	-0.7	3.1	3.0	-0.1	316		" " 4643	

4. Packing material: *Inserts* (*Baggies*) *Bubble Wrap* (*Gel Packs*) (*Wet Ice*) *Dry Ice* *Sleeves* _____
5. Were custody papers properly filled out (ink, signed, etc.)? NA (Y) N
6. Did all bottles arrive in good condition (unbroken)? *Indicate in the table below.* NA (Y) N
7. Were all sample labels complete (i.e analysis, preservation, etc.)? NA (Y) N
8. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.* NA (Y) N
9. Were appropriate bottles/containers and volumes received for the tests indicated? NA (Y) N
10. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* (NA) Y N
11. Were VOA vials received without headspace? *Indicate in the table below.* (NA) Y N
12. Was C12/Res negative? NA (Y) N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, & Resolutions: _____

Page ____ *of* ____

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	New Hampshire Department of Environmental Services	**Service Request:**	K1404977
Project:		**Date Collected:**	05/16/14 13:30
Sample Matrix:	Water	**Date Received:**	05/17/14 10:00
Sample Name:	Bellamy Raw	**Units:**	ug/L
Lab Code:	K1404977-001	**Basis:**	NA

Determination of Selected Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS

Analysis Method: 537
Prep Method: Method

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
Perfluorooctylsulfonic Acid	ND U	0.0370	1	05/20/14 13:25	5/19/14	
Perfluorooctanoic Acid	ND U	0.0185	1	05/20/14 13:25	5/19/14	
Perfluoroheptanoic Acid	ND U	0.00926	1	05/20/14 13:25	5/19/14	
Perfluorononanoic Acid	ND U	0.0185	1	05/20/14 13:25	5/19/14	
Perfluorobutanesulfonic Acid	ND U	0.0833	1	05/20/14 13:25	5/19/14	
Perfluorohexylsulfonic Acid	ND U	0.0278	1	05/20/14 13:25	5/19/14	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Perfluoro-n-[1,2-13C2] hexanoic acid	106	70 - 130	05/20/14 13:25	
Perfluoro-n-[1,2-13C2] decanoic acid	106	70 - 130	05/20/14 13:25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	New Hampshire Department of Environmental Services	**Service Request:**	K1404977
Project:		**Date Collected:**	05/16/14 15:20
Sample Matrix:	Water	**Date Received:**	05/17/14 10:00
Sample Name:	DPW	**Units:**	ug/L
Lab Code:	K1404977-003	**Basis:**	NA

Determination of Selected Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS

Analysis Method: 537
Prep Method: Method

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
Perfluorooctylsulfonic Acid	ND U	0.0370	1	05/20/14 13:52	5/19/14	
Perfluorooctanoic Acid	ND U	0.0185	1	05/20/14 13:52	5/19/14	
Perfluoroheptanoic Acid	ND U	0.00926	1	05/20/14 13:52	5/19/14	
Perfluorononanoic Acid	ND U	0.0185	1	05/20/14 13:52	5/19/14	
Perfluorobutanesulfonic Acid	ND U	0.0833	1	05/20/14 13:52	5/19/14	
Perfluorohexylsulfonic Acid	ND U	0.0278	1	05/20/14 13:52	5/19/14	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Perfluoro-n-[1,2-13C2] hexanoic acid	104	70 - 130	05/20/14 13:52	
Perfluoro-n-[1,2-13C2] decanoic acid	117	70 - 130	05/20/14 13:52	

Analytical Report

Client:	New Hampshire Department of Environmental Services	**Service Request:**	K1404977
Project:		**Date Collected:**	05/16/14 15:45
Sample Matrix:	Water	**Date Received:**	05/17/14 10:00
Sample Name:	New Castle	**Units:**	ug/L
Lab Code:	K1404977-005	**Basis:**	NA

Determination of Selected Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS

Analysis Method: 537
Prep Method: Method

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
Perfluorooctylsulfonic Acid	ND U	0.0370	1	05/20/14 14:01	5/19/14	
Perfluorooctanoic Acid	ND U	0.0185	1	05/20/14 14:01	5/19/14	
Perfluoroheptanoic Acid	ND U	0.00926	1	05/20/14 14:01	5/19/14	
Perfluorononanoic Acid	ND U	0.0185	1	05/20/14 14:01	5/19/14	
Perfluorobutanesulfonic Acid	ND U	0.0833	1	05/20/14 14:01	5/19/14	
Perfluorohexylsulfonic Acid	ND U	0.0278	1	05/20/14 14:01	5/19/14	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Perfluoro-n-[1,2-13C2] hexanoic acid	107	70 - 130	05/20/14 14:01	
Perfluoro-n-[1,2-13C2] decanoic acid	111	70 - 130	05/20/14 14:01	

Analytical Report

Client:	New Hampshire Department of Environmental Services	**Service Request:**	K1404977
Project:		**Date Collected:**	05/16/14 14:00
Sample Matrix:	Water	**Date Received:**	05/17/14 10:00
Sample Name:	Madbury 2	**Units:**	ug/L
Lab Code:	K1404977-007	**Basis:**	NA

Determination of Selected Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS

Analysis Method: 537
Prep Method: Method

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
Perfluorooctylsulfonic Acid	ND U	0.0370	1	05/20/14 14:10	5/19/14	
Perfluorooctanoic Acid	ND U	0.0185	1	05/20/14 14:10	5/19/14	
Perfluoroheptanoic Acid	ND U	0.00926	1	05/20/14 14:10	5/19/14	
Perfluorononanoic Acid	ND U	0.0185	1	05/20/14 14:10	5/19/14	
Perfluorobutanesulfonic Acid	ND U	0.0833	1	05/20/14 14:10	5/19/14	
Perfluorohexylsulfonic Acid	ND U	0.0278	1	05/20/14 14:10	5/19/14	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Perfluoro-n-[1,2-13C2] hexanoic acid	102	70 - 130	05/20/14 14:10	
Perfluoro-n-[1,2-13C2] decanoic acid	112	70 - 130	05/20/14 14:10	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	New Hampshire Department of Environmental Services	**Service Request:**	K1404977
Project:		**Date Collected:**	05/16/14 16:00
Sample Matrix:	Water	**Date Received:**	05/17/14 10:00
Sample Name:	Haven	**Units:**	ug/L
Lab Code:	K1404977-009	**Basis:**	NA

Determination of Selected Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS

Analysis Method: 537
Prep Method: Method

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
Perfluorooctylsulfonic Acid	**1.90**	0.370	10	05/20/14 16:53	5/19/14	
Perfluorooctanoic Acid	**0.297**	0.0185	1	05/20/14 14:19	5/19/14	
Perfluoroheptanoic Acid	**0.115**	0.00926	1	05/20/14 14:19	5/19/14	
Perfluorononanoic Acid	ND U	0.0185	1	05/20/14 14:19	5/19/14	
Perfluorobutanesulfonic Acid	ND U	0.0833	1	05/20/14 14:19	5/19/14	
Perfluorohexylsulfonic Acid	**0.801**	0.278	10	05/20/14 16:53	5/19/14	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Perfluoro-n-[1,2-13C2] hexanoic acid	107	70 - 130	05/20/14 14:19	
Perfluoro-n-[1,2-13C2] decanoic acid	117	70 - 130	05/20/14 14:19	

Analytical Report

Client:	New Hampshire Department of Environmental Services	**Service Request:**	K1404977
Project:		**Date Collected:**	05/16/14 16:00
Sample Matrix:	Water	**Date Received:**	05/17/14 10:00
Sample Name:	Haven Field Blank	**Units:**	ug/L
Lab Code:	K1404977-010	**Basis:**	NA

Determination of Selected Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS

Analysis Method: 537
Prep Method: Method

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
Perfluorooctylsulfonic Acid	ND U	0.0370	1	05/20/14 16:35	5/19/14	
Perfluorooctanoic Acid	ND U	0.0185	1	05/20/14 16:35	5/19/14	
Perfluoroheptanoic Acid	ND U	0.00926	1	05/20/14 16:35	5/19/14	
Perfluorononanoic Acid	ND U	0.0185	1	05/20/14 16:35	5/19/14	
Perfluorobutanesulfonic Acid	ND U	0.0833	1	05/20/14 16:35	5/19/14	
Perfluorohexylsulfonic Acid	ND U	0.0278	1	05/20/14 16:35	5/19/14	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Perfluoro-n-[1,2-13C2] hexanoic acid	102	70 - 130	05/20/14 16:35	
Perfluoro-n-[1,2-13C2] decanoic acid	120	70 - 130	05/20/14 16:35	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	New Hampshire Department of Environmental Services	**Service Request:**	K1404977
Project:		**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KQ1405357-04	**Basis:**	NA

Determination of Selected Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS

Analysis Method: 537
Prep Method: Method

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
Perfluorooctylsulfonic Acid	ND U	0.0400	1	05/20/14 12:03	5/19/14	
Perfluorooctanoic Acid	ND U	0.0200	1	05/20/14 12:03	5/19/14	
Perfluoroheptanoic Acid	ND U	0.0100	1	05/20/14 12:03	5/19/14	
Perfluorononanoic Acid	ND U	0.0200	1	05/20/14 12:03	5/19/14	
Perfluorobutanesulfonic Acid	ND U	0.0900	1	05/20/14 12:03	5/19/14	
Perfluorohexylsulfonic Acid	ND U	0.0300	1	05/20/14 12:03	5/19/14	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Perfluoro-n-[1,2-13C2] hexanoic acid	98	70 - 130	05/20/14 12:03	
Perfluoro-n-[1,2-13C2] decanoic acid	116	70 - 130	05/20/14 12:03	

Client: New Hampshire Department of Environmental Services **Service Request:** K1404977

Project:

Sample Matrix: Water

SURROGATE RECOVERY SUMMARY

Determination of Selected Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS

Analysis Method: 537

Extraction Method: Method

Sample Name	Lab Code	Perfluoro-n-[1,2-13C2] hexanoic acid 70 - 130	Perfluoro-n-[1,2-13C2] decanoic acid 70 - 130
Batch QC	K1404976-001	101	115
Bellamy Raw	K1404977-001	106	106
DPW	K1404977-003	104	117
New Castle	K1404977-005	107	111
Madbury 2	K1404977-007	102	112
Haven	K1404977-009	107	117
Haven Field Blank	K1404977-010	102	120
Batch QC	KQ1405357-01	107	110
Batch QC	KQ1405357-02	106	113
Lab Control Sample	KQ1405357-03	100	116
Method Blank	KQ1405357-04	98	116

Client:	New Hampshire Department of Environmental Services	**Service Request:**	K1404977
Project:		**Date Collected:**	N/A
Sample Matrix:	Water	**Date Received:**	N/A
		Date Analyzed:	05/20/14
		Date Extracted:	05/19/14

Duplicate Matrix Spike Summary
Determination of Selected Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS

Sample Name:	Batch QC	**Units:**	ug/L
Lab Code:	K1404976-001	**Basis:**	NA
Analysis Method:	537		
Prep Method:	Method		

		Matrix Spike KQ1405357-01			Duplicate Matrix Spike KQ1405357-02					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Perfluorobutanesulfonic Acid	ND U	0.325	0.321	101	0.340	0.321	106	0-200	5	30
Perfluoroheptanoic Acid	ND U	0.0390	0.0357	109	0.0389	0.0357	109	0-200	<1	30
Perfluorohexylsulfonic Acid	ND U	0.121	0.107	113	0.124	0.107	115	0-200	2	30
Perfluorononanoic Acid	ND U	0.0738	0.0714	103	0.0782	0.0714	110	0-200	6	30
Perfluorooctanoic Acid	ND U	0.0812	0.0714	114	0.0821	0.0714	115	0-200	1	30
Perfluorooctylsulfonic Acid	ND U	0.154	0.143	108	0.160	0.143	112	0-200	3	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client:	New Hampshire Department of Environmental Services	**Service Request:**	K1404977
Project:		**Date Analyzed:**	05/20/14
Sample Matrix:	Water	**Date Extracted:**	05/19/14

Lab Control Sample Summary
Determination of Selected Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS

Analysis Method:	537	**Units:**	ug/L
Prep Method:	Method	**Basis:**	NA
		Analysis Lot:	393327

Lab Control Sample
KQ1405357-03

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Perfluorobutanesulfonic Acid	0.0993	0.0900	110	50-150
Perfluoroheptanoic Acid	0.0102	0.0100	102	50-150
Perfluorohexylsulfonic Acid	0.0345	0.0300	115	50-150
Perfluorononanoic Acid	0.0215	0.0200	107	50-150
Perfluorooctanoic Acid	0.0224	0.0200	112	50-150
Perfluorooctylsulfonic Acid	0.0458	0.0400	114	50-150